

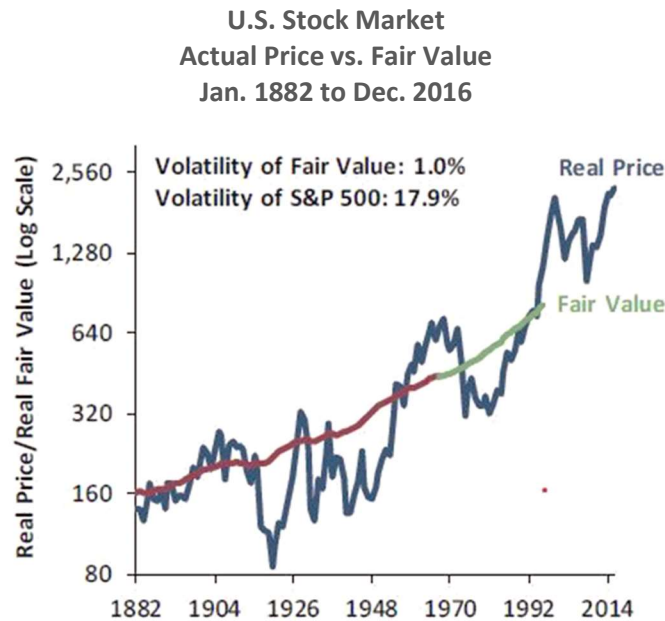


Key Points

- We believe actively managed investment strategies can deliver long-term outcomes with risk management characteristics that are not available through a passive index.
- We also believe passive index funds are an excellent way to achieve broad market exposure inexpensively and tax-efficiently, and we incorporate low-cost exchange-traded index funds (ETFs) into certain portfolio strategies.
- We accept that successful active investment management requires a *less wrong* forecast of future asset prices relative to current prices, and there are only two legitimate strategies for achieving this consistently.
- One strategy is to have a better forecast for the “news” that might influence future asset prices, where “news” refers to anything that matters to asset values such as earnings growth, product innovation, geopolitics, or inflation.
- The second legitimate approach is to develop a better forecast for how asset prices might react to “news” after it occurs.
- A common strategy for pursuing these objectives is to employ an army of experts to interpret the world better than everyone else’s experts.
- Our approach is different because it relies on processes more than PhDs, and it is based on a more advanced model of how asset markets work.
- Specifically, we rely on a handful of foundational investment principles to help us *anticipate* and *react* to the most important drivers of investment value.
- In the stock market we pursue “news anticipation” by focusing on a limited number of companies that combine capable management with sustainable competitive advantages and expanding market opportunities.
- We exploit “news-reaction” across multiple asset markets by systematically re-positioning certain investments based upon objective pre-conditions in the markets.
- These two active investment disciplines are commonly described as “fundamental” and “quantitative,” and we incorporate both approaches into our investment portfolios to elevate risk management beyond the foundations of diversification and strategic asset allocation.
- We utilize fixed income to further manage portfolio volatility and drawdown risk, as appropriate for the specific investment objectives of each client.

Foundational Principals

Active investment management can only be justified if asset prices are wrong from time to time. Fortunately for investors, the long-term history of all risk markets demonstrates clearly that asset prices overshoot their intrinsic value in both directions on a regular basis, sometimes spectacularly.



As of 12/31/16

Source: Robert Shiller, Federal Reserve, GMO

Note: Clairvoyant fair value based on next 50 years of dividends and earnings. Green series is approximation of clairvoyant value given shorter history.

Robert J. Shiller, "Do Stock Prices Move Too Much to be justified by Subsequent Changes in Dividends?" *American Economic Review*, June 1981; *GMO Quarterly Letter*, July 2017.

It is not possible to invest directly in the index

The recognition that asset prices are frequently wrong forms the foundation of our investment process across all asset classes. This world view contrasts with the foundational assumption behind much of professional investment management, which believes asset prices are mostly "right," in the sense that the current price of a security is assumed to reflect all available information at any given time.

The optimum way to invest is not the same if securities prices are frequently wrong instead of mostly right. Our investment strategies are designed for the former, which sets them apart from much of our industry that designs for the latter.

