EVIDENCE-BASED INVESTING

We take an academic approach to investing at Index Fund Advisors, Inc. We utilize an evidence-based strategy that relies on objective, peer-reviewed research that has been published in academic financial and economic journals. Using this research, we have created portfolios designed to maximize expected return for risk taken.

The peer-review process ensures that academic articles are only published after a high level of scrutiny by qualified members of the profession within the relevant field. After publication, such articles are subject to further scrutiny by the journal’s professional readership. Further research in subsequent years may confirm, modify, or refute prior research. However, it is all subject to the peer-review process and publication in academic journals. This assures that any such research represents the state of the art at any given time.

Given the increased fiduciary liability for institutional investors tasked with investing assets in the best interest of others, it is our opinion that such a strategy is, for many reasons, both prudent and proper for public funds.

In contrast, any Wall Street firm can publish “research reports” making unsubstantiated claims (e.g., “Apple’s share price will hit $1,000 by the end of the year”). Such forecasting “research” can be authored and published in a matter of days, compared to academic research which often takes years to complete, be reviewed, and published. Such industry-related, proprietary “research” is not subject to the peer-review process or published in reputable, academic journals. It is considered invariably biased, and is not even considered at all when guidelines are published by academic professional organizations.

Here we briefly review but a few of the many seminal research papers from which IFA has developed its investment philosophy. While the research presented in these papers spans 60+ years, and may have been subsequently refined, the findings put forth in these papers have stood the test of time. Several have resulted in Nobel prizes for their authors.

After this review, we will explain how IFA has used such research to formulate its investment policy, and used it to create low-cost portfolios that deliver the highest expected return for the risk taken; then why it is our advice that those responsible for investing public funds should make it a cornerstone of the investment plans.
PORTFOLIO SELECTION

By Harry Markowitz; Journal of Finance (1952)

This Nobel Prize-winning paper introduced the now widely accepted notion that when putting together a portfolio, it is not sufficient to focus on returns alone. Risk must be considered as well. Specifically, once we have available historical data, we can make assumptions about expected returns, variances, and correlations of different securities (or asset classes). We can then construct a portfolio that maximizes expected return for a given level of risk, or minimizes risk for a given level of required return. The set of portfolios that meets these criteria is known as “the efficient frontier.”

As an aside, Markowitz was a former academic consultant to IFA. Markowitz is noted to highlight the importance of investors following the advice of academics rather than Wall Street professionals.

LINK: https://www.ifa.com/harry-markowitz

For IFA Portfolio information, please see the attached disclosures.
2 CAPITAL ASSET PRICES - A THEORY OF MARKET EQUILIBRIUM UNDER CONDITIONS OF RISK

By William Sharpe; Journal of Finance (1964)

This is another Nobel Prize-winning paper. It took Harry Markowitz’s “Portfolio Selection” one step further. Rather than trying to select an optimal portfolio of individual equities from the thousands of securities in the market, Sharpe showed that investors should simply hold the full market (that is, all equities offered) as the risky part of their allocation. If markets are efficient and investors can act in a completely unconstrained manner, then the market portfolio, which weighs each security according to its market capitalization, is inherently the most efficient possible portfolio. Hence, the model is known as the Capital Asset Pricing Model.


3 THE BEHAVIOR OF STOCK MARKET PRICES

By Eugene Fama; Journal of Business (1965)

This seminal paper presented the Efficient Market Hypothesis (EMH), which later earned Fama a Nobel Prize. The EMH asserts that security prices reflect all readily available information. Thus, investors cannot consistently achieve returns in excess of market average returns on a risk-adjusted basis.

While EMH is something that technically cannot be proven, there is no evidence that successfully refutes it.


Simulated Random Walk of Stock Prices

Source: IFA

Hypothetical illustration for informational purposes only and not intended to be investment advice
This paper created the field of behavioral economics and finance. This later earned a Nobel Prize for Kahneman (Tversky was deceased by that time). It proposed the notion that human beings are not the “super-rational utility maximizers” that they might be assumed to be under the EMH and CAPM. When faced with probabilities of different outcomes, people do not necessarily make the choices that we would expect from a purely mathematical analysis. Rather, they take extraordinary measures to avoid or limit losses, which curtails their chances of achieving gains. This tendency is known as loss aversion or regret avoidance.

