

Portfolio Management: A Tale of Two Strategies

Asked to imagine a professional portfolio manager at work, many readers might picture someone talking into two phones at once, frantically taking notes, watching the financial news while keeping an eye on jittery computer screens that constantly blink red and green, and slamming the keyboard whenever one of those computer blinks shows even a miniscule drop in stock price.

It's a cliché—but it's still relevant when you consider that institutional portfolios, mutual funds included, typically own more than 100 stocks with annual portfolio turnover ratios greater than 100 percent. Most portfolio managers buy and sell their entire portfolio every twelve months. They are constantly active. Today, portfolio management is a never-ending effort to constantly trade stocks with a faint hope of not only beating the stock market but also beating it with the least amount of volatility relative to the market.

To stay in the game, portfolio managers must outperform the market. On any given day, a client might apply the obvious measuring stick: "Is my portfolio beating the market?" If the answer is yes, the portfolio manager keeps the relationship. As a result, most portfolio managers are fixated on advice from economic forecasters and market strategists, which they use to try to stay one step ahead of changing stock prices in the weeks and months ahead.

This investment approach has generated dismal track records. As a result, assets under management for long-only equity portfolio managers have steadily declined year after year. Many investors have sold their active portfolios and bought passive index funds. Others have invested in hedge funds, where managers swear they have cracked the code on how to beat the market in the short run. A growing battalion of institutional and individual investors are embracing private equity firms, which promise that they can deliver competitive equity returns with no market volatility—an easy trick, since the assets are not priced daily.

Warren Buffett, the quintessential value investor and focus-portfolio manager, is far removed from the stereotypical frenzy of institutional portfolio managers. He moves with slow and deliberate calm born of great confidence. His accomplishments and performance record are legendary.

Buffett has long defined his portfolio management approach as *focus investing*. This is a remarkably simple idea. Yet, like most simple ideas, focus investing rests on a complex foundation of interlocking concepts, including physics, biology, mathematics, psychology, sociology, and philosophy.

The essence of focus investing is this: choose a few stocks at reasonable prices that are likely to produce above-average returns over the long haul. Concentrate the bulk of your investments in these stocks. Have the emotional fortitude to hold these investments through any short-term market gyrations.

Over the years, Warren Buffett has developed a method for selecting companies worthy of investment. His strategy rests on common sense: if the company itself is doing economically well and is managed by smart people, eventually, its stock price will reflect its intrinsic value. Buffett thus devotes most of his attention *not* to forecasting stock prices but rather to measuring the economic returns of his underlying businesses.

This is not to suggest that analyzing a company—uncovering all the information that reflects its economic value—is particularly easy. It does take some work. Valuing companies is more difficult than simply calculating a price-to-earnings ratio. Even so, Buffett has often said that the homework needed to value companies

requires no more energy than other investors expend on trying to stay on top of the stock market, and the results are infinitely more useful.

In its current state, active portfolio management is locked in a tug-of-war between two competing strategies: the standard investment management approach defined by Modern Portfolio Theory (MPT) and a focus investing approach intellectually linked to the teachings of value investing. As we shall see, these portfolio management strategies are poles apart.

The Advent of Value Investing

Nearly 100 years ago, value investing took root at Columbia Business School. The seed was planted in the fall of 1927, when a young Ben Graham returned to his alma mater to teach a course on security analysis.

He was born Benjamin Grossman in London in 1894, to a Jewish family of merchants who imported china and bric-a-brac from Austria and Germany. In 1895, Benjamin's father moved his family to New York to open an American branch of the business. It was there that the family changed its name to Graham. Tragically, Benjamin's father died young, leaving his family penniless and his mother alone to raise Benjamin and his two brothers.

Despite the setback, Graham's mother kept the family together. Ben Graham attended the prestigious Boys High School in Brooklyn, then enrolled at Columbia University. A brilliant scholar, he mastered mathematics and philosophy by consuming the major classical works in Greek and Latin. His longtime friend Irving Kahn said that Graham's "speed of thought was so great that most people puzzled at how he could resolve a complicated question directly after having heard it." Graham, Kahn continued, "had another extraordinary characteristic in the breadth and depth of his memory." He could read Greek, Latin, German, and Spanish. Without formally studying the language, Graham once translated "a Spanish novel into literary English so professionally it was accepted by an American publisher."¹

Graham graduated from Columbia University in 1914 as class salutatorian, second in his class, and was immediately offered teaching jobs by Columbia's philosophy, mathematics, and English departments. Concerned about the low starting salaries in academia (he needed to support his siblings and widowed mother), Graham asked Columbia's dean, Frederick Keppel, for advice. Keppel steered Graham to Wall Street, where he joined Newburger, Henderson, and Loeb as an assistant in the bond department.