*Please see **Appendix A** at the end of this document for a detailed description of the market models referenced above.*

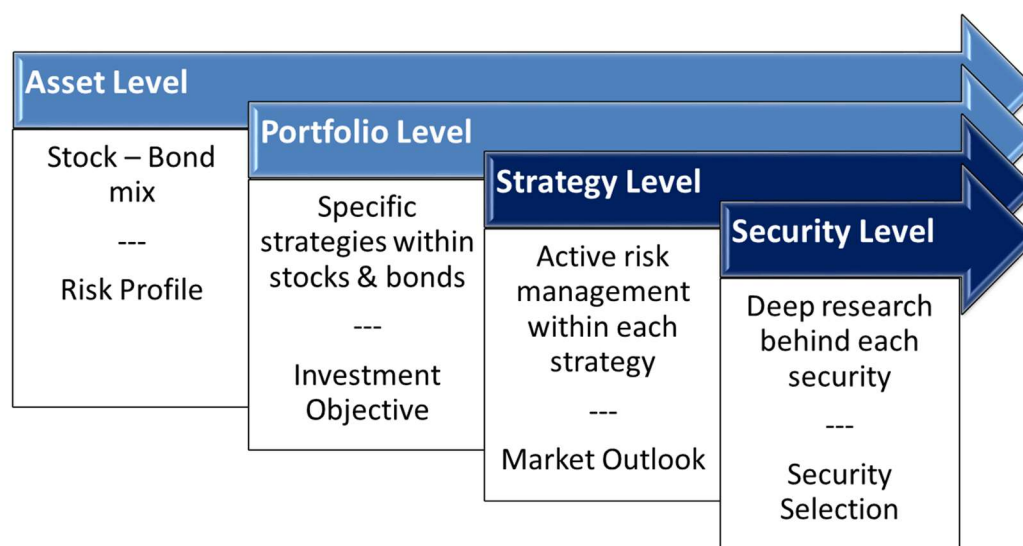
Two Disciplines

We address the challenge of trying to identify mispriced securities better than others by focusing on two disciplines that we believe can tilt the odds in our favor when executed consistently over time:

- 1) We seek to participate in future “good news” – without predicting it with precision – by focusing our stock selection on a small subset of companies that combine exceptional management with a sustainable competitive advantage in a structurally attractive market opportunity.
- 2) We seek to exploit conditional probabilities in the asset markets – caused by overshooting prices – by systematically repositioning broad market index ETFs in response to objective market signals.

The first process is a “news anticipation” strategy where we strive to be less wrong than the consensus about the most important developments that impact a particular company, or industry. The second discipline is a “news reaction” strategy, where we seek to exploit the structural nature of how asset markets work to anticipate the future response to “news” after it occurs.

We combine these two disciplines within a total portfolio framework to manage risk and maximize the probability of achieving real-world investment objectives for our clients. By managing each of our investment strategies in-house, rather than outsourcing to third parties, we can optimize the compatibility of these two disciplines to operate in unison within a strategically diversified portfolio. We also deliver our services at a materially lower cost to clients by eliminating a layer of fees required for third-party asset managers.



Our Definition of “Active”

We believe the value proposition for any active investment strategy should start with differentiation. If an active investment strategy cannot deliver something that is unavailable through an index, what is its purpose?

None of our investment strategies could be replicated by a passive index, including the quantitative strategies that *use* passive index ETFs for their execution. For example, our managed equity strategies concentrate on a relative handful of carefully chosen companies, rather than holding hundreds of stocks like a typical index. Instead of buying dozens of stocks in the same industry, we might only own one, or none, which is sacrilege for an index. And while our preferred holding period for many stocks is measured in decades (like an index), we also pursue opportunities that play out over a much shorter timeframe.

Our quantitative strategies seek to combine the benefits of passive index funds with the flexibility to adjust to changing market conditions. By applying a systematic trading discipline to a carefully chosen universe of passive ETFs, we believe it is possible to achieve a more favorable risk-reward profile for investors compared to the common buy-and-rebalance approach to passive investing.

