Evidence-Based Investment Insights: 12 Essential Ideas for Building Wise Wealth

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Introduction

Are you ready to become a better investor? Would you like to learn more about the most important principles driving wealth creation and preservation, without it hurting a bit?

Welcome to Evidence-Based Investment Insights:

12 Essential Ideas for Building Wise Wealth.

Each insight will take only a few minutes of your time. In exchange, you'll learn how to invest with greater confidence—with evidence, not emotion, guiding your way. That's because our insights are based on a dozen solid principles formed by 70+ years of peer-reviewed inquiry into how capital markets efficiently and effectively deliver enduring wealth to patient investors.

Don't worry, unless you specifically ask us about it, we'll skip the Greek symbols and multi-factor modeling. Instead, we'll translate each insight into its meaningful essence: the *"What's in it for me?"* you need to know, so you can apply the science of investing into your own portfolio.

Being a better investor doesn't 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:

- Knowing and heeding the insights available from those who *do* have advanced degrees in financial economics
- Structuring your portfolio so that you're playing *with* rather than *against* the market and its expected returns
- Avoiding your own most dangerous behaviors, ingrained through eons of evolution and tempting you to make the worst financial decisions at all the wrong times

Are you ready to begin building your own wise wealth accordingly? We invite you to read on.

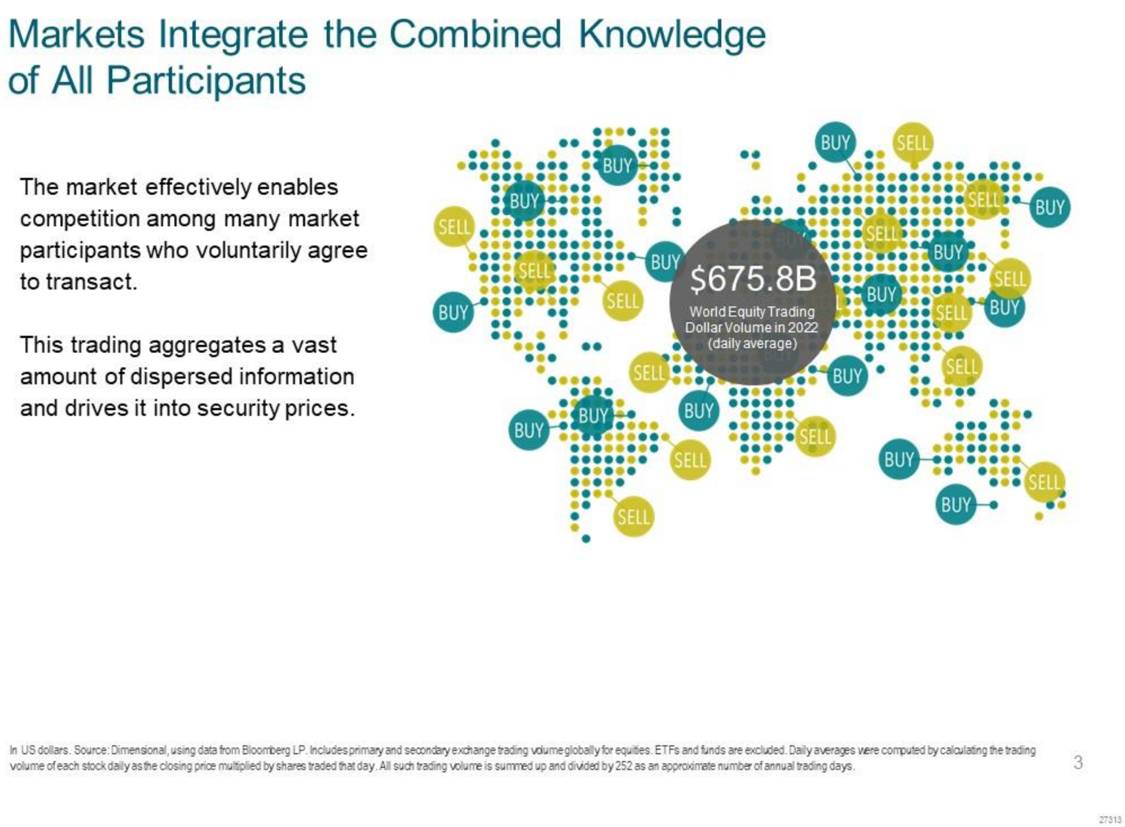
EVIDENCE-BASED INVESTMENT INSIGHTS
PART I: MARKET PRICING

Insight #1: You, the Market, and the Prices You Pay

When it comes to investing (or anything in life worth doing well) it helps to know what you're facing. In this case, that's "the market." How do you achieve every investor's dream of buying low and selling high amidst a crowd of highly resourceful and competitive players? The answer is to play with rather than against market forces, by understanding how market pricing occurs.

The Market: A Working Definition
Technically, "the market" is a plural, not a singular place. There are markets for trading stocks, bonds, commodities, real estate, and more, in the U.S. and worldwide. For now, you can think of these markets in aggregate as a single place, where participants from all around the globe compete against one another to buy low and sell high.

Granted, this "single place" is enormous. It represents a huge number of participants who are individually AND collectively helping to set fair prices every day. That's where things get interesting.



Group Intelligence: We Know More Than You and I

Before the academic evidence showed us otherwise, it was commonly assumed that the best way to make money in seemingly ungoverned markets was through a "lone wolf" approach known as **traditional active investing**.

To succeed, a traditional active investor seeks to become an expert at forecasting market pricing, so they can successfully **pick stocks** (pick/avoid future winning/losing stocks), and/or **time the market** (enter/exit ahead of rising/falling markets). In so doing, their goal is to earn higher returns than markets are expected to deliver "passively," to anyone who is participating in them.

Unfortunately, this outdated approach to beating the market is inherently flawed. A simple jar of jelly beans shows us why. Academia has revealed that the market is not so ungoverned after all. Yes, it's chaotic when viewed up close. But it's also subject to a number of important larger forces.

One of these is group intelligence. The term refers to the notion that, at least on questions of fact, groups are better at consistently arriving at accurate answers than even the smartest individuals in that same group … with a caveat: ***Each participant must be free to think independently, as is the case in free markets.*** (Otherwise, peer pressure can taint the results.)

Writing the Book on Group Intelligence

In his landmark book "The Wisdom of Crowds," James Surowiecki presented and popularized an enormous body of academic insights on group intelligence.

Take those jelly beans, for example. In one college experiment, 56 students guessed how many jelly beans were in a jar that held 850 beans. The group's aggregated average guess came relatively close at 871. Only one student in the class guessed closer than that. Similarly structured experiments have been repeated under various conditions. Time and again, the group consensus was among the most reliable counts.

Now apply group wisdom to the market's multitude of daily trades. Each 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. These current prices set by the market are expected to yield the closest estimate for guiding the market's next trades. It's not perfect mind you. But it's the most reliable estimate in an imperfect world.

