



CLEARLOGIC

ADVANCED FINANCIAL CLARITY

EVIDENCE-BASED INVESTMENT INSIGHTS:
THREE ESSENTIAL IDEAS
FOR BUILDING SUSTAINABLE WEALTH





THE IMPORTANCE OF A FIDUCIARY RELATIONSHIP

Are you ready to become a better investor?

Would you like to enhance your understanding of the most important principles that drive the creation of wealth, without it hurting a bit? In this approachable report, we'll introduce you to three essentials on how to invest with greater confidence, with evidence instead of emotion guiding your way.

You see, being a better, evidence-based investor does not mean you must have an advanced degree in financial economics, or that you have to be smarter, faster or luckier than the rest of the market. It means three things:

1. *Knowing and heeding the evidence* from those who do have advanced degrees in financial economics
2. *Structuring your portfolio* so that you're working with rather than against the market and its expected returns
3. *Understanding the "human factor," i.e., your own behaviors*, ingrained through eons of evolution and tricking you into make the worst financial decisions at all the wrong times

Are you ready to apply the science of investing into your own durable portfolio? Read on.

PART I: KNOWING AND HEEDING THE EVIDENCE

You, the Market and the Prices You Pay

How do you achieve every investor's dream of buying low and selling high in a crowd of resourceful and competitive players? The answer is to team with rather than compete against the crowd, by understanding how market pricing occurs, according to these insights:

- Group intelligence drives efficient pricing
- It's not whether breaking news is good or bad, it's whether it's expected or unexpected
- By the time you hear the news, the market already knows it
- Financial "gurus" are no better than you at consistently predicting the markets

The Power of Group Intelligence in Price-Setting

Before the academic evidence showed us otherwise, it was commonly assumed that the best way to make money in what seemed like ungoverned markets was by outwitting others at forecasting future prices and trading accordingly in domestic and international stocks, bonds, commodities, real estate and more - or by hiring high-priced market analysts to do this for you.

Unfortunately for those who are still trying to operate by this outdated strategy, academia has revealed that the market is not so ungoverned after all. Yes, it's chaotic, messy and unpredictable when viewed up close. But it's also subject to *group intelligence*. Groups of independent players (such as free market participants) are better at consistently arriving at accurate factual answers than even the smartest individuals in that same group.

Applying group wisdom to the market's multitude of daily trades means that each individual trade may be spot on or wildly off from a "fair" price, but the aggregate average incorporates all known information contributed by the intelligent, the ignorant, the lucky and the lackluster.

Instead of believing that you can regularly outguess the market's collective wisdom, you are better off concluding that the market is doing a better job than you can at forecasting prices.

The Effect of Breaking News on Market Pricing

The next step is to understand how prices are set moving forward. What causes market prices to change? It begins with the never-ending stream of world news. Here, it's critical to be aware of the evidence that tells us the most important thing of all:

You cannot expect to consistently improve your outcomes by reacting to breaking news.

How the market adjusts its pricing is why there's not much you can do after the news is released. First, it's not the news itself; it's whether we saw it coming. In other words, it's not just news, but *unexpected news* that alters future pricing. By definition, the unexpected is impossible to predict, as is how dramatically (or not) the market's group intelligence will respond to it.

The Barn Door Principle

Another reason breaking news is relatively irrelevant to your investing is what we'll call "The Barn Door Principle." *By the time you hear the news, the market already has incorporated it into existing prices.* The proverbial horses have already galloped past your open trading door before you could do anything about it. This is especially so in today's electronic world, where price adjustments typically occur within the first few post-announcement trades.

Stock Prices Adjust Quickly

In other words, unless you happen be among the very first to respond to breaking news (competing, mind you, against automated traders who often respond in fractions of milliseconds), you're setting yourself up to buy higher or sell lower than those who already have set new prices based on the news - exactly the opposite of your goal.

Financial Gurus and Other Unicorns

As touched on above, you're also ill-advised to seek a market-forecasting, financial guru to pinch hit for you. As *Morningstar strategist Samuel Lee* has described, managers who have persistently outperformed their benchmarks are "rarer than rare."

But maybe you know of an extraordinary stock broker or fund manager or TV personality who strikes you as being among the elite few who can make the leap. Should you turn to them for the latest market tips, instead of settling for "average" returns?