Some practitioners may claim that behavioral finance disproves the EMH, and that all the sub-optimal behavior creates exploitable opportunities for gain. However, the EMH does not presuppose that the information investors act on is reliable and/or accurate. Nor does it state that investors are rational in all their actions. It elegantly and simply states that investors as a group act on all the information that is available; and that individual investors (rational or not), cannot do better than the market itself.

Andrew Lo (of Massachusetts Institute of Technology) has synthesized the two fields in his adaptive market hypothesis.

We should note that the founding fathers of behavioral finance—Kahneman in particular—strongly advocate index funds for most institutions and investors at large.

LINK: http://bit.ly/1JKHH76

**Emotions of Active Investors**

Hypothetical 5-Year Period

Hypothetical illustration for informational purposes only and not intended to be investment advice
These authors asked a simple question: What are the factors that explain the returns of managed portfolios such as pensions and endowments? The possibilities are security selection (stock-picking and bond-picking), market-timing, and asset allocation. In reviewing the returns data for 91 large pension plans over a ten-year period. They found that asset allocation alone was found to explain about 94% of the variation of returns (not the same as the absolute value or total return) of any particular fund.

Roger Ibbotson later expanded on this work, noting that asset allocation explained about 40% of the difference in returns among funds, but 100% of the level of returns gross of fees, on average, across funds.

LINK: http://cfa.is/2kOZFTb
### Dimensions of Returns
**Up to 94 Years (1/1/1928 - 12/31/2021)**

<table>
<thead>
<tr>
<th></th>
<th>US STOCKS</th>
<th>INTERNATIONAL STOCKS</th>
<th>EMERGING MARKETS STOCKS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SIZE PREMIUM</strong></td>
<td>1.95% SD 11.35%</td>
<td>12.14% SD 24.12%</td>
<td>14.17% SD 17.75%</td>
</tr>
<tr>
<td></td>
<td>Small minus Large</td>
<td>Small minus Large</td>
<td>Small minus Large</td>
</tr>
<tr>
<td><strong>VALUE PREMIUM</strong></td>
<td>2.84% SD 14.11%</td>
<td>12.60% SD 25.09%</td>
<td>13.05% SD 16.21%</td>
</tr>
<tr>
<td></td>
<td>Value minus Growth</td>
<td>Value minus Growth</td>
<td>Value minus Growth</td>
</tr>
<tr>
<td><strong>PROFITABILITY PREMIUM</strong></td>
<td>3.79% SD 8.85%</td>
<td>12.12% SD 15.23%</td>
<td>12.58% SD 20.70%</td>
</tr>
<tr>
<td></td>
<td>High Prof. minus Low Prof.</td>
<td>High Prof. minus Low Prof.</td>
<td>High Prof. minus Low Prof.</td>
</tr>
</tbody>
</table>

Information provided by Dimensional Fund Advisors LP. All returns are in USD. *Premiums are calculated as the difference in annualized returns between the two indices described over the period shown. Standard Deviation of Premiums are calculated using monthly premium data and annualized. MSCI indices are gross div. For US stocks, indices are used as follows. Small Cap minus Large Cap: Dimensional US Small Cap Index minus the S&P 500 Index. Value minus Growth: Fama/French US Value Research Index minus the Fama/French US Growth Research Index. High Prof minus Low Prof: Dimensional US High Profitability Index minus the Dimensional US Low Profitability Index. For developed ex US stocks, indices are used as follows. Small Cap minus Large Cap: Dimensional International Small Cap Index minus the MSCI World ex USA Index (gross div.). Value minus Growth: Fama/French International Value Index minus the Fama/French International Growth Index. High Prof minus Low Prof: Dimensional International High Profitability Index minus the Dimensional International Low Profitability Index. For Emerging Markets stocks, indices are used as follows. Small Cap minus Large Cap: Dimensional Emerging Markets Small Cap Index minus MSCI Emerging Markets Index (gross div.). Value minus Growth: Fama/French Emerging Markets Value Index minus Fama/French Emerging Markets Growth Index. High Prof minus Low Prof: Dimensional Emerging Markets High Profitability Index minus the Dimensional Emerging Markets Low Profitability Index. Profitability is measured as operating income before depreciation and amortization minus interest expense, scaled by book. Indexes are not available for direct investment and performance does not reflect the expenses of an actual portfolio. Unless indicated otherwise, the performance includes reinvestment of dividends and capital gains but does not include the deduction of IFA’s advisory fees, transaction costs or taxes. Past performance is no guarantee of future results. Actual returns may be lower. For detailed information on the hypothetical backtested performance data in this chart, including sources, updates and important disclosures, see ifabt.com/See “Index Descriptions” at ifaindexes.com for descriptions of Dimensional and Fama/French index data. S&P data © 2022 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. MSCI data © MSCI 2022, all rights reserved.
SIZE AND BOOK-TO-MARKET FACTORS IN EARNINGS AND RETURNS