S&P 500 Index Top-10 Holdings Not One Company Made the Transition

1980

IBM
AT&T
Exxon
Standard Oil of Indiana
Schlumberger
Shell Oil
Mobil
Standard Oil of California
Atlantic Richfield
General Electric

**7 of 10 Energy /
One Technology**

2023

Microsoft
Apple
NVIDIA
Amazon.com
Meta Platforms
Alphabet
Berkshire Hathaway
Eli Lilly
Broadcom
JP Morgan

**6 of 10 Technology /
Zero Energy**

*Source: Standard & Poor's; As of 12/31/1980 and 9/30/23, respectively
It is not possible to invest directly in the index*

FUNDAMENTAL STOCK SELECTION – A “NEWS ANTICIPATION” STRATEGY

We believe the primary source of *long-term* wealth creation in the stock market is sustainable competitive advantage. Companies with a sustainable competitive advantage tend to earn a higher-than-average rate of return on the assets they control. It is the compounding of this excess return on capital over many years that allows certain companies to create substantial stock market wealth over time as they maximize their participation in expanding markets and industries from a position of competitive strength.

The benefits of competitive advantage can be further enhanced by an exemplary management team. It has been our experience over many years that well-managed companies with structural advantages tend to make their own luck as they navigate the uncertain world. These uncommon companies tend to be better prepared for life’s inevitable curve balls, be it a geopolitical shock, financial panic, natural disaster, global pandemic, or disruptive technological change. Moreover, these companies frequently emerge from disruptions stronger than when they began.

We believe market prices frequently under-appreciate the long-term potential of exceptional companies, particularly when these companies participate in major disruptive innovations from a position of competitive leadership and strength. We also find that companies that create the most long-term value for shareholders are exceptional risk managers and stewards of their employees and communities.

Concentrated Portfolio Design

By accumulating shares in a relatively concentrated selection of exceptional companies, and then holding on through good times and bad, we can allow the power of compounding to work in our favor for many years, if not decades. We do not need to predict the future with precision because no matter what happens next, the best businesses with the most capable management tend to get it right more often than not.

Limited Activity

We do not need to trade very often in our Managed Equity strategies, particularly among stocks we consider “Core Holdings.” Although we are always happy to increase the position in a Core Holding when the price looks attractive, or harvest a bit off the top when the price seems rich, our baseline posture for these stocks is buy-and-hold.

Risk Management

Our concentrated stock portfolios also enable flexibility to manage risk by adjusting to changing market conditions. This might be done at the security level to exploit specific opportunities in the marketplace, or at a macro level through the strategic use of cash reserves for both risk management and opportunistic purposes. This form of risk management does not occur in an index fund.