Bottom line, if such outperforming experts did exist in reliable numbers, we should expect to see credible evidence of it. Not only is such data lacking, the body of evidence to the contrary is overwhelming. Star performers - "active managers" - often fail to survive, let alone persistently beat comparable market returns. Across the decades and around the world, a multitude of academic studies have scrutinized active manager performance and have consistently found it lacking.

Outsmarting other investors is tough

Few mutual funds survive and beat their benchmarks
10-year performance period ending December 31, 2013



Past performance is no guarantee of future results. In US dollars. Mutual fund data is from the CRSP Mutual Fund Database, provided by the Center for Research in Security Prices, University of Chicago. Beginning sample includes funds as of the beginning of the 10-year period ending in 2012. The number of funds as of the beginning is indicated below the exhibit. Survivors are funds that are still in existence as of December 2012. Winners are funds that survive and beat their respective benchmarks over the period, as indicated by Success Rate. Funds are identified using Lipper fund classification codes and are matched to their respective benchmarks at the beginning of the sample period. Loser funds are funds that did not survive the period or whose cumulative return did not exceed their respective benchmark.

PART II: STRUCTURING YOUR PORTFOLIO

So far, we've assessed some of the hurdles to effectively participating in efficient capital markets. We believe the best way to overcome these hurdles is to sidestep them entirely. By managing the market factors you can expect to control and avoid the temptation to react to those you cannot, you can build and sustain an evidence-based portfolio that allows the market do what it does best on your behalf: *build long-term capital wealth*.

The Business of Investing

With all the excitement over stocks and bonds and their ups and downs in headline news, there is a key concept that is often overlooked. *Market returns are compensation for providing the financial capital that feeds the human enterprise going on all around us, all the time.*

When you buy a stock or a bond, your capital is ultimately put to hard work by businesses or agencies who expect to succeed. You would think that, when a company or agency does succeed, your investment would too. But actually, such success is only one factor at best, among many others that influence your expected returns.

At first, this seems counterintuitive. It means, for example, that even if business is booming, you cannot necessarily expect to reap the rewards simply by buying its stock. But remember, by the time good or bad news is apparent, it's already reflected in higher-priced share prices, with less room for future growth.

Market Risks and the Rewards of Diversification

So what does drive expected returns? There are a number of factors involved, but decades of academic inquiry inform us that among the most powerful ones spring from accepting unavoidable market risks. As an investor, you can expect to be rewarded for accepting the market risks that remain after you have eliminated the avoidable ones. Let's explain.

Avoidable Concentrated Risks - Even in a positive up market environment, one company may experience an industrial accident, causing its stock to plummet. A municipality can default on a bond even when the wider economy is thriving. A natural disaster can strike an industry or region while the rest of the world thrives. These are concentrated market risks that can be avoided by not piling all of your financial eggs into too few stocks, bonds or sectors.

Unavoidable Market Risks - If concentrated risks are like bolts of lightning, market risks are encompassing downpours in which everyone gets wet. For example, invest in the market at all and, presto, you're exposed to more market risk than if you had sat in cash (where it may lose value due to inflation, but that's a different risk, for a different report).

In the science of investing, we dampen concentrated risks with *diversification*. By spreading your holdings widely and globally. If some holdings are affected by a concentrated risk, you can offset potential the damage with plenty of other, unaffected holdings.