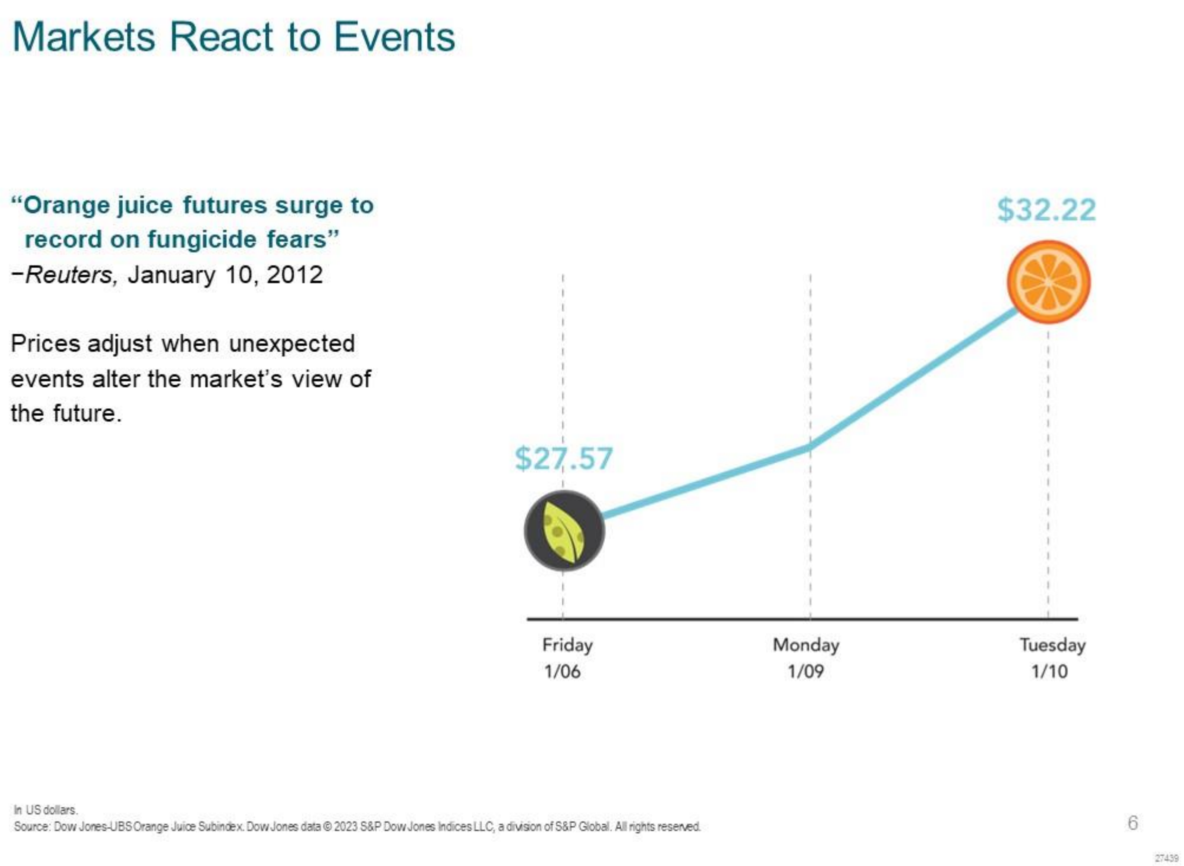
YOUR TAKE-HOME

Understanding group intelligence and how it governs efficient market pricing is a first step in more consistently buying low and selling high in competitive markets. Instead of believing the discredited notion that you can actively outguess the market's collective wisdom, you are better off concluding that the market is incredibly efficient at its price-setting job. Your job then becomes efficiently capturing the returns that are being delivered.

Insight #2: Ignoring the Siren Song of Daily Market Pricing

In **"You, the Market, and the Prices You Pay,"** we explored how group intelligence governs relatively efficient markets (as well as jelly beans) in an imperfect world. Next, let's look at how prices are set moving forward. This, too, helps us understand why traditional active investors face a steep hurdle by trying to compete against rather than participate in efficient markets.

News, Inglorious News
What causes market prices to change? It begins with the never-ending stream of news informing us of the good, bad, and ugly events that are always taking place. For example, when there are reports that a fungus is attacking Florida trees, orange juice futures may soar, as the market predicts that there is now going to be less supply than demand.



But what does this mean to you, your investment portfolio, and every investor's quest to buy low and sell high? Should you buy, sell, or hold tight to your juiciest investments?

Before the news tempts you to chase or flee active trends, 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.***

Great Expectations
How the market adjusts its pricing is why there's not much you can do about breaking news. There are two principles to bear in mind here.

First, it's not the news itself that moves the price; it's how it impacts our expectations. When a security's price changes, it's not whether something good or bad has happened. It's whether the news is ***better*** or ***worse*** than expected. If it's reported that an orange tree disease is continuing to spread, pricing changes may be minimal if everyone was already bracing for ongoing doom and gloom. On the other hand, if an ingenious new fungicide is announced, prices may change dramatically in reaction to the lucky break.

Thus, it's not just news, but unexpected news that alters future pricing. By definition, the unexpected is impossible to predict. So is how, and how dramatically (or not) market players respond to it. For example, what's good news to one industry may be bad news to another. Once again, group intelligence gets in the way of those who are hoping to outwit others by consistently forecasting future prices.

The Barn Door Principle
Another reason to consider breaking news irrelevant to your investing is what we'll call "The Barn Door Principle."

> *By the time you hear any breaking news, the market already has incorporated it into existing prices, well ahead of your ability to act on it. The proverbial horses have already galloped past your open trading door.*

This is especially so in today's world of electronic trading and social media broadcasting. Prices are set and re-set nearly instantaneously as fresh news arrives.

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 counterproductively buy higher or sell lower than those who already have set new prices based on the news.

YOUR TAKE-HOME

Avoid trying to play an expensive game of market whack-a-mole, based on ever-evolving information and cut-throat competition over which you have no control. Instead, position your life savings to benefit from greater market efficiencies.

Insight #3: Financial Gurus and Other Fantastic Creatures

In **"Ignoring the Siren Song of Daily Market Pricing,"** we explored how price-setting occurs in capital markets, and why investors should avoid reacting to breaking news. The cost and competitive hurdles are just too tall. Now, let's explain why you're also ill-advised to seek a pinch-hitting expert to compete for you.

In his "Berkshire Hathaway 2017 Shareholders Letter," Warren Buffett described his take on the price paid to active "experts":

> *"Performance comes, performance goes. Fees never falter."*

Instead, Buffett suggests:

> *"Seizing the opportunities then offered does not require great intelligence, a degree in economics or a familiarity with every bit of Wall Street jargon. What investors then need instead is an ability to both disregard mob fears or enthusiasms and to focus on a few simple fundamentals."*

Group Intelligence Wins Again

As we covered in "**You, the Market, and the Prices You Pay**," independently thinking groups (like capital markets) are usually better at arriving at accurate answers than even the smartest individuals in the group. That's in part because their wisdom is already bundled into prices, which adjust with fierce speed and relative accuracy to any breaking news.

Thus, even experts who specialize in analyzing business, economic, geopolitical, or any other market-related information face the same challenges you do if they try to forecast future prices. They must still try to successfully ***predict the unpredictable.*** Just like anyone else, they cannot foresee the news itself, let alone the reactions to unexpected news that is not yet known. Particularly after the costs involved in trying, outmaneuvering prices set by group intelligence usually remains a prohibitively tall hurdle.

The Proof Is in the Pudding

But maybe you know of an extraordinary stock broker, fund manager, or media guru who strikes you as being among the elite few who are up to the challenge. Maybe they have a stellar track record, impeccable credentials, a secret sauce, or brand-name recognition. Can you rely on their latest forecasts?

Let's set aside market theory for a moment and consider what has actually been working. Bottom line, if investors could depend on expert stock-picking or market-timing forecasters, we should expect to see credible evidence of it, with more "winners" than random chance would explain.

Not only is such data lacking, the body of evidence to the contrary is overwhelming. Each season's crop of star performers often fails to survive, let alone persistently beat comparable market returns moving forward.

Plus, the best way to profit from a guru's stellar track record requires you to jump on their band wagon while they're still on a hot roll, so you too can profit from their ***future*** success. In the absence of a time-travel machine, this is once again a daunting challenge.

To cite one of many sources, Morningstar publishes a semiannual "Active vs Passive Investment Management Barometer Report," comparing actively managed funds to their passively managed peers. In its Midyear 2023 report, there was some *relatively* good news for active investors. For the 12 months from June 2022–June 2023, Morningstar found, "Fifty-seven percent of active strategies survived and beat their average passive counterpart … well above their 43% success rate in calendar-year 2022."

Of course, if 57% of active strategies survived *and* beat the market for the 12 months ending June 2023, this means a relatively hefty 43% of them did not.

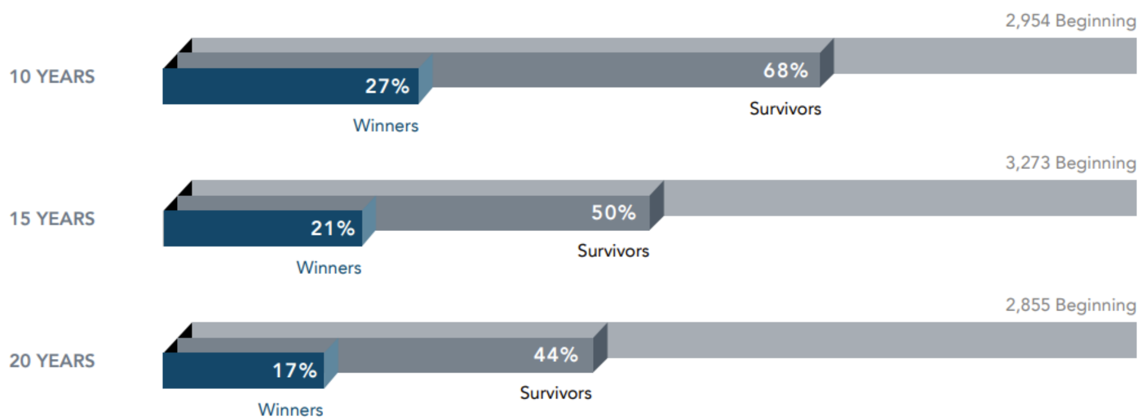
Thus, even the brief pop was not a resounding success. Nor do we expect it to be long-lived. As Morningstar also reported:

> *"Actively managed funds' recent surge did little to change their long-term track record against their passive peers. Just **one out of every four active strategies** survived and beat their average passive counterpart over the 10 years through June 2023."*

Dimensional Fund Advisors found similar results in its independent analysis. Looking at the 10-year performance for U.S.-domiciled stock funds through year-end 2022, they found only 27% of an initial 2,954 funds survived *and* outperformed their benchmarks.

Few Equity Funds Have Survived and Outperformed

US-domiciled equity fund performance periods ending December 31, 2022



Past performance is no guarantee of future results.
The sample includes funds at the beginning of the 10-, 15-, and 20-year periods ending December 31, 2022. Survivors are funds that had returns for every month in the sample period. Winners are funds that survived and outperformed their benchmark over the period. US-domiciled, USD-denominated, non-Dimensional open-end and exchange-traded fund data is from Morningstar. See The Fund Landscape Appendix for more information. US-domiciled mutual funds and US-domiciled ETFs are not generally available for distribution outside the US.