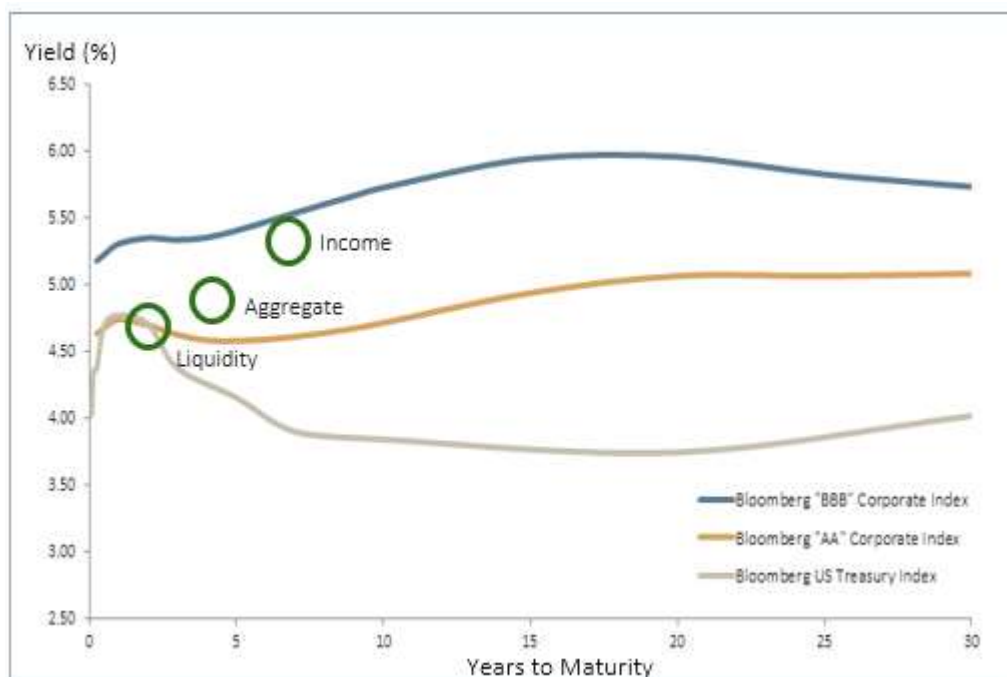
“NEWS ANTICIPATION” IN THE BOND MARKET

We apply similar principles to the selection of individual bonds. Among our taxable strategies, we focus on the bonds of structurally advantaged companies with capable management to capture the yield premium available in corporate bonds – relative to government and agency securities – without sacrificing principal protection for the overall portfolio.

Our individually managed bond portfolios also benefit from the flexibility to avoid certain companies or industries in the case of taxable strategies, or states and municipalities within our tax-exempt strategies. This level of precision is not available in a bond index fund or mutual fund.

Active management in the bond market also enables customization around investor priorities for liquidity, income, or an aggregate of the two.

Taxable Bond Yield Curve (as of 12/31/22)



Source: Bloomberg; Yield curve positioning in this graph is hypothetical for illustration purposes only

TACTICAL ASSET ALLOCATION – A “NEWS REACTION” STRATEGY

Throughout history, risk-based asset prices have been more volatile than the underlying fundamentals they reflect. We believe this dynamic is a structural feature of all risk markets caused by the inability of *anyone* to predict the future consistently in an uncertain world. This structural feature of asset markets opens the door for quantitative investment strategies that rely on purely objective inputs to drive decisions.

Serial Correlation in the Asset Markets

Cycles of under-shooting and overshooting prices reveal themselves as “serial correlation,” or “memory” in the historical record of asset prices. When there is serial correlation in a system it means conditions in the system today can influence the *range of outcomes* most likely to follow tomorrow, or next week, or month. It also means that knowing something about recent conditions can offer predictive value about what might happen next.

The weather is an example of a system with serial correlation. If it is cold in Nebraska today it is reasonable to expect it will be cold again tomorrow. This phenomenon is commonly known as “winter.” Farmers have understood this dynamic since the dawn of civilization, rotating their crops to follow the mean-variant temperature of each *season*, rather than responding to the mean-variant temperature for the entire year.

Crop Rotation for Financial Markets

The magnitude of serial correlation in the financial markets is nowhere near that of the weather, but there is memory in markets, nonetheless. Knowing something about conditions in the market today can offer predictive value about the range of outcomes most likely to follow.

We use quantitative disciplines to identify the range of future outcomes implied by recent market conditions, and then systematically reposition broad market ETFs toward the most favorable range of probabilities identified by the data. Whereas the traditional buy-and-rebalance approach to asset allocation is usually optimized for the average mean-variant behavior of markets over many decades, our quantitative approach is optimized for the “seasons” within the longer-term data.

EXAMPLE: Measuring Momentum with a Moving Average

A quantitative metric called a “moving average” is a common input for measuring momentum in the asset markets. A moving average represents the rolling historical average price of a security or market index measured over the previous few months (typically 6 to 12). Studies spanning numerous asset markets, time periods and geographies reveal a tendency for asset markets to deliver a more favorable risk-reward distribution when the recent price of a market index is above its moving average versus below it (i.e. momentum is positive).