Graham soon grew restless. He started as a clerk, then trained to be a salesman. But what he really wanted to do was research potential investments, not sell bonds. Despite lacking any formal training in economics or accounting, Graham began researching railroad bonds and writing research reports.²

A report on the Missouri Pacific Railroad caught the eye of a partner at J.S. Bache & Co., a respected New York Stock Exchange firm that quickly offered Graham a job as a statistician with a 50 percent salary increase. Graham told Newburger that although he felt a sense of loyalty to the firm, he was not motivated to be salesman. Newburger countered with its own pay raise. It was not quite 50 percent, but it included a sweetener: the opportunity for Graham to start his own statistical department. He decided to stay and pursue investment research at the same time.

In the early 1900s, serious investing meant buying bonds. Common-stock investing was considered a speculative game that was based on insider information, not financial data. Nonetheless, Graham began writing articles for *The Magazine of Wall Street*, a newsletter with investment tips for stocks as well as bonds. He soon developed a following. He next published a pamphlet called *Lessons for Investors*, in which he argued, "If the market value of a stock is substantially less than its intrinsic value, it should have excellent prospects for an advance in price." It was the first time the term intrinsic value appeared in the financial press.³

Graham left Newburger in 1923 to start his own investment firm. Two years later, he hired Jerome Newman and formed Graham-Newman Corp., which lasted until 1956. Graham's early investment results were promising. Much of his portfolio was

hedged or in arbitrage situations, which dampened the steep losses of the 1929 crash. But in 1930, Graham tiptoed back into the stock market—this time unhedged—believing stocks had hit bottom. When the market dropped again, Graham was nearly ruined for the second time in his life.

But all was not lost. Years before the stock market crash, Graham had begun teaching a night class on investing. The Columbia University catalog promised that a Wall Street investment professional would teach advanced security analysis on Monday evenings in Schermerhorn Hall, room 305. The class description read, “Investment Theories subject to practical tests. Origin and detection of discrepancies between price and value.” In this class, Graham coined the term *security analysis* and replaced the Wall Street job title of statistician with a new name: security analyst.⁴

Graham had one stipulation in agreeing to teach the class: someone had to take detailed notes. David Dodd, a young finance professor with recent degrees from the University of Pennsylvania (where he earned a BS) and Columbia University (where he earned an MS) volunteered. Dodd’s notes formed the substance of the pair’s seminal book, *Security Analysis*. When it appeared in 1934, *New York Times* reviewer Louis Rich wrote, “It is a full-bodied, mature, meticulous, and wholly meritorious outgrowth of scholarly probing and practical sagacity. If this influence should ever exert itself, it will come about by causing the mind of the investor to dwell upon the securities rather than the market.”⁵

Although Ben Graham and David Dodd will be forever connected through *Security Analysis*, they never taught a class together. In Columbia’s fall semester, David Dodd based his class, “Investment Management and Strategy,” for first-year graduate students, on *Security Analysis*. In the spring, Graham taught a smaller, more intimate investment seminar for only twenty students. For his seminar, Graham also took insights from *Security Analysis*, but with the added benefit of connecting the lessons to stocks currently trading in the market.

Timing was part of the enduring significance of *Security Analysis*. This book appeared just a few years after the 1929 stock

market crash, a world-changing event that profoundly influenced Graham's ideas. While other academicians sought to explain the financial catastrophe, Graham helped people regain their footing and proceed with a profitable course of action.

Graham explained that the danger in 1929 was not that speculation had tried to masquerade as investing, but rather, that investing had fashioned itself into speculation. He noted that optimism based on history was both rampant and dangerous. Encouraged by the past, investors imagined a coming era of continued growth and prosperity. In doing so, they began to lose their sense of proportion about price. Graham said people were paying high prices for stocks without any sense of mathematical expectation; stocks cost any price that the optimistic market quoted. As the height of this insanity, the line between investment and speculation had blurred.