Across the decades and around the world, a multitude of academic studies have scrutinized active manager performance and consistently found it lacking.

- Among the earliest such studies is Michael Jensen's 1967 *Journal of Finance* paper, "The Performance of Mutual Funds in the Period 1945–1964." He concluded, there was "very little evidence that any individual fund was able to do significantly better than that which we expected from mere random chance."
- More recently, Eugene Fama and Kenneth French published a 2010 *Journal of Finance* study, "Luck versus Skill in the Cross Section of Mutual Fund Returns," demonstrating that "the high costs of active management show up intact as lower returns to investors."
- In 2016, a pair of professors from the University of North Florida published "A Review of Studies in Mutual Fund Performance, Timing and Persistence," scrutinizing more than 60 of the "more widely cited works" on fund performance. They concluded: "The basic results have not changed; it appears that: (1) mutual funds underperform the 'market;' (2) fund managers in aggregate are incapable of timing the market; and (3) mutual fund investors are ill-advised to invest based on prior fund performance."
- Yet another study, "Mutual fund performance at long horizons," appeared in the January 2023 *Journal of Financial Economics*. Its authors concluded that fund managers still struggled to outperform the market (as proxied by the S&P 500). They estimated "an aggregate wealth loss to mutual fund investors of $1.02 trillion," based on long-horizon mutual fund underperformance. In separate commentary, the authors wrote, "This wealth loss reflects the combined effect of mutual fund fees and investors' timing decisions."

YOUR TAKE-HOME

So far, we've been assessing common investment challenges. Fortunately, there's a way to invest that lets you nimbly sidestep rather than face these stumbling blocks: You can simply let the market do what it does best on your behalf. Next up, we'll introduce the strategies involved, starting with what some have described as investment's only free lunch: diversification.

EVIDENCE-BASED INVESTMENT INSIGHTS PART II: DIVERSIFICATION

Insight #4: The Full-Meal Deal of Diversification

With **"Financial Gurus and Other Fantastic Creatures,"** we concluded our exploration of the impractical odds you face if you or your hired help try to outsmart the market's price-setting efficiencies. Now, we turn our attention to the many ways you can harness these efficiencies to work for, rather than against you.

It starts with diversification as among your greatest financial friends. After all, what other single action can both dampen your exposure to a number of investment risks ***and*** strengthen your ability to achieve your personal financial goals? While the combination may seem almost magical, the benefits of diversification have been well-documented and widely explained by 70+ years of academic inquiry. Its powers have been enduring and robust.

Global Diversification: Quantity AND Quality

What is diversification? In a general sense, it's about spreading your risks around. In investing, that means it's more than just ensuring you have many holdings. It's also about having many different ***kinds*** of holdings. That is, you want to ensure that your multiple baskets contain not only many eggs, but also a bounty of fruits, vegetables, grains, meats, and cheese.

While this may make intuitive sense, many investors come to us believing they are well-diversified when they are not. They may own a large number of stocks or stock funds across numerous accounts. But upon closer analysis, we find most of their holdings are concentrated in large-company U.S. stocks, or similarly narrow market exposure.

In the pages ahead, we'll explore what we mean by different kinds of investments. For now, think of a concentrated portfolio as the undiversified equivalent of many basketsful of plain, white eggs. Over-exposure to what should be just one financial ingredient among many is not only unappetizing, it can be detrimental to your financial health. Poor diversification:

1. Increases your vulnerability to avoidable risks
2. Increases the odds for a bumpier, less reliable investment experience
3. Makes you more susceptible to second-guessing your investment decisions

A World of Opportunities

Combined, these three strikes tend to generate unnecessary costs, increased investment mistakes, and, perhaps most important of all, higher anxiety. You're back to trying to beat formidable market forces instead of turning them into investment alliances.

There is a wide world of investment opportunities available from low-cost funds offering efficient exposure to global capital markets. Why not make best use of them?

YOUR TAKE-HOME

To best capture the benefits of diversification, turn to fund managers who focus their energies—and yours—on efficiently capturing diversified dimensions of global returns.

In our last piece, we described why brokers or fund managers who are instead fixated on trying to outperform the market are likely wasting your time and money. You may still be able to achieve diversification, but your experience will be weakened by pointless efforts, extraneous costs, and irritating distractions. Who needs that, when diversification can help you have your cake and eat it too?

Next, let's explore why diversification is sometimes called one of investors' few free lunches.

Insight #5: Managing the Market's Risky Business

In **"The Full-Meal Deal of Diversification,"** we described how effective diversification means more than just holding a large number of accounts or securities. It also calls for efficient, low-cost exposure to a variety of assets from around the globe. Now, let's expand on the benefits of diversification, beginning with its ability to help you better manage investment risks.

There's Risk, and Then There's Risk
Before we even have words to describe it, most of us learn about risk as toddlers, when we tumble into the coffee table or reach for that hissing cat's tail. We learn where risks are found, how to avoid them when possible, and which ones may be worth taking anyway.

To understand, avoid, and manage investment risks, it helps to know there are two main types: ***avoidable concentrated risks*** and ***unavoidable investment risks.***

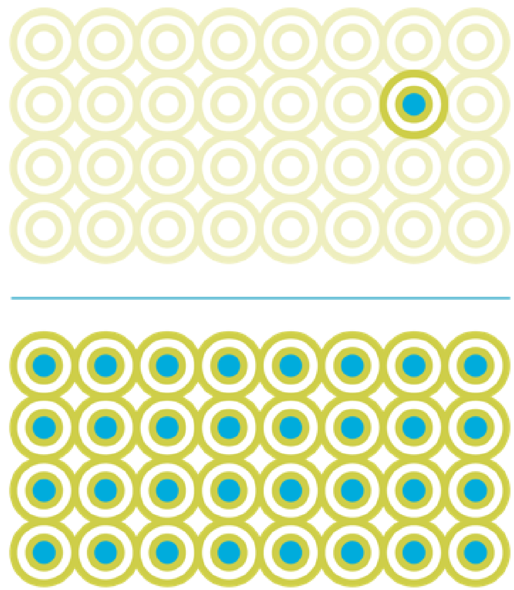
Avoidable Concentrated Risks
Concentrated risks are the ones that wreak havoc on particular stocks, bonds, or sectors. Even in a bull market, one company can experience an industrial accident, causing its stock to plummet. A municipality can default on a bond even when the wider economy is thriving. A natural disaster can strike an industry or region while the rest of the world thrives.

In the science of investing, concentrated risks are considered far more avoidable. Bad luck still happens. But we are granted a super power for minimizing its impact on our investments: You can diversify your holdings widely and globally, as just described. When you are well diversified, if some of your holdings are affected by a concentrated risk, you are much better positioned to offset the damage done with plenty of other holdings.

Diversification Reduces Risks That Have No Expected Return

Concentrating in one stock exposes you to unnecessary risks.

Diversification reduces the impact of any one company's performance on your wealth.



Diversification does not eliminate the risk of market loss.

Unavoidable Investment Risks
Unavoidable investment risks are the systemic kind that apply to large swaths of the market. If concentrated risks are like bolts of lightning, investment risks are like downpours, in which everyone gets wet.

Put another way, systemic investment risks are the ones you face by investing in capital markets to begin with. If you stuff your cash in a safety deposit box, it will still be there the next time you visit it. (It is likely to buy you less due to inflation, but that's a different risk, for discussion on a different day.) Invest in the market and, presto, you're exposed to investment risk.

Risks and Expected Rewards
Hearkening back to our past conversations on group intelligence, the market as a whole knows the differences between avoidable and unavoidable risks, and sets prices accordingly. This wisdom informs us on how to manage our own investments.

Managing concentrated risks: If you try to beat the market by chasing particular stocks or sectors, you are exposing yourself to concentrated risks you could instead minimize through diversification. As such, you cannot expect to be consistently rewarded for taking on concentrated risks.

Managing investment risks: Every investor faces investment risks that cannot be "diversified away." When these overall risks are on the rise, those who stay invested with steely resolve can expect to more fully capture future expected returns as markets recover and likely grow. However, sitting tight during risky times when others are selling out is easier said than done. That's why you want to take on as much, but no more investment risk than you need to, in pursuit of expected returns. Diversification becomes a "dial" for setting the right volume of investment-related risk/reward exposure for your individual goals.

YOUR TAKE-HOME

Diversification plays a key role in managing your investment experience. It's vital for minimizing concentrated risks. It also helps you fine tune your desired exposure to investment risks and expected rewards, to reflect your own financial goals.