Distribution of Monthly Outcomes Based Upon a Moving Average Indicator

Average Monthly Return				
Pre-Condition	US Stocks (1926-2022)	International (1970-2022)	Emerging Markets (1989-2022)	Real Estate (1972-2022)
Index ABOVE its Moving Average	1.15%	1.08%	1.36%	1.13%
Index BELOW its Moving Average	0.50%	0.34%	0.20%	0.46%
Frequency of Negative Return				
Pre-Condition	US Stocks (1926-2022)	International (1970-2022)	Emerging Markets (1989-2022)	Real Estate (1972-2022)
Index ABOVE its Moving Average	33.7%	38.1%	36.6%	34.8%
Index BELOW its Moving Average	44.8%	44.9%	46.3%	41.8%

Dates for specific markets relate to the year in which the index data for that market began. All periods end as of December 31, 2022. Sources: Standard & Poor's; Morningstar-Ibbotson; Bloomberg; www.msibarra.com; www.reit.com; Capital Advisors, Inc. It is not possible to invest in an index.

The data above shows that monthly returns have been higher, while the frequency of negative returns has been lower, in months following a positive moving average reading across four major asset markets. In each of these examples, knowing one simple fact – whether the index was trading above or below its moving average – offered predictive value about the range of outcomes most likely to follow.

Our quantitative strategies respond to data like this to systematically reposition broad market ETFs in front of favorable conditional probabilities. We believe investors can achieve higher risk-adjusted returns through this more dynamic approach to portfolio construction. Rather than re-balancing to static asset allocation targets over time, as is customary for most passive investment strategies, our approach to passive investing systematically responds to changing market conditions.

The Role of Fixed Income

Many investors need stable investments to support their needs for liquidity and/or income from their portfolios. Others simply prefer a smoother ride. For these objectives we combine fixed income with our equity strategies to further manage portfolio volatility and drawdown risk.

Our fixed income strategies emphasize investment-grade bonds in the short-to-intermediate range of the maturity spectrum. We customize fixed income strategies according to the investor's priorities for liquidity and income. The liquidity priority is achieved exclusively with investment-grade credits at the short end of the maturity range. When income is a priority, we expand the universe of potential securities to include longer-term bonds and a wider spectrum of credit quality. Most of our fixed income portfolios represent an aggregate of both priorities.

Putting it All Together

We combine our fundamental and quantitative investment strategies with high-quality fixed income to customize a diversified portfolio for the specific needs of each investor we serve. Our approach delivers an added dimension of risk management. In addition to traditional drivers of diversification at the asset, strategy, and security levels, we diversify the decision drivers in our portfolios to include both fundamental and quantitative inputs. The result is a strategically diversified portfolio designed to participate in the major structural trends driving economic value creation globally, while remaining flexible to adjust to changing market conditions.

APPENDIX A

Foundational Model of Asset Market Behavior

- Capital Advisors' investment strategies are different because they are designed for a different model of how asset markets work relative to much of professional investment management.
- The foundation of our viewpoint is an expectation that risk markets will overshoot their long-term intrinsic value in both directions from time to time – in other words, asset prices are frequently *wrong*.
- We believe overshooting prices are caused by rational mistakes among investors and reinforced by shared incentives among many market participants.
- We believe investor mistakes are unavoidable because structural change ensures the future will be different from the past.

The Prevailing View

Professional investment management has followed a common rule book for the past seven decades. The rule book is called *Modern Portfolio Theory* (MPT), and it evolved from a ground-breaking paper on the topic of portfolio construction published in 1952 by an economist named Harry Markowitz.

In the decades since its introduction countless professional investors have used MPT as the foundation for their investment process despite aspects of the theory that have been questioned throughout its existence. One particularly controversial element of MPT is the notion of market “efficiency,” which assumes the market price of tradable assets like stocks and bonds reflects everything there is to know about it.

According to the efficient market hypothesis (EMH), the current price of a traded security is assumed to be the best estimate of its “true” value. The model further assumes that future changes in the price of a security are random because they are driven by an unpredictable flow of new information.

Using EMH as the model of how markets work, MPT directs investors to construct a portfolio of broad market positions appropriate for their own risk profile, and then maintain the portfolio with limited deviation from the static targets for each asset class. These static targets are frequently referred to as the “strategic asset allocation.”