As an antidote to the risky behavior that is speculation, Graham proposed an investment approach for selecting stocks that relied on what he called the *margin of safety*. He reasoned that a margin of safety existed for a common stock if its price was below its intrinsic value. How does one determine intrinsic value? Again, Graham started his answer with a no-nonsense definition: intrinsic value is "that which is determined by the facts." These facts include a company's assets, earnings, and dividends—in other words, quantitative factors.

Graham decried the emphasis routinely placed on qualitative factors. To the extent investors move away from hard assets and toward intangibles, he believed, they become prone to a potentially risky way of thinking. Opinions about management and the nature of the business are not easily measured, and that which is difficult to measure can be badly measured. But if a greater amount of a company's intrinsic value is the sum of measurable, quantitative factors, then Graham figured an investor's downside is more limited. Fixed assets, dividends, and current and historical earnings are all measurable. Each of these factors can be expressed in numbers, making it a source of mathematical logic backed by historical results.

Interestingly, the term *margin of safety* did not originate with Graham. He discovered the term in *Moody's Manual of Investments*. Indeed, when Graham called for a margin of safety in stock analysis, he applied the same methodology he used in analyzing bonds. There is a "close similarity between the techniques of investing in common stocks and that of investing in bonds," he wrote. "The common-stock investor also [wants] a stable business and one showing an adequate margin of earnings over dividend requirements."⁶

Graham reasoned that the larger the margin of safety, the less downside risks an investor would face in the event of a market sell-off or from a company's deteriorating prospects. Graham equated risk with a margin of safety. By paying a price below intrinsic value, an investor reduced risk. Conversely, an investor who paid a price above a company's intrinsic value increased risk and operated with no margin of safety. Graham believed that paying too high a price for earnings, dividends, and assets is an investor's greatest danger. The danger of overpaying can be found not only with investing in good companies but also with investing in low-quality companies that are priced high because business conditions are temporarily but not permanently favorable.

Two golden rules stand at the heart of value investing. Rule number one is *Don't lose*. Rule number two is *Don't forget rule number one*. Graham's investing method, which creates a large margin of safety—the difference between a company's current prospects and its stock price—is critical for avoiding financial ruin. Graham hoped that the lessons learned from reading *Security Analysis* would protect investors from the damaging financial losses he himself had experienced.

In the first edition of *Security Analysis*, Graham and Dodd did not address portfolio management. They waited until the third edition, published in 1951, to discuss the concept of portfolio management. Graham and Dodd agreed that portfolio diversification was essential, writing "Diversification is almost a necessary adjunct of the margin of safety (buying below intrinsic value) idea." Therefore, they believed "a group of twenty or more such issues

will average out the individual favorable and unfavorable developments. Thus, if the margin of safety is soundly calculated it should have the full opportunity to create profits in the aggregate.”⁷ Graham’s “twenty or more” issues would be considered a focus portfolio, compared to today’s institutional portfolios.

As far back as 1917, when Graham wrote his first article for *The Magazine of Wall Street*, he held a steadfast belief that there was a better way to think about investing, and it did not involve speculating about what the next person was going to do with their shares. Graham believed that in the world of investing, the temperament of a businessperson was far superior to that of a speculator. Having said this, he was dismayed to “see how many capable businessmen try to operate in Wall Street with complete disregard of all sound principles through which they have gained success in their own undertakings.”⁸

Graham believed that someone who purchased common shares in a company had earned “double status” and should decide what action to take. They could view themselves as a minority stockholder in a business whose fortune was “dependent on the profits of the enterprise or on a change in the underlying value of its assets.” Or they could see themselves holding a “piece of paper, an engraved stock certificate, which could be sold in a matter of minutes at a price which varies from moment to moment—when the market is open, that is—and often far removed from the balance sheet value.”⁹ In essence, Graham believed investors must choose between owning a business and speculating on the market.

Graham drew a difference between market analysis and security analysis. “Security analysis has several advantages over market analysis, which are likely to make the former a more successful field of activity for those with training and intelligence,” he wrote. Graham believed market analysis was “essentially a battle of wits” played against other, like-minded investors, all trying to guess what the stock market is going to do over the short term. In this game, there is no hedge. Graham wrote that “In market analysis, there is no margin of safety, you are either right or wrong, and if you are wrong, you lose money.”¹⁰

The margin-of-safety concept, the purview of security analysis, is unquestionably a smart strategy. It is almost the perfect hedge. Buying a common stock or owning a portfolio of stocks trading at a large discount to underlying intrinsic value can give you a handsome return if all works out well, and it can also limit your losses if future returns are less than expected.