By Eugene Fama and Kenneth French; Journal of Finance (1994)

This series of papers from Fama (University of Chicago) and French (Dartmouth University) established the 3-Factor Model for equity portfolios, and the 5-Factor Model for balanced portfolios of equities and bonds.

The Fama/French Three-Factor Model says the expected return of a broadly diversified stock portfolio in excess of a risk-free rate is a function of that portfolio's sensitivity or exposure to three common risk factors. They are: (1) a market factor, as measured by the excess return of a broad equity market portfolio relative to a risk-free rate; (2) a size factor, as measured by the difference between the returns of a portfolio of small stocks and the returns of a portfolio of large stocks; and (3) a value factor, as measured by the difference between the returns of a portfolio of high book-to-market (or value) stocks and the returns of a portfolio of low book-to-market (or growth) stocks.


The Fama and French Five Factor Model
The Difference Between Investing and Speculating

Sources: Fama and French
MARKET TIMING ABILITY AND VOLATILITY IMPLIED IN INVESTMENT NEWSLETTER ASSET ALLOCATION RECOMMENDATIONS


The authors analyzed over 15,000 asset allocation recommendations from 237 investment newsletters from 1980 to 1992. Once adjusted for risk, they found that over 75% of the newsletters produced negative abnormal returns. To quote them, “Some recommendations are remarkably poor. For example, the (once) high profile Granville Market Letter-Traders produced an average annual loss of 5.4% over the past 13 years. This compares to 15.9% average annual gain on the S&P 500 index.”

LINK: http://bit.ly/2kmQztG

237 Market Timing Newsletters
From June 1980 to December 1992

VALUE VERSUS GROWTH: 
THE INTERNATIONAL EVIDENCE


This paper tested the applicability of the Fama-French Three-Factor Model to international equity returns. The model was found to be valid here also. In addition, besides having a higher expected return over time, there is an additional benefit of a lower correlation with the U.S. market, which provides a diversification benefit.

LINK: http://bit.ly/1rL6hfJ

Large, Small, Value and Growth Indexes Around the World
Annualized Returns and Standard Deviations Over Various Periods

<table>
<thead>
<tr>
<th></th>
<th>U.S. Large Cap Stocks</th>
<th>U.S. Small Cap Stocks</th>
<th>Non-U.S. Developed Markets Stocks</th>
<th>Emerging Stocks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>94 Years (1928-2021)</td>
<td>94 Years (1928-2021)</td>
<td>47 Years (1975-2021)</td>
<td>32 Years (1990-2021)</td>
</tr>
<tr>
<td>Annualized Return (%)</td>
<td>11.76%</td>
<td>9.86%</td>
<td>10.17%</td>
<td>11.28%</td>
</tr>
<tr>
<td>Risk</td>
<td>24.87%</td>
<td>18.01%</td>
<td>18.34%</td>
<td>22.38%</td>
</tr>
<tr>
<td>Annualized Standard Deviation (%)</td>
<td>28.27%</td>
<td>25.98%</td>
<td>26.01%</td>
<td>20.89%</td>
</tr>
</tbody>
</table>