If EMH is the right model of how asset markets work, MPT is an optimal blueprint for designing investment portfolios. Harry Markowitz shared the Nobel Prize in Economics in 1989 for proving this point mathematically.

The Alternative Model

In the mid-1990s an alternative theory of asset market behavior was developed at Stanford University by professor, Mordecai Kurz. The theory of “Rational Belief Equilibrium” (RBE) represents progress in a scientific sense because it generalized a predecessor theory – EMH – by rendering EMH as a special case within a broader explanation of how markets work. Specifically, RBE overcame two highly restrictive assumptions from the EMH model:

- 1) The assumption that asset market returns are independent and identically distributed random variables (i.i.d.). An example of an i.i.d. distribution is a coin toss, where the probability of heads is always 50% regardless of the sequence of outcomes that preceded it.
- 2) The assumption that market participants share a common pricing model for converting new information into a correct price for traded securities.

The very earliest critics of MPT suggested that neither of these assumptions passed the smell-test of common sense, and numerous empirical studies have subsequently proven these assumptions to be false. Even so, it took more than 40 years for an alternative theory to emerge that could explain market behavior more effectively without the restrictive assumptions of EMH. That theory is RBE, and it is the basis for the investment strategies we execute at Capital Advisors.

The Theory of Rational Belief Equilibrium

RBE explains why asset markets tend toward *cycles* – bull and bear markets; booms and busts – in a way that EMH never could. The key ingredient in the RBE model is ignorance. Not that some investors are ignorant at the expense of others, but rather, that we are all ignorant about what matters most in investing – the future.

The assumptions that underlie RBE are refreshing because they acknowledge the obvious – nobody is clairvoyant. Rather than assume market prices are always “right,” RBE explains why prices are frequently wrong. It allows for the reality that rational investors make mistakes from time to time because the world is always changing.

The Role of Structural Change

According to RBE our ability to forecast the future is constantly derailed by *structural change* within the systems we must forecast. For example, in 1996 who knew how this new thing called the Internet might impact the future of business and society? How altered was the world view of the average American on the evenings of December 7, 1941, or September 11, 2001? Such is the nature of structural change – we cannot rely on historical experience alone to interpret what is happening because nothing quite like it has ever happened before.

According to RBE, cycles emerge in asset markets whenever investors' mistakes become correlated. The financial crisis in 2008 provides an extreme example of a correlated mistake involving the housing market. Prior to 2008 the risk models used by banks and securities dealers assumed home prices would not decline on a national basis. This seemed like a rational belief at the time because it was consistent with the historical record of home prices prior to 2007. But structural change in the mortgage market caused home prices to evolve in a novel direction, and the rest is history.

The booms and busts that populate the history of all risk markets represent self-reinforcing feedback loops built upon a foundation of assumptions that includes at least one unrecognized, error; followed by a self-reinforcing unwind when market participants recognize their collective mistake.

Shared incentives among market participants can reinforce these cyclical trends. Many professional investors are incentivized by job security to "follow the herd" due to narrow investment mandates and frequent benchmarking of performance. Short-term traders can reinforce trends due to a profit incentive. For example, trading strategies that follow the direction of recent price action have been prevalent for as long as there have been markets.

Investor Prescription

The optimum strategy for constructing investment portfolios is not the same if the price of the underlying securities can be wrong. One prescription for such a world is to concentrate investment capital among a relative handful of *underpriced* securities, rather than spreading it broadly across hundreds of securities in an index. We pursue this approach in our *Managed Equity* strategies by concentrating these portfolios on well-managed companies with a sustainable competitive advantage. We find the long-term growth potential of these uncommon companies is frequently undervalued by the stock market.

Another prescription for this worldview is to exploit conditional probabilities across the major asset markets. This opportunity emerges from the structural tendency for market prices to overshoot in both directions from time to time. We exploit conditional probabilities through our tactical investment strategies.

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The **MSCI EAFE Index** seeks to track the yield and price performance of publicly traded companies in developed markets outside the United States.

The **MSCI Emerging Markets Index** seeks to track the yield and price performance of publicly traded companies in emerging market countries outside the United States.

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