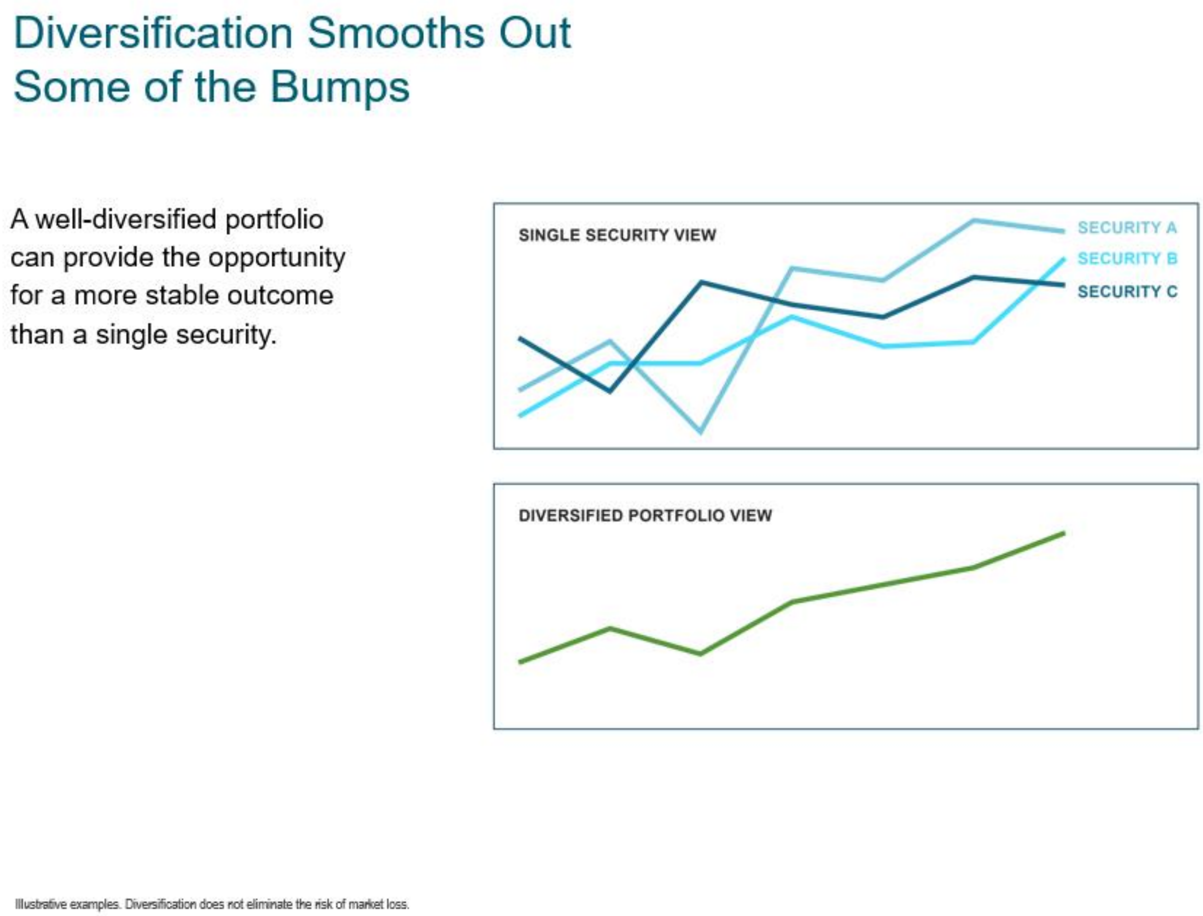
This sets us up for addressing another powerful benefit of diversification: smoothing out the ride along the way.

Insight #6: Get Along, Little Market

In **"Managing the Market's Risky Business,"** we described how diversification plays a key role in minimizing unnecessary risks and helping you better manage those that remain. To round out the conversation, we'll cover another benefit to be gained from a well-diversified stable of investments: It creates a smoother ride toward your goals.

Diversifying for a Smoother Ride
Like a bucking bronco, near-term market returns are characterized more by periods of wild volatility than by a steady-as-she-goes trot. Diversification helps you tame that beast. Because, as any rider knows, it doesn't matter how high you can jump if you fall out of the saddle.

When we crunch the evidence-based numbers, we discover that diversification helps minimize the bucking you must endure along the way to long-term expected returns. Imagine several rough-and-tumble, upwardly mobile lines that represent several kinds of holdings. Individually, each represents a wild ride. Bundled together, the upward mobility remains, but the jaggedness along the way can be smoothed (albeit never completely eliminated).



Fidelity's "guide to diversification" describes how diversification and individualized portfolio construction can help you tame the market's best and worst investment outcomes according to your goals. For a more detailed, data-driven illustration of the same, check out "How to diversify your investments," by financial author Larry Swedroe.

Covering the Market

A key reason diversification works is related to how different market components respond to price-changing events. When one type of investment may *zig* due to particular news, another may *zag*. Instead of trying to move in and out of favored components, the goal is to remain diversified across a variety of them. This increases the odds that, when some of your holdings are underperforming, others will outperform, or at least hold their own.

The result of diversification isn't perfectly predictable. But it offers a blanket of coverage for capturing random market returns where and when they occur. This goes a long way toward replacing nerve-wracking guesswork with a more coherent investment strategy.

The classic Crazy Quilt Chart illustrates this concept. After viewing a color-coded layout of which market factors have been the annual winners and losers in past years, it's clear there is no discernable pattern, just a crazy array. If you can predict how each column of best and worst performers will stack up in years to come, your psychic powers are greater than ours.

Diversification Helps Take the Guesswork Out of Investing

Annual returns (%): 2008–2022

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.

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Higher Return	8.8	79.0	28.1	9.4	18.6	38.8	32.0	5.4	21.3	37.8	2.1	31.5	20.0	45.9	-1.0
	6.6	48.8	26.9	3.4	18.6	32.4	13.7	4.5	12.0	31.7	1.9	25.5	18.7	28.7	-4.5
	4.7	28.5	22.4	2.3	17.1	27.6	4.9	1.4	11.6	21.8	1.5	24.3	18.4	14.8	-5.5
	-33.8	27.2	19.2	2.1	16.3	1.2	1.9	1.0	6.7	14.6	-4.2	23.1	11.2	13.9	-18.1
	-37.0	26.5	15.1	0.6	16.0	0.6	1.2	0.9	5.8	3.8	-4.4	18.9	4.4	-0.1	-18.8
	-39.2	2.3	3.7	-4.2	2.1	0.3	0.2	0.2	1.5	1.1	-11.0	4.2	3.2	-0.8	-19.7
	-46.7	0.8	2.0	-13.3	0.9	-0.1	-1.8	-4.4	1.0	0.7	-14.2	3.9	1.8	-1.2	-20.4
Lower Return	-53.2	0.2	0.8	-18.2	0.2	-2.3	-5.8	-14.6	0.8	0.6	-18.6	2.9	-11.2	-2.2	-26.0

S&P 500 Index
Russell 2000 Index
Dow Jones US Select REIT Index
Dimensional International Small Cap index
MSCI Emerging Markets Index (gross div.)
ICE BofA One-Year US Treasury Note Index
Bloomberg US Treasury Bond Index 1-5 Years
FTSE World Government Bond Index 1-5 Years (hedged to USD)

Your Take-Home

Diversification offers you wide, more manageable exposure to the market's long-term expected returns, as well as a smoother expected ride along the way. Perhaps most important, it eliminates the need to try to forecast future market movements, thus reducing those disruptive self-doubts that throw so many investors off course.

So far, we've introduced some of the challenges investors face in efficient markets and how to overcome them with a well-diversified portfolio. Next, we'll pop open the hood and take a closer look at how to tune up your own investment portfolio's performance.