Sources: Center for Research in Security Prices, Fama/French Data. The time periods shown are based on the earliest common inception date of each index within that asset class. All indexes shown are Fama French Indexes unless otherwise labeled. Past performance does not guarantee future results. Performance figures may contain both live and HYPOTHETICAL back-tested data. All data, including performance data, is provided for illustrative purposes only, it does not represent actual performance of any client portfolio or account and it should not be interpreted as an indication of such performance. For HYPOTHETICAL back-tested performance data shown in this chart, including sources, updates, and important disclosures, see ifabt.com. Indexes are labeled with letters to designate the index name and are defined at indexdescriptions.com. The IFA Indexes include several stock and bond indexes that represent a monthly data series that begins with index data from various sources on January 1, 1928. The construction of IFA Indexes data introduces live mutual fund data of funds that are similar to the preceding index upon the inception date of the funds and uses that monthly mutual fund data up to the current month. The HYPOTHETICAL back-tested performance of the indexes was achieved with the benefit of hindsight, it does not represent actual investment strategies for the entire period; and it does not reflect the impact that economic and market factors may have had on the advisor's decision making if the advisor were actually managing client money during the period shown. Unless indicated otherwise, the performance of the IFA Indexes when shown individually, does reflect the deduction of mutual fund fees, include reinvestment of dividends and capital gains but does not include the deduction of IFA advisory fees, transaction costs or taxes, which if included, would lower performance. IFA Indexes were created by IFA in 2000. Indexes are not available for direct investment and performance does not reflect the expenses of an actual portfolio. Unless indicated otherwise, the performance includes reinvestment of dividends and capital gains but does not include the deduction of IFA's advisory fees, transaction costs or taxes. IFA utilizes "standard deviation" as a quantification of risk, see the definition in the IFA glossary. © 2022 Index Fund Advisors, Inc. (IFA.com)
FALSE DISCOVERIES IN MUTUAL FUND PERFORMANCE: MEASURING LUCK IN ESTIMATING ALPHAS

By Laurnet Barras, Olivier Scaillet and Russ Wermers; Journal of Finance (2010)

When a mutual fund manager has a statistically significant different performance than the fund’s benchmark (i.e., a statistically significant positive or negative alpha), there are two possible explanations: skill or luck. The authors define a “false discovery” as a mutual fund that exhibits significant alpha by luck alone. Using a sample of 2,076 actively managed US equity funds between 1975 and 2006, the authors found that total observed alpha is consistent with the following breakdown: 75.4% of the funds had a true alpha of zero after costs. Also, 24.0% had a true alpha that was negative. That left only 0.6% with a true positive alpha, a number that the authors considered to be “statistically indistinguishable from zero”.

LINK: http://bit.ly/2rCHkLH

**Stock Picking Skill Statistically Indistinguishable from Zero**

32 Years (1/1/1975 - 12/31/2006) Sample Size: 2,076 Fund Managers

![Pie chart showing 99.4% of fund managers without genuine stock-picking ability and 0.6% considered just lucky](chart.png)

Sources: “False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas” by Laurent Barras, Olivier Scaillet, Russell Wermers; Mark Hulbert, “The Prescient are Few,” NY Times, July 13, 2008
The authors examined the performance of investment managers before and after they were either hired or fired by institutional plan sponsors. This study was based on an analysis of almost 8,800 hiring decisions by more than 3,400 plan sponsors from 1994 to 2003. The sample also included 869 firing decisions made by 482 institutions. Newly hired managers tended to have excess returns that were statistically significant before hiring and then became statistically indistinguishable from zero after hiring. In an ironic twist, fired managers tended to have higher returns than the managers hired to replace them.


Managers' Performance Before and After Hiring or Firing
8 Years (1/1/1996 - 12/31/2003) 412 Round-trip Decisions

<table>
<thead>
<tr>
<th>Hired Managers</th>
<th>Fired Managers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three Years Before Decision</td>
<td>Three Years After Decision</td>
</tr>
<tr>
<td>Managers' Performance After Hiring</td>
<td>The Fired Beat the Hired!</td>
</tr>
<tr>
<td>3.46%</td>
<td>Managers' Performance After Hiring</td>
</tr>
<tr>
<td>0.18%</td>
<td>Managers' Performance After Firing</td>
</tr>
<tr>
<td>-0.58%</td>
<td></td>
</tr>
</tbody>
</table>