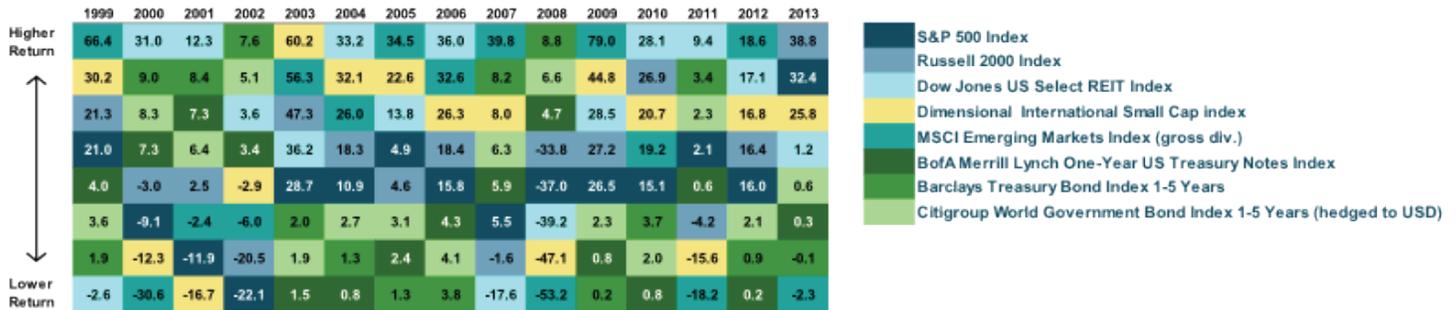
Every investor faces market risks that cannot be "diversified away," and your portfolio's allocation acts to ensure that the amount of market-risk is appropriate for you. In the short term, equity returns can vary greatly from their historical averages. However, in the long term, the range of equity returns becomes much narrower and closer to its historical average. Investors who stay invested when market volatility is on the rise can expect to eventually be compensated for their steely resolve with higher returns. Proper allocation based on your risk tolerance and risk capacity will help you avoid investing beyond your risk tolerance.

Diversification Helps Take the Guesswork out of Investing

Annual returns (%): 1999-2013

You never know which markets will outperform from year to year.

By holding a globally diversified portfolio, investors are positioned to capture returns wherever they occur.



The Essence of Evidence-Based Investing

With any risky venture, including those found in our capital markets, there are no guarantees that you'll earn the returns you're aiming for, or even recover your stake. This leads us to why we so strongly favor *evidence-based investing* as a rational methodology for staying on course toward your financial goals, especially when your emotional reactions threaten to take over the wheel.

Evidence-based investing represents the marriage between a "Who's Who" body of scholars who have been studying financial markets since at least the 1950s, and the financial professionals who heed their findings. For we are tasked with an equally important charge: *Even if a relatively reliable return premium exists in theory, can we capture it in the real world - after the implementation and trading costs involved?*

Assessing the Evidence (So Far)

In academia, rigorous research calls for considerably more than an arbitrary sampling or a few in-house spreadsheets designed to prove a notion bolstered by conflicts of interest. Academic research demands a higher standard, including a disinterested, objective outlook; robust data analysis; repeatability and reproducibility; and formal peer reviews and publication.

What has this level of research identified so far? Five expected "premiums" for patient investors:

1. **Equity** - Stocks (equities) have returned more than bonds (fixed income).
2. **Small-cap** - Small-company stocks have returned more than large-company stocks.
3. **Value** - Value companies (with lower ratios between their stock price and various business metrics such as company earnings, sales and/or cash flow) have returned more than growth companies (with higher such ratios). These are stocks that, based on the empirical evidence, appear to be either undervalued or more fairly valued by the market, compared with their growth stock counterparts.
4. **Term** - Bonds with distant maturities or due dates have returned more than bonds that come due quickly.
5. **Credit** - Bonds with lower credit ratings (such as "junk" bonds) have returned more than bonds with higher credit ratings (such as U.S. treasury bonds).

Scholars and practitioners alike strive to determine not only that various return factors exist, but why they exist. This helps us determine whether a factor is likely to persist (so we can build it into long-term portfolios) or is more likely to disappear upon discovery. Explanations for why persistent factors linger usually fall into two broad categories: risk-related and behavioral.

Risk Returns Factors – It appears that persistent premium returns are often explained by accepting market risk (the kind that cannot be diversified away) in your portfolio. For example, it's presumed that value stocks are riskier than growth stocks, which at least in part explains the higher expected returns they have exhibited to date.

Behavioral Return Factors – There may also be behavioral foibles at play. That is, our basic-survival instincts often play against otherwise well-reasoned financial decisions. As such, the market may favor those who are better at overcoming their impulsive reactions to breaking news.

What Has Evidence-Based Investing Done for Me Lately?

Beyond the five key market factors described above (equity, value, small-cap, term and credit), continued inquiry has found additional factors at play, with additional potential premiums (which also seem to result from accepting added market risk, avoiding ill-advised investor behaviors or both). In academic circles, the most prominent among these are profitability and momentum:

- **Profitability** – Highly profitable companies have delivered premium returns over low-profitability companies.
- **Momentum** – Stocks that have done well or poorly in the recent past tend to continue to do the same for longer than random chance seems to explain.