EVIDENCE-BASED INVESTMENT INSIGHTS
PART III: RETURN FACTORS

Insight #7: The Business of Investing

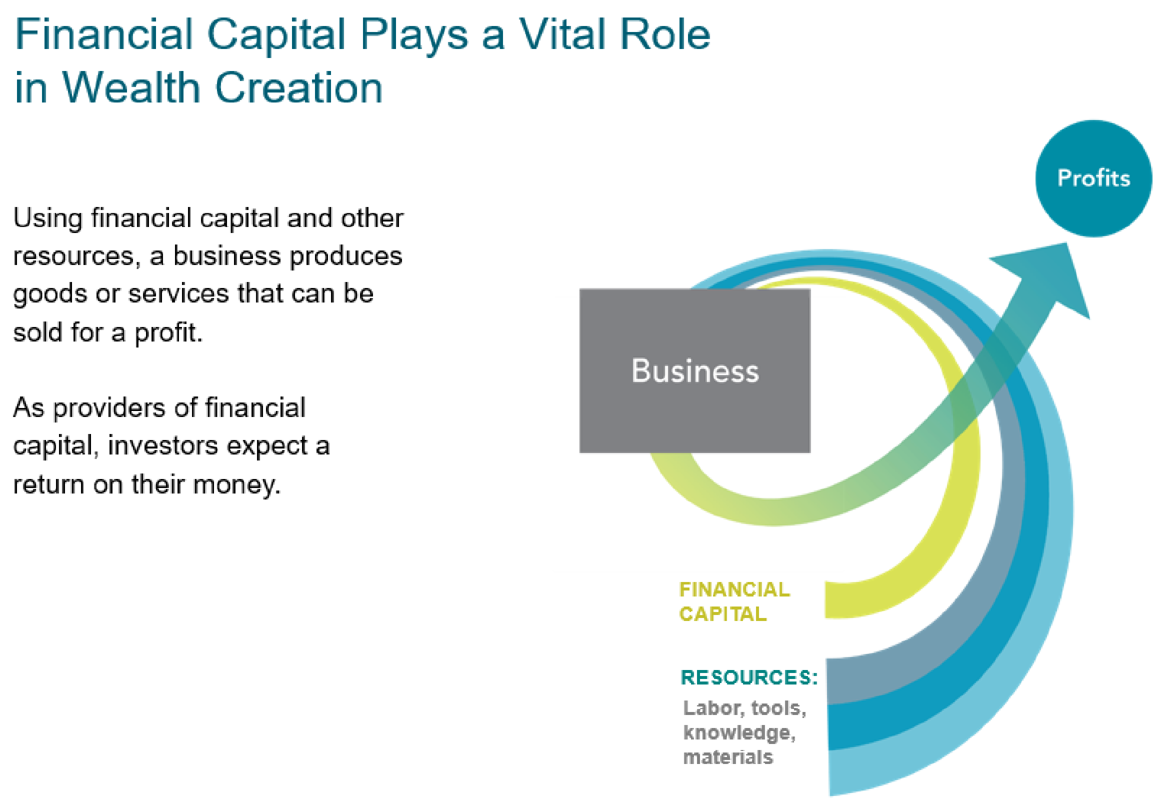
In **"Get Along, Little Market,"** we wrapped up a discussion about the benefits of diversified investing. The next step is to understand how to build your own diversified portfolio to more effectively capture long-term global market returns according to your willingness, ability, and need to take on investment risks.

This in turn calls for understanding why we can expect investment returns to begin with.

With all the excitement over the market's ups and downs in headline news, there is a key concept often overlooked:

Market returns are compensation for the financial capital you've provided, to fuel a world of human enterprise going on all around us, all the time.

For example, when you buy a stock or a bond, your capital is ultimately put to work by real-life businesses or agencies. Each of them expects to succeed at whatever it's doing, whether that's growing oranges, operating a municipality, or flying us to Mars. You, in turn, are not giving your money away. You mean to receive your capital back, and then some.



Investor Returns vs. Operational Success

A company hopes to generate profits. A government agency hopes to complete its work with budget to spare. Investors hope to earn generous returns. You would think that, when a company or agency succeeds, its investors would too. But actually, operational success is only one factor among many that influence expected returns.

This may seem counterintuitive. For example, even if a business is booming, you cannot necessarily expect to reap the rewards simply by buying stock in it. For one, if you buy in *after* a company is already thriving, you'll probably pay a premium price to get in on the action; future rewards may not be as generous as if you'd bought in sooner. (As we've covered before, by the time good or bad news is apparent, it's already reflected in higher-priced shares.)

The Fascinating Facts About Market Returns

So, what *does* drive expected returns? There are a number of factors involved, but some of the most powerful ones spring from those unavoidable investment risks we introduced earlier. As an investor, you can expect to be rewarded for accepting the risks that remain after you have diversified away the avoidable ones.

Consider two of the broadest market factors: **stocks (equities)** and **bonds (fixed income)**. Most investors start by deciding what percentage of their portfolio to allocate to each. Regardless of the split, you hope to be compensated for all of the capital you have put to work in the market. So why does the allocation matter?

When you buy a bond …

- You are **lending** money to a business or government agency, with no ownership stake.
- Your returns come from **interest** paid on your loan.
- If a business or agency defaults on its bond, you are closer to the **front** of the line of creditors to be repaid with any remaining capital.

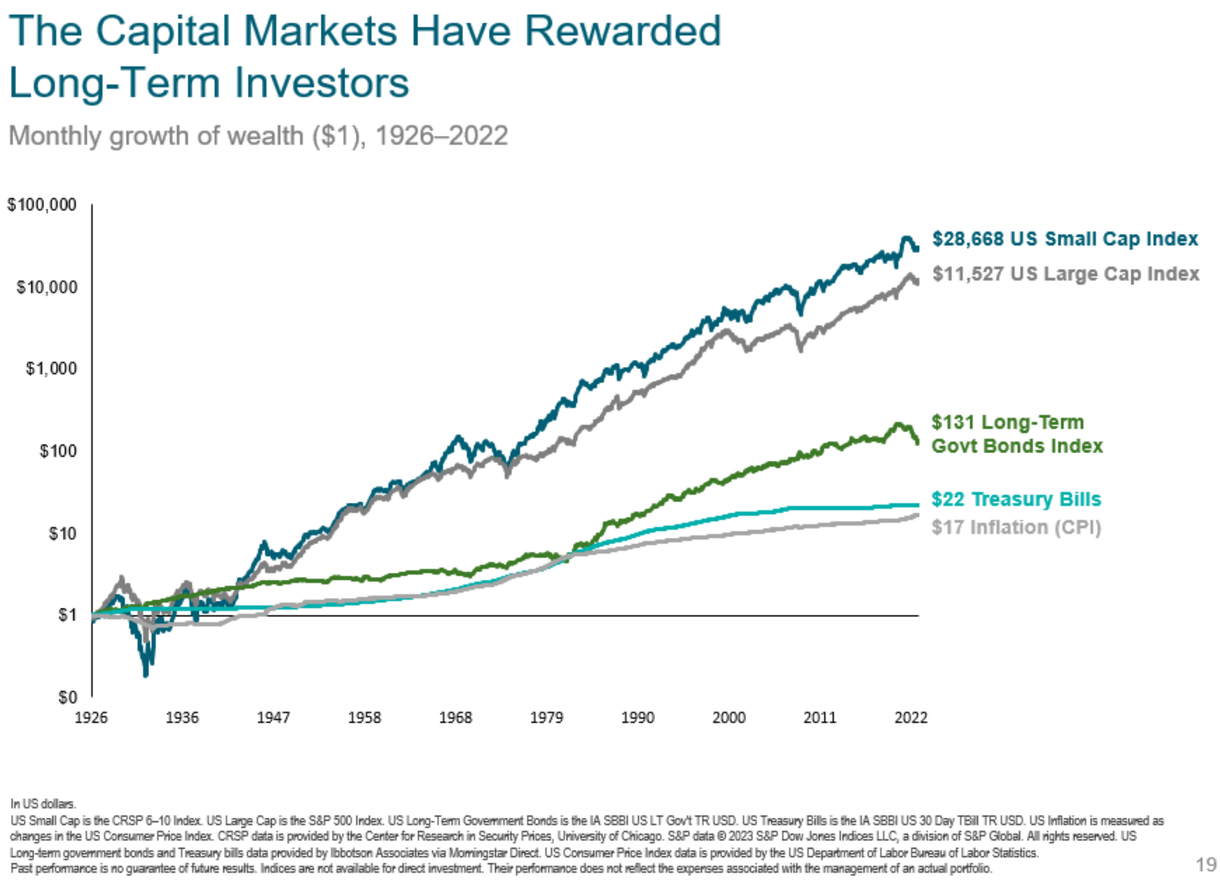
When you buy a stock …

- You become a **co-owner** in the business, with voting rights at shareholder meetings.
- Your returns come from **increased share prices** and/or **dividends**.
- If a company goes bankrupt, you are closer to the **end** of the line of creditors to be repaid.

In short, stock owners face more risk and uncertainty; they may not receive an expected return, or they may even lose their investment. This is one reason why investors *generally* demand higher returns from their stock holdings than from their bond investments, and why stock markets have *generally* delivered higher returns than bonds over time. (There are exceptions. A junk bond in a dicey venture can be as risky as any stock holding.)

This outperformance of stocks over bonds is called the **equity premium**. The precise amount of the premium and how long it takes to be realized is far from a sure bet. That's where the risk/reward element comes into play. But comparing stock vs. bond performance over time, it's easy to identify a pair of stock return characteristics:

> *In aggregate, stocks have handily pulled ahead of bonds over the long-run. But they've also exhibited a bumpier ride along the way. Higher expected returns AND higher risks show up in stock market returns.*



YOUR TAKE-HOME

Exposure to stock market investment risks has long been among the most important factors contributing to premium returns. Academic inquiry suggests there are also additional systemic factors contributing to higher returns. Next up, we'll continue to explore market factors and expected returns, and why an evidence-based approach is so critical to that exploration.

Insight #8: The Essence of Evidence-Based Investing

In **"The Business of Investing,"** we explored how markets deliver wealth to those who invest their financial capital in human enterprise. But, as with any risky venture, there are no guarantees. For any given investment, you might not earn the returns you're aiming for, or even recover your stake. This is one reason we strongly favor **evidence-based investing**.

It's easier to stick with your investment selections if you've used a rational methodology for choosing them.

This is especially important during volatile periods, when your hopes, fears, and other emotional reactions threaten to steer you off-course. So, what does evidence-based investing entail?