Note: Investment managers’ performances is measured by their average annualized excess returns over the benchmarks. The bar chart reflects the results of the study minus an estimated annual 0.5% management fee and an annual 0.5% cost of transition subtracted from the after hiring manager returns. Source: Amit Goyal and Sunil Wahal, The Selection and Termination of Investment Management Firms by Plan Sponsors. The Journal of Finance, Volume LXIII, No. 4, published August 2008. Past performance does not guarantee future results. Performance figures may contain both live and HYPOTHETICAL back-tested data. All data, including performance data, is provided for illustrative purposes only, it does not represent actual performance of any client portfolio or account and it should not be interpreted as an indication of such performance. © 2021 InvestingForCatholics.com
ABSENCE OF VALUE: AN ANALYSIS OF INVESTMENT ALLOCATION DECISIONS BY INSTITUTIONAL PLAN SPONSORS


This study is similar to the Goyal and Wahal study described above. However, rather than looking at hiring and firing decisions, the authors examined changes in asset allocations made by plan sponsors. Such changes automatically necessitate hiring and firing decisions. The authors found that only in two out of the eighteen years from 1985 to 2002 did plan sponsor decisions add value over the next five years.

Performance-chasing was felt to be the primary underlying cause of this underperformance. The authors noted that plan sponsors are more likely to throw money at the asset class that has recently had high returns, only to be disappointed. The authors estimated the economic impact of these ill-fated decisions to be $170.2 billion for the full sample period.

LINK: http://cfa.is/2kTtQs2

Value Gained or Lost When Moving Assets From One Manager to Another
18 Years (1985 - 2002)

Conclusion: In only two out of eighteen years did plan sponsor decisions add value over the next five years.

LUCK VERSUS SKILL IN THE CROSS SECTION OF MUTUAL FUND RETURNS

*By Eugene Fama and Kenneth French; Journal of Finance: Vol. LXV, No. 5 (Oct. 2010)*

This study was influential in how we could decipher luck from skill in the context of the entire universe of actively managed mutual funds. Given the thousands of actively managed mutual funds that exist, there is the potential for extreme returns based on random chance alone. The authors examined the 3-Factor (Fama/French 3 Factor Model) adjusted excess returns (alpha) of 3,156 actively managed mutual funds between 1984 to 2006. They then compared these aggregate results to a distribution of potential 3-factor (Fama/French Three Factor Model) adjusted excess returns (alpha) based on random outcomes. They concluded that the net excess returns (after fees) of the active fund management community were no better than what would be expected by random chance. If there are some skilled managers who can produce enough risk-adjusted outperformance to cover their costs, they are hidden by the mass of managers with insufficient skill.


WE HAVE MET THE ENEMY...AND HE IS US: LESSONS FROM TWENTY YEARS OF THE KAUFFMAN FOUNDATION’S INVESTMENTS IN VENTURE CAPITAL FUNDS AND THE TRIUMPH OF HOPE OVER EXPERIENCE

*By Diane Mulcahy, Bills Weeks, and Harold S. Bardley; Ewing Marion Kauffman Foundation (2012)*

The authors examined the performance of nearly 100 venture capital funds their own $1.83 billion endowment invested in from 1992-2011. They found that the majority of funds—62 out of 100--failed to exceed returns available in public markets, after fees and carry were paid. Only 4 of the 30 venture capital funds with committed capital of more than $400 million delivered returns better than those available from a publicly traded small cap common stock index. The cumulative effect of fees, carry, and the uneven nature of venture investing ultimately left them with 78% of their funds that did not achieve returns sufficient to reward them for their patient, expensive, and long-term approach to investing in their endowment.

LINK: http://bit.ly/3k0mZKG
THE OTHER SIDE OF VALUE: THE GROSS PROFITABILITY PREMIUM

*By Robert Novy-Marx (2012)*

This groundbreaking article found an additional dimension of expected return using a proxy labeled “gross profitability.” The author found that gross profitability, defined as gross profits-to-assets, had approximately the same power as book-to-market, a common proxy for “value,” in predicting the cross-section of average returns. From a portfolio perspective, controlling for profitability was shown to dramatically increase the performance of value strategies, especially among the largest, most liquid stocks in the market. Because strategies based on profitability are typically growth strategies, they provide an excellent complement to value strategies, thus improving an investor’s overall opportunity set.


THE PROFITABILITY AND INVESTMENT PREMIUM

*By Sunil Wahal (2016)*

The author builds on the profitability and investment premium research done by Robert Novy-Marx, Eugene Fama, and Kenneth French by extending the sample time period back to 1940. Mr. Wahal concludes that the profitability premium is similar in magnitude to the post 1963 period, which further strengthens the argument for the existence of the profitability premium by demonstrating that the research is not subject to sampling bias. The author also concluded that the five-factor model from Fama and French is still useful for measuring the style tilts of managed portfolios.