But that's not all. In addition to providing positive returns, the margin of safety is also a psychological investment, an investment in temperament that makes achieving profitable returns possible. Using the margin of safety to select stocks strengthens an investor's resolve to hold fast against the market's inherent short-term volatility. Knowing the value of your investment, knowing you have the cushion of a large margin of safety, strengthens your emotional fortitude. Operating with a margin of safety emboldens investors to act with the stoic temperament needed to protect themselves as riders on the stock market rollercoaster.

The Advent of Modern Portfolio Theory

Ask people what they know about the history of investing, and I suspect most would begin by recounting the infamous stock market crash of 1929. The Roaring Twenties, the decade following World War I, was a period of double-barreled economic activity: great wealth building and speculation, culminating in the biggest stock market crash in US history.

Others might answer that investing began on 17 May 1792, when twenty-four brokers gathered under a buttonwood tree outside 68 Wall Street to sign an agreement that founded what is now the New York Stock Exchange. But history buffs would tell you investing began with the Amsterdam Stock Exchange in 1602. An invention of the Dutch East India Company, the exchange not only allowed joint stock companies to attract capital from investors but also allowed investors to buy and sell their shares. In all, modern investing is about 425 years old.

Modern Portfolio Theory (MPT)—which passes for today's standard investment management approach—is barely fifty years old.

We can trace the theory's roots back to 1952, although for the first thirty years of its existence, no one outside academia gave it much thought.

MPT assumes investors are risk averse and that given the choice of two portfolios with the same expected return, an individual will always prefer the less risky one. Understanding this, investors can build an optimal portfolio of stocks and bonds that reflects their risk tolerance or the emotional wherewithal to withstand price volatility. As we shall see, MPT is all about the bounciness of a stock's price and an individual's ability to handle volatility. In blunter terms, the driving force behind the standard investment management approach is the paramount objective of solving psychological discomfort, which MPT deems more important than achieving higher investment returns.

Central to MPT is the belief that the portfolio's overall risk and return is more important than the risk and return of individual stocks. In other words, in MPT, the whole becomes more important than the individual parts. Over the years, numerous strategies have been developed to guide investors toward their goals with a minimum of angst. But as we will discover, these strategies fail to reach their goal because they emphasize the wrong question.

MPT puts investors' emotional well-being ahead of investment returns, which get second place on the priority list. Grounded in this definition of risk tolerance, standard active portfolio management cannot outperform passive index funds, as a general rule. MPT adds no value.

How did we get into this self-defeating mindset? The answer starts with Harry Max Markowitz, born in Chicago on 24 August 1927. By all accounts, he was a fine young man who played the violin and studied hard. His interests included physics, mathematics, and philosophy. Markowitz attended the University of Chicago—the only place he applied—where he earned a bachelor's degree in liberal arts in 1947. He continued with graduate studies in economics. As a graduate student, Markowitz gravitated to the Cowles Commission for Research in Economics, embedded at the University of Chicago.

Alfred Cowles established the commission in 1932. He had subscribed to several investment services, none of which predicted the 1929 stock market crash. Cowles wanted to see whether market forecasters could predict the market's future direction. In one of the most detailed financial studies conducted to date, the commission analyzed 6,904 forecasts made between 1929 and 1944. In a model of understatement, Cowles noted that the results "failed to disclose the evidence of ability to predict the future course of the stock market."¹¹

Markowitz's doctoral advisor was Jacob Marschak, a recent director of the Cowles Commission. One afternoon when Markowitz was sitting outside Marschak's office, he introduced himself to an older, distinguished-looking gentleman sitting nearby. In the casual conversation that ensued, the gentleman mentioned he was a stockbroker and suggested Markowitz might consider writing his dissertation on the stock market. When Markowitz mentioned the idea to his advisor, Marschak enthusiastically agreed and reminded his student that Alfred Cowles was himself interested in markets.¹²

Marschak's field of expertise was economics, not the stock market, so he directed Markowitz to Marshall Ketchum, dean of the Graduate School of Business and coeditor of *The Journal of Finance*. Ketchum then sent Markowitz to the university library to read *The Theory of Investment Value* by John Burr Williams, the same book that Warren Buffett studied later to help him determine the intrinsic value of a company's cash flows.¹³

Markowitz was instantly intrigued. He was fascinated by Williams's net present value (NPV) model for valuing stocks. Still, he was perplexed. Markowitz believed that using the NPV model would logically drive an investor to own a portfolio of just a few stocks or possibly only one. Surely, no sensible investor would only own one or two stocks. The uncertainty of what could happen in the world would argue against taking such a risk.