Alpha, Beta, and Sources of Returns

Since at least the 1950s, a "Who's Who" body of scholars has been studying portfolio management to answer key questions such as:

1. **What drives market returns (factors)?** Which factors (sources of return) appear to have persisted over time, around the world, and through various market conditions? Once we've identified a potential factor, are there rational reasons for why it's likely to persist moving forward? The more robust a factor appears to be, the more confidently we can tilt a portfolio toward or away from its risks and expected returns, based on personal financial goals.

2. **What drives portfolio performance (alpha vs. beta)?** When comparing the performance of one diversified portfolio to the next, how much of the difference is explained by different exposures to these return factors—no matter which individual securities are involved? In financial parlance, that's a portfolio's **beta**. Then, how much is explained by a portfolio manager's stock-picking or market-timing skills? That's their value-added **alpha**.

The More We Know …

In 1992, professors Eugene Fama and Kenneth French published their landmark paper, "The Cross-Section of Expected Stock Returns," in *The Journal of Finance*. The paper gave birth to the Fama-French Three-Factor Model, which laid the groundwork for most factor-based inquiry that has continued ever since (and helped earn Fama a Nobel Prize in Economics in 2013).

Building on Harry Markowitz's earlier Capital Asset Pricing Market (CAPM) model, the Three-Factor Model increased our ability to use beta to explain most of the difference between different portfolios' returns. While CAPM found market beta alone could explain around 70% of the differences, the Three-Factor Model, with three sources of beta, offered over 90% explanatory power. [Source]

In 2015, Fama and French published "A five-factor asset pricing model" in the ***Journal of Financial Economics***, which they also replicated in a 2017 paper looking at the same five factors in international markets.

Many other financial economists have added to the ongoing conversation about new and existing investment factors. How do they interact and contribute to a portfolio's returns? Which combination represents a "perfect" portfolio? For a thorough review, consider reading "In Pursuit of the Perfect Portfolio," by Andrew Lo and Stephen Foerster. The authors reach a telling conclusion (emphasis ours):

> *"We can see that* ***the idea of diversification of a portfolio as a means to reduce risk is universally accepted, but this may be the only thing our experts fully agree on****. Even an idea as fundamental as the market portfolio, a portfolio of all assets in the global market, is only viewed as a starting point for the Perfect Portfolio by most of our experts."*

Bottom line, the more we understand factor investing, the harder it has become to believe that the pursuit of extra, alpha-generated returns can add consistent value—especially ***after*** the costs involved and ***beyond*** what already is available through the beta returns found in a low-cost, well-structured, evidence-based portfolio.

Investors who focus on beta over alpha returns can then concentrate on which factors combine into their own "perfect" portfolio, based on their personal financial goals and risk tolerances. As Fama has succinctly suggested:

> *"Pick your risk exposure, and then diversify the hell out of it."*

We'll explore some of the key factors involved in our next section, **"Factors That Figure in Your Evidence-Based Portfolio."** First, let's discuss the difference between the far less frequent academic milestones that contribute to factor investing, versus a barrage of industry analyses. While both can add value, they do so in different ways.

The Rigors of Academic Inquiry

In academia, rigorous research calls for far more than a limited look at a few in-house spreadsheets. It typically demands:

A disinterested outlook: Rather than beginning with a conclusion and then figuring out how to prove it, purely academic inquiry is conducted with no agenda other than to explore intriguing phenomena and report the results of the exploration.

Robust data analysis: An academic analysis should be free from weaknesses such as:

- **Suspect data** that is too short-term, too small of a sampling to be significant, "cherry picked" to prove a point, or otherwise likely to taint the results.
- **Survivorship bias,** in which returns from funds that were closed during the study period (usually because of poor performance) are omitted from the results.
- **Comparing apples to oranges**, such as using the wrong benchmark against which to assess a fund's or a strategy's "success" or "failure."
- **Insufficient or inappropriate use of advanced mathematics** like multi-factor regression, which helps pinpoint critical factors among a profusion of possibilities.

Repeatability and replicability: Academic research calls for results that can be repeated and replicated by the original authors and/or others across multiple environments. For example, do the outcomes only occur in the U.S., or are the same phenomena found elsewhere? This strengthens the reliability of the results and helps ensure they weren't just random luck.

Peer review: Scholars must publish their detailed results, data, and methodology, typically within an appropriate, peer-reviewed academic journal. Where transparency is tantamount, there should be no such thing as "proprietary information." Others need to be able to scrutinize the work, and either agree that the results are sound or rebut them with counterpoints.

Financial Scholar vs. Financial Professional

Building on this level of academic inquiry, fund companies and other financial professionals 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?*

As in any discipline, it's academia's interest to discover the possibilities; it's our interest to figure out what to do with the information. For example, as technology marches on, we've been able to add to real-life portfolios certain investment factors that were initially out of reach (when appropriate for individual circumstances). Emerging countries' stocks and bonds is one example. So are some holdings beyond traditional stocks and bonds.

This is one reason it's important to maintain the roles of financial scholar and financial professional, to ensure each of us are doing what we can do best in our fields. It's also why "studies," "analyses," "papers," and other insights generated ***outside*** of academia typically require a higher level of scrutiny before accepting the results and incorporating them into our investment strategies.

YOUR TAKE-HOME

As is the case in any healthy scholarly environment, those contributing to the lively inquiry about what drives market returns are rarely of one mind. Still, when backed by solid methodology and credible consensus, an evidence-based approach offers the best opportunity to:

- Advance and apply well-supported findings
- Eliminate weaker proposals
- Strengthen our ability to build and preserve long-term wealth according to our unique goals

Next, we'll continue to piece together our exploration of market factors and expected returns.

Insight #9: Factors That Figure in Your Evidence-Based Portfolio

In **"The Essence of Evidence-Based Investing,"** we explored what we mean by evidence-based investing. Grounding your investment strategy in rational methodology strengthens your ability to stay on course toward your financial goals, as we:

1. **Assess** existing factors' capacity to offer expected returns and diversification benefits
2. **Understand** why such factors exist, so we can most effectively apply them
3. **Explore** additional factors that may complement our structured approach

Assessing the Historical Evidence
An accumulation of studies dating back to the 1950s through today has identified **three stock market factors** that have formed the backbone for evidence-based portfolio builds over time:

1. **The equity premium**: Stocks (equities) have returned more than bonds (fixed income), as we described in **"The Business of Investing"**
2. **The small-cap premium**: Small-company stocks have returned more than large-company stocks.
3. **The value premium**: 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.

This is the trio of factors described in the Fama-French Three-Factor Model we discussed in **"The Essence of Evidence-Based Investing."** Similarly, academic inquiry has identified two primary factors driving fixed income (bond) returns:

1. **Term premium**: Bonds with distant maturities or due dates have returned more than bonds that come due quickly.
2. **Credit premium**: Bonds with lower credit ratings (such as "junk" bonds) have returned more than bonds with higher credit ratings (such as U.S. treasury bonds).

Understanding the Evidence
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 a long-term portfolio) or is more likely to disappear upon discovery.

Explanations for why persistent factors linger usually fall into two broad categories: **risk-related** and/or **behavioral**.

A Tale of Risks and Expected Rewards
Persistent premium returns are often explained by accepting market-related risks that cannot be diversified away, in exchange for pursuing their expected rewards.

For example, it's presumed that value stocks are inherently riskier than growth stocks, relative to their underlying worth.

In "Value Premium Lives!" financial author Larry Swedroe explains:

> *"Among the risk-based explanations for the [value] premium are that value stocks contain a distress (default) factor, have more irreversible capital, have higher volatility of earnings and dividends, are much riskier than growth stocks in bad economic times, have higher uncertainty of cash flow, and … are more sensitive to bad economic news."*

Or, as Fortunes & Frictions financial blog author and advisor Rubin Miller describes:

> *"The 'value' is the price investors must pay for the company. … Investors require lower prices to be willing to buy Turkish stocks over U.S. stocks, just as a consumer might*

require a lower price for buying a taco versus a pizza. The price has to clear for the purchase, and so it reflects value."

A Tale of Behavioral Instincts
When it comes to price-setting, there are also behavioral foibles at play. That is, our basic survival instincts often play against thoughtful reason. As such, the market may favor those who avoid acting on damaging gut reactions to breaking news.

Once we complete our exploration of market return factors, we'll explore the fascinating field of behavioral finance. Suffice it to say for now, this "human factor" can contribute significantly to your ultimate success or failure as an evidence-based investor.

YOUR TAKE-HOME

Factors that figure into market returns may be a result of taking on added risk, avoiding the self-inflicted wounds of behavioral biases, or a mix of both. Regardless, existing and unfolding academic inquiry on market return factors continues to hone our strategies for most effectively capturing expected returns according to your personal goals. The same inquiry continues to identify other promising factors that may augment our efforts. We will turn to these next.

Insight #10: What Has Evidence-Based Investing Done for Me Lately?

In **"Factors That Figure in Your Evidence-Based Portfolio,"** we introduced three key stock market factors (**equity**, **value** and **small-cap**) plus two more for bonds (**term** and **credit**). Combined, these five factors have long formed a backbone for many evidence-based portfolios.

Does this mean we have everything we need to know to build better and better portfolios? Hardly!