**LINK:** [http://bit.ly/3whl0c](http://bit.ly/3whl0c)
PRIVATE EQUITY PERFORMANCE: RETURNS, PERSISTENCE AND CAPITAL FLOWS

By Steve Kaplan and Antoinette Schoar (2003)

Authors investigated the performance and capital flows of 746 private equity partnerships and concluded that the average fund returns (net of fees) approximately equal the S&P 500 over the time period over the 18 year period from 1980 to 1997. Weighted by committed capital, venture funds outperform the S&P 500 before fees while buyout funds do not. The authors also acknowledge the limitations of their conclusions given problems arising from differences in market risk and the possibility of selection bias, a common problem also found when examining the performance of hedge funds.


*Comment on downside risk/returns: active vs passive

Before proceeding to how we implement the above, we would like to note one further research finding. Or, rather, its lack thereof. Proponents of active management claim to be able to minimize downside risk during falling markets compared to similarly allocated but passively managed portfolios. However, we can find no academic research to support the claim that actively managed portfolios minimize losses compared to passively managed portfolios. Such a claim appears to be a myth perpetuated by active managers to assure a stream of income—for themselves.

We challenge any active fund manager to present peer-reviewed, academic articles refuting any of the above research.
IFA relies on Modern Portfolio Theory (MPT) in the construction of its portfolios. We start with a default market portfolio (in other words, owning the entire market) then successively add asset classes that historically either increase expected returns or reduce risk. IFA does not utilize a technological “optimizer” or automatic algorithm in the construction of its portfolios. Any such resulting asset allocations would be extremely sensitive to the assumptions, which, if even slightly off, could lead to significantly different outcomes. IFA does not consider it prudent to attempt to forecast future returns, risks, and correlations for different asset classes for public fund managers. While the efficient frontier is easily found in hindsight, it is unknowable in advance.

The CAPM robustly reinforces the idea that risk and return are inseparable. However, it does not do a very good job of explaining the returns of diversified portfolios. Fama and French solved this by noting the increased returns from small cap and value stocks. IFA deviates from the market portfolio by, among other means, tilting towards small cap and value stocks in the equity portion of its portfolios, resulting in higher expected returns than the market as a whole, as seen in the chart below.
IFA adheres to the philosophy that once investors have found and implemented a risk-appropriate portfolio, their best course of action is to avoid becoming emotionally involved. For instance, if investors scrutinize the market over any short-term period (daily, weekly, monthly, or quarterly), and the market makes a large move, they are more likely to overreact inappropriately and do more harm than good.

That said, IFA reminds investment committee members that appropriate risks are a reliable source of long-term returns. Indeed, there is no such thing as excess return without risk. Of course, investors need to understand that only some risks are compensated. IFA warns investors to avoid all types of active investing, be it stock-picking, time-picking, manager-picking, economic or political forecasting, etc.

To quote Benjamin Graham, “The investor’s chief problem—and even his worst enemy—is likely to be himself.”

IFA takes the position that the single most important decision investment committee members can make is the asset allocation of their portfolios dictated by a prudent Investment Policy Statement (for an excellent resource please read the 1985 classic book “Investment Policy,” by Charles D. Ellis). Security selection and market timing are unlikely to add any value and usually incur unnecessary costs. Instead, IFA captures the risk premiums of market, size, value, term, and default as modelled by academics Fama and French.

IFA has studied in detail the practical applications of these multi-factor models to its portfolios. Thus, IFA constructs its portfolios based on the Three and Five Factor Models.

IFA encourages public fund investment committee members to avoid investment strategies involving stock picking, marketing timing, active manager picking, or style drifting. These strategies have been shown through academic evidence to not provide the consistent excess market returns that they are seeking to capture. A much more prudent strategy would be to buy, hold, and rebalance a globally diversified portfolio of index funds that properly matches the public fund’s capacity for risk.

“The deeper one delves, the worse things look for actively managed funds,” wrote Dr. William Bernstein wrote more than 15 years ago. IFA agrees, and will continue relying on long-term historical data and research such as those cited above to inform our evidence-based approach that has stood the test of time.