But before we get ahead of ourselves, let's discuss a few caveats.

- **Wet Paint Warning** – While these “new” factors may have existed for some time, our ability to isolate them is more recent. As the ink still dries on the research papers, we are still assessing their staying power.
- **Cost versus Reward** – Just because an expected premium exists in theory, doesn't mean it can be implemented in real life. We must be able to capture it after the costs involved.
- **Dueling Factors** – it can often be difficult to build one factor into a portfolio without sacrificing another. Benefits and tradeoffs must be carefully considered at the fund level as well as for your individual goals.

As a result, opinions vary on when, how or even if profitability, momentum and other newer factors should play a role in current portfolio construction.

Investment Reality: Choose Your Allies Carefully

In fact, this is one area where we believe an evidence-based advisor relationship can be critical to your wealth and well-being. How do you determine what to heed and who to ignore as the financial community continues to pave the way to future improvements? Even when a new academic insight is rock solid, hyperactive reaction to it can strip away the practical advantages of an enlightened investment approach.

Our aim as a professional advisor is to extract the diamonds of promising new research and insights from the considerably larger piles of misleading misinformation.

Dimensions Point to Differences in Expected Returns

Academic research has identified these dimensions, which are well documented in markets around the world and across different time periods.



Diversification does not eliminate the risk of market loss. 1. Relative price as measured by the price-to-book ratio, value stocks are those with lower price-to-book ratios. 2. Profitability is a measure of current profitability, based on information from individual companies' income statements.

PART III: THE HUMAN FACTOR – YOU AND YOUR BEHAVIORS

We turn now to the final and possibly the most significant factor in your evidence-based investment strategy: the *human factor*. In short, your own impulsive reactions to market events can easily trump any other market challenges you face.

Despite everything we know about efficient capital markets and all the solid evidence available to guide our rational decisions ... we're still human. We've got things going on in our heads that have nothing to do with solid evidence and rational decisions – a brew of chemically generated, "survival of the fittest" instincts and emotions that spur us to leap before we have time to look.

To study the relationships between our heads and our financial health, there is another field of evidence-based inquiry known as *behavioral finance*. Wall Street Journal columnist Jason Zweig's "Your Money and Your Brain" provides a good guided tour of the findings, describing both the behaviors themselves as well as what is happening inside our heads to generate them. To name a couple of the most obvious examples:

When markets tumble – Your brain's amygdala floods your bloodstream with corticosterone. Fear clutches at your stomach and every instinct points the needle to "Sell!"

When markets unexpectedly soar – Your brain's reflexive nucleus accumbens fires up within the nether regions of your frontal lobe. Greed grabs you by the collar, convincing you that you had best act soon if you want to seize the day. "Buy!"

Beyond such market-timing instincts that lead you astray, your brain cooks up plenty of other insidious biases to overly influence your investment activities.

Rapid reflexes often serve us well in everyday living. But in finance, where the coolest heads prevail, many of our base instincts cause more harm than good. If you don't know that they're happening or don't manage them when they do, your brain can trick you into believing you're making entirely rational decisions when you are in fact being overpowered by instinct-driven, chemical reactions. That's why we suggest working with an objective advisor, to help you see and avoid collisions with yourself that your own myopic vision might miss.

CONCLUSION

We hope you've enjoyed reading our report on evidence-based investing as much as we've enjoyed sharing it with you. When we introduced our three essential ideas for building wise wealth, we sought to replace most of the technical jargon, with three key insights for becoming a more confident investor:

1. **Understand the Evidence.** You don't have to have an advanced degree in financial economics to invest wisely. You need only know and heed the insights available from those who do have advanced degrees in financial economics.
2. **Embracing Market Efficiencies.** You don't have to be smarter, faster or luckier than the rest of the market. You need only structure your portfolio to team with rather than compete against the market and enjoy the healthy expected returns available by doing so.
3. **Managing Your Behavioral Miscues.** You don't have to – and won't be able to – eliminate every high and low emotion you experience as an investor. You need only be aware of how often your instincts will tempt you off-course, and manage your actions accordingly. (Hint: A professional advisor can potentially add huge value here.)

Humans Are Not Wired for Disciplined Investing