The Benefits of Evolving Evidence
Continued research has helped us identify additional market factors at play, with additional potential premiums. Three of the more prominent among these include **investment**, **profitability** and **momentum**:

- **The investment factor**: Companies that reinvest heavily to sustain profitability tend to deliver lower returns than those that distribute more net cash flow to shareholders.
- **The profitability factor**: Companies with higher profitability have delivered premium returns over those with lower profitability.
- **The momentum factor**: Stocks that have performed well or poorly in the recent past tend to continue to do the same for longer than random chance seems to explain.

Ongoing analysis has also helped us fine tune how to judiciously pair new and existing factors. For example, as described in a Dimensional Fund Advisors 2023 paper, "The Evolution of Small

Cap Investing," it appears small-cap investing may be improved by avoiding downward momentum when trading, and by filtering out small companies with relatively low profitability, heavy reinvestment costs, and/or minimal cash flows.

Factoring for Alternatives

Beyond stock and bond market investments, another line of ongoing inquiry involves looking at investable assets from other markets.

Where might we identify investment premiums that can be cost-effectively mined, ***after*** taxes and trading costs? Where evidence suggests they exist, such as in alternative lending and reinsurance markets, we may be able to use these assets to further diversify existing investment portfolios. In "Reducing the Risk of Black Swans," Larry Swedroe and Kevin Grogan explain:

> *"Like with factors, adding alternatives that represent unique sources of risk and return and that offer equity-like expected returns should allow us to lower a portfolio's allocation to market beta (the riskiest factor), thus creating portfolios with even greater risk parity and even more diversified sources of risk. Because each of the alternatives we have discussed shows low correlations to other portfolio assets, we should end up with a more efficient portfolio — one with similar returns but less risk."*

Sustainable Investing

These days, many investors would also like their investments to contribute, or at least cause less harm to the greater good, while still delivering decent, if not stellar returns.

Ongoing research has helped here as well. An evidence-based outlook helps confirm when a sustainable investing theory appears to be robust in reality. It also suggests when a promising approach may not pencil out as hoped for, no matter how well-intended it may be.

The Big Picture on Evidence-Based Investing

We acknowledge, we've just thrown a lot of information at you in a compact space. Here are four best practices for incorporating new and existing investment factors into your investing:

1. **Take your time**: While a "new" factor may or may not have existed for some time, our ability to isolate them is more recent. The evidence-based community has had less time to assess their staying power. Time will tell how persistent they may be. ***Favor factors with longer, broader, and more durable evidence.***

2. **Consider the costs**: As touched on before, even if a factor exists in theory, that doesn't mean it can be implemented in real life. ***We must be able to capture an expected premium without generating costs beyond its worth.***

3. **Balance dueling factors**: Sometimes, it can 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**.**

4. **Identify your priorities**: How will you balance a desire to invest efficiently *and* sustainably? Equipped with ***solid evidence in an often emotionally charged arena***, you will be better positioned to make the rational choices and informed decisions that best fit your heartfelt values and financial goals.

5. **Don't forget to diversify**: As we covered in Part II, avoid concentrating too much of your wealth in any given factor, no matter its appeal. ***Ideal portfolios are still tempered by global diversification***, based on the risk and return expectations each component has to offer.

How We Can Help

With so much at stake, no wonder opinions vary on when, how, or even if various factors should play a role in your own portfolio management.

This is where we believe an evidence-based advisor relationship is critical to your wealth and well-being.

Exciting new investments that erupt overnight based on scant evidence and concentrated events are unlikely reasons to alter a durable investment discipline. Instead, it's important to reflect on thoughtful questions such as:

- Have the results been replicated across factors, over time, and around the world?
- Is there robust analysis, not only from industry insiders but from objective academics?
- Has it survived extensive peer review, if not unscathed, at least free of mortal wounds?

All of this takes time. And yet, one need only glance at daily headlines to become awash in ideas from competing, often conflicting voices of authority. Being informed is helpful; drowning in information overload is not. Too much noise creates perpetual uncertainty, which can strip away all the emotional and performative advantages of a patient, disciplined approach.

We would be happy to speak with you individually about the latest evidence on factor investing, and how to best apply it to your own investment strategies.

YOUR TAKE-HOME

By considering each new potential factor according to strict guidelines, our aim is to extract the diamonds of promising new evidence-based insights from the considerably larger piles of random data. We feel you are best served by heeding those who take a similar approach with their advice. Next, we turn to a factor we have mentioned but have yet to explore, even though it may be the most influential one of all: you and your financial behaviors.

EVIDENCE-BASED INVESTMENT INSIGHTS
PART IV: BEHAVIORAL INFLUENCES

Insight #11: The Human Factor in Evidence-Based Investing

In **"What Has Evidence-Based Investing Done for Me Lately?"** we wrapped up our conversation about evidence-based investing in stock, bond, and potential alternative markets. We also described how to extract the diamonds of promising new evidence-based insights from the overwhelming piles of noisy news.

We turn now to the final, and arguably most significant factor in your evidence-based investment strategy: **the human factor**. In short, your own impulsive reactions to market events can easily outweigh any other market challenges you face—occasionally for better, but usually for worse.

Exploring the Human Factor
Despite everything we know about efficient capital markets and all the 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 higher reasoning. Instead, a brew of chemically generated instincts and emotions often spur us to leap long before we have time to look.

Rapid reflexes can serve us well. Our prehistoric ancestors depended on snap decisions when responding to predator and prey. Today, our child's cry still brings us running, no questions asked; their laughter elicits an outpouring of unconditional love (and oxytocin).

In finance, however, where the coolest heads prevail, many of our base instincts cause more harm than good. If you don't know it's happening or don't manage it when it occurs, your brain's chemistry can trick you into believing you're making entirely rational decisions when you are in fact acting on impulse.

Put another way by neurologist and financial advisor William J. Bernstein, MD, PhD:

"Human nature turns out to be a virtual Petrie dish of financially pathologic behavior."

Behavioral Finance, Human Finance
To study the relationships between our psychological and financial health, there is another field of evidence-based inquiry known as **behavioral finance**.

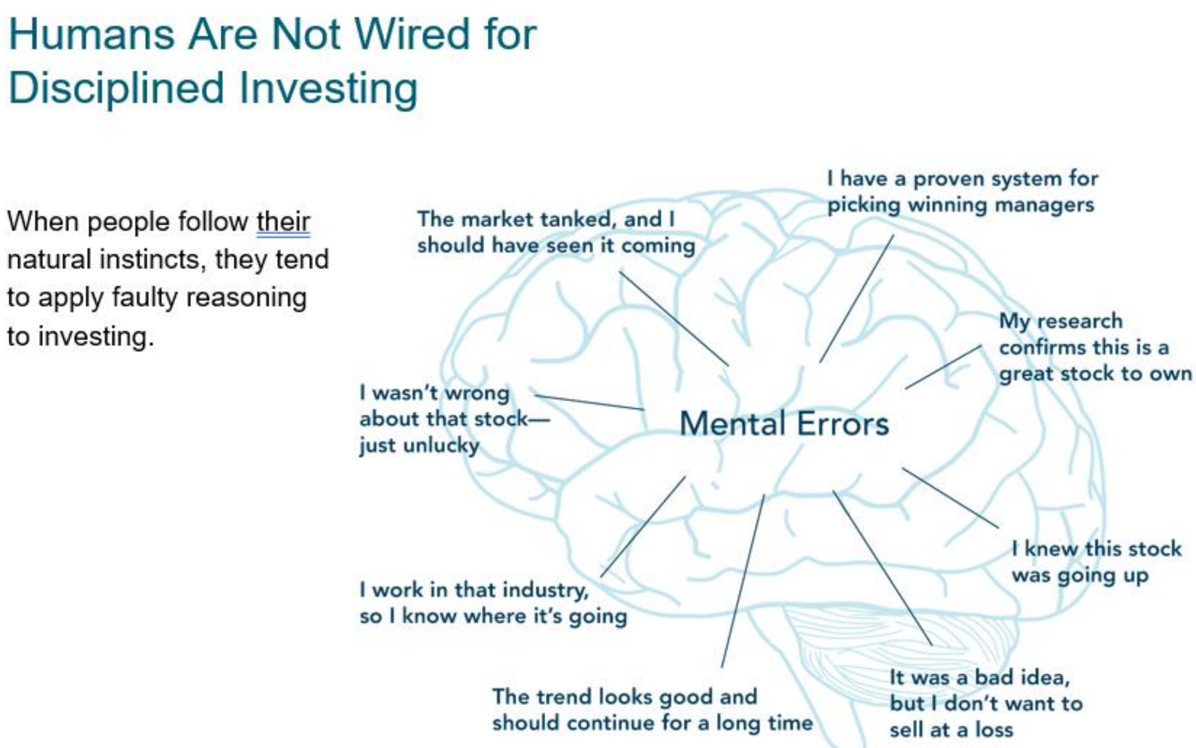
What happens when we stir up that proverbial Petrie dish of financial pathogens? Daniel Crosby's "The Behavioral Investor" provides a guided tour of various academic findings that describe what's happening inside our heads to generate our financial behaviors:

"Our brains have remained relatively stagnant over the last 150,000 years, but the complexity of the world in which they operate has exponentiated. … It would be a gross understatement to say that our mental hardware has not caught up to the times."

To offer a couple examples:

- **When markets tumble:** Your brain's *anterior insula* lights up in its mammalian depths, just as it does when you experience physical pain. Fear drives the needle to ***"Sell!"***
- **When markets unexpectedly soar:** Your *nucleus accumbens* activates your brain's arousal center, convincing you that you had best act soon to seize the day. ***"Buy!"***

An Advisor's Greatest Role: Managing the Human Factor
Beyond the market-timing instincts that lead you astray, your brain cooks up plenty of other sneaky biases to alter your investment activities. To name a few (which we'll cover next), there's herd mentality, recency, confirmation bias, overconfidence, loss aversion, and sunken costs.



Your Take-Home

Managing the human factor in investing is another way an evidence-based financial practitioner can add value. By spotting where you may be falling prey to a behavioral bias, we can hold up an evidence-based mirror, so you can see it too. Next, we'll explore some of the more potent behavioral biases every investor faces.

Insight #12: Behavioral Biases—What Makes Your Brain Trick?

In **"The Human Factor in Evidence-Based Investing,"** we explored how our deep-seated "fight or flight" instincts generate an array of behavioral biases that can trigger unsound investment decisions—such as buying when markets are high and selling when they are low. Here, we'll familiarize you with a half-dozen additional biases, and how to recognize the signs of these behavioral booby traps.

Behavioral Bias #1: Herd Mentality
Herd mentality is what happens when you see a market movement afoot and you decide to join the stampede. The herd may be hurtling toward what seems like a hot buying opportunity, such as a run on a stock or stock market sector. Or it may be fleeing a widely perceived risk, such as a pandemic, or a country in economic turmoil. Either way, as we covered in "**Ignoring the Siren Song of Daily Market Pricing**," following the herd puts you on a dangerous path toward buying high, selling low, and incurring unnecessary costs along the way.

Behavioral Bias #2: Recency
Even without a herd to spur you on, your long-term plans are at risk when you give recent information greater weight than the long-term evidence warrants. From our earlier section, "**The Business of Investing,**" we know that stocks have historically delivered premium returns over bonds. And yet, whenever stock markets dip downward, we typically see recency at play, as droves of investors sell their stocks to seek "safe harbor." Vice-versa when bull markets are on a tear: Investors pile in, chasing after past returns.

Behavioral Bias #3: Confirmation Bias
Confirmation bias is the tendency to favor evidence that supports our beliefs and gloss over that which refutes it. We'll notice and watch news that supports our belief structure; we'll discount that which might prove us wrong. Of all the behavioral biases on this and other lists, confirmation bias may be the greatest reason why the rigorous, peer-reviewed approach we described in "**The Essence of Evidence-Based Investing**" is so critical to objective decision-making. Without it, your mind wants you to be right so badly, it may rig the game against your own best interests.

Behavioral Bias #4: Overconfidence
In "Your Money & Your Brain," Jason Zweig describes overconfidence in action when he asks: "How else could we ever get up the nerve to ask somebody out on a date, go on a job interview, or compete in a sport?" In these and similar scenarios, a degree of overconfidence can be good. But it often becomes dangerous in investing. Overconfidence tricks us into believing we can consistently beat the market by being smarter or luckier than average. In reality, as we described in "**You, the Market, and the Prices You Pay**," it's best to patiently participate in the market's expected returns, instead of trying to go for broke—potentially literally.

Behavioral Bias #5: Loss Aversion

As a flip side to overconfidence, we also are endowed with an over-sized dose of loss aversion. In fact, academic insights suggest we dislike the thought of losing money about twice as much as we enjoy the prospect of receiving more of it.

One way that loss aversion plays out is when investors prefer to sit in cash or bonds during bear markets, or even when stocks are going up but a correction "feels" overdue. The evidence clearly suggests you are likely to end up with higher long-term returns by at least staying put in the market, if not bulking up on stocks while they're relatively cheap. But even the *potential* for future loss can be a more compelling stimulus than the *higher likelihood* of long-term returns.

Behavioral Bias #6: Sunken Costs
We investors also have a terrible time admitting defeat. When we buy an investment and it sinks lower, we're reluctant to lose our initial stake. Anchoring, which is another bias, may convince us to avoid selling anything until we can at least recover our sunken cost.

In a data-driven strategy (and life in general), the evidence is strong that this sort of logic leads people to throw good money after bad. In the long run, it's essentially irrelevant whether an individual holding in your portfolio has gone up or down. By refusing to let go of it ***once it no longer suits your greater purposes***, an otherwise solid investment strategy gets weighed down by emotional choices and debilitating distractions. The better question guiding when to hold and when to sell is whether or not a holding continues to makes sense within your overall portfolio.

YOUR TAKE-HOME

So, there you have it. Six behavioral biases, with many others worth exploring. We recommend you take the time to learn more. First, it's a fascinating field of inquiry. Second, it can help you become a more confident investor. Following are a few of our favorite books on the subject:

- "Predictably Irrational," Dan Ariely
- "Why Smart People Make Big Money Mistakes," Gary Belsky, Thomas Gilovich
- "The Behavioral Investor," Daniel Crosby
- "Quit," Annie Duke
- "Stumbling on Happiness," Daniel Gilbert
- "Thinking, Fast and Slow," Daniel Kahneman
- "Nudge," Richard Thaler, Cass Sunstein
- "Your Money & Your Brain," Jason Zweig

The insights you'll discover are likely to enhance other aspects of your life as well. But be forewarned: Even once you are aware of your behavioral stumbling blocks, it's still difficult to avoid tripping on them. By definition, your instincts fire off lightning-fast reactions in your brain well before logical thinking kicks in.

This is one reason why we suggest working with an objective advisor, to help you see and avoid the collisions that your own myopic vision might miss.

CONCLUSION

We hope you've enjoyed reading our series as much as we've enjoyed sharing it with you. To wrap, let's recap the key take-home messages from each insight covered.

1. **You, the Market, and the Prices You Pay:** Understanding group intelligence and its effect on efficient market pricing is a first step toward more consistently buying low and selling high in free markets.

2. **Ignoring the Siren Song of Daily Market Pricing:** Rather than trying to react to the market's ever-changing conditions and cut-throat competition, invest your life savings according to factors over which you can expect to have some control.

3. **Financial Gurus and Other Fantastic Creatures:** Avoid paying "experts" to forecast your future moves for you. The evidence indicates that their ability to persistently beat the market is more likely to be fleeting than fantastic.

4. **The Full-Meal Deal of Diversification:** In place of speculative investing, diversification is among your most important allies. Spreading your assets around dampens unnecessary risks.

5. **Managing the Market's Risky Business:** All risks are not created equal. Minimize concentrated risks (timing markets and picking individual stocks) by diversifying away from them. Maximize long-term returns by holding large swaths of the market, building in systemic investment risks. Diversification helps manage the necessary risks involved.

6. **Get Along, Little Market:** Diversification can also create a smoother ride through bucking-bronco markets. It helps you stay in your seat and on track toward your personal goals.

7. **The Business of Investing:** At their essence, market returns are compensation for providing the financial capital that feeds the global human enterprise going on all around us.

8. **The Essence of Evidence-Based Investing:** What separates solid evidence from flimsy findings? Evidence-based insights demand scholarly rigor, including an objective outlook, robust peer review, and the ability to reproduce similar results under varying conditions.

9. **Factors That Figure in Your Evidence-Based Portfolio:** Building on 70+ years of robust evidence-based inquiry to date, three key stock market factors (equity, small-cap, and value) plus a couple more for bonds (term and credit) have formed a backbone for many evidence-based portfolio builds.

10. **What Has Evidence-Based Investing Done for Me Lately:** Building on our understanding of which market factors seem to matter the most, we continue to heed unfolding evidence on best investment practices.

11. **The Human Factor in Evidence-Based Investing:** The most significant factor for investors may be the "human factor." Behavioral finance helps us understand that our instinctive reactions to market events can overtake our logical resolve as reasoned investors.

12. **Behavioral Biases—What Makes Your Brain Trick:** Continuing our exploration of behavioral finance, we share a half-dozen deep-seated instincts that can trick you into making significant money management mistakes. Here, perhaps more than anywhere else, an objective advisor can help you avoid mishaps that your own myopic view might miss.

YOUR (FINAL!) TAKE-HOME

When we introduced our 12 Essential Ideas for Building Wise Wealth, we promised to skip the technical jargon, replacing it 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. **Embrace 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 play *with* rather than *against* the market and its expected returns.

3. **Manage your behavioral biases.** Since you cannot eliminate the emotions you experience as an investor, you must remain vigilant to how often your instincts tempt you off-course, and manage your actions accordingly. (Hint: A professional advisor can add huge value here.)

How have we done in our goal to inform, without overwhelming you? We would love to have the opportunity to continue the conversation in person. Please be in touch with us today.

Questions and More Information, contact:

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