Markowitz could not see how Williams was controlling for risk, despite the fact that Williams had aligned his thinking about risk with Ben Graham's idea of a margin of safety. In the preface of

his book, Williams advised readers to select stocks that were selling below NPV and avoid stocks selling at prices above it. Williams wrote, “Investment value, defined as the present worth of future dividends, future coupons, and principal, is of practical importance to every investor because it is the *critical* value above which he cannot go in buying and holding, without added *risk* (italics added).”¹⁴

Other than this, Williams did not elaborate on risk management. Even so, it is puzzling that Markowitz made no reference to Williams’s recommendation to buy stocks below value to manage risk. Nonetheless, Markowitz was consumed with the idea that investors should be interested in risk as well as return. The theory he ultimately developed (with refinements from others) is that risk is wholly a function of stock price volatility. That understanding of “investment risk” became the first leg of MPT.

In March 1952, Markowitz published an article titled “Portfolio Selection” in *The Journal of Finance*. He would receive his doctorate in economics two years later. The article was just fourteen pages, with just four pages of text (graphs and mathematical equations supplied the rest) and only three citations: John Burr Williams, *The Theory of Investment Value* (1938); John Richard Hicks, *Value and Capital* (1939); and James Victor Uspensky, *Introduction to Mathematical Probability* (1937). From Markowitz’s standpoint, it didn’t take volumes to explain what he believed was a rather simple notion: risk and return are inextricably linked. As an economist, he believed it was possible to quantify the relationship between the two and thus determine the degree of risk that would be required to realize various levels of returns.

To illustrate his point, Markowitz drew a trade-off graph with the expected return on the vertical axis and the risk on the horizontal axis. A line drawn from the bottom left to the top right is called the *efficient frontier*, which is a staple of MPT. Each point on the line represents an intersection between a potential reward and the corresponding level of risk. The most efficient portfolio is the one that gives the highest return for a given level of risk. An inefficient portfolio exposes the investor to risk without offering the corresponding level of expected return. An investor’s goal is to match

portfolios to risk tolerance while limiting or avoiding inefficient portfolios.

Markowitz introduced the idea that the best measure of risk is variance, meaning price volatility. In the paper's first paragraph, Markowitz wrote, "We consider the rule that the investor does (or should) consider expected return as a desirable thing and variance of return an *undesirable thing* (italics added)."¹⁵ He went on, "This rule has many sound points, both as a maxim for, and a hypothetical about, investment behavior. We illustrate geometrically relations between beliefs and choice of portfolios according to the 'expected returns-variance returns' rule."¹⁶ Markowitz noted that the "terms *yield* and *risk* frequently appeared in financial writings but are not always used in precision." He suggested that if the term *yield* were replaced with *expected yield* or *expected return* and *risk* with *variance of return*, little change in the meaning would result.¹⁷

Markowitz's reasoning was a gigantic leap. It was arguably pretentious for a twenty-five-year-old graduate student, someone who had never owned a business or invested in the stock market, to assert that the unpleasantness of price volatility is in fact *risk* without any corresponding economic explanation or evidence that purchasing an asset with high variance actually leads to permanent capital loss. Markowitz also ignored the issue of a company's value as it relates to stock price, which, as we know, is the central point of Ben Graham's approach to investing. In the end, Markowitz ignored the issue of intrinsic value and price as a bellwether for risk, proposing that risk was only associated with price variance.

We don't know why Markowitz did not cite Graham. Apparently, neither his advisor nor his dissertation committee suggested that he reference *Security Analysis*, the leading investment textbook at the time. Neither did Markowitz refer to Graham's *The Intelligent Investor*, a popular investment book that had been widely reviewed three years earlier. Graham had said that there is a difference between short-term quotational loss and permanent capital loss. "The idea of risk is often extended to apply to a possible decline in the price of a security," wrote Graham, "even though the decline may be of a cyclical and temporary nature and even though the

holder is unlikely to be forced sell at such time.” Graham continued, “We believe that what is involved is not a true risk in the useful sense of the term. The risk attached to an ordinary commercial business is measured by the chance of losing money, not by what would happen if the owner were forced to sell.”¹⁸

Asset behavior around price is the bedrock of Markowitz’s theory of risk. With each step in Markowitz’s thinking, he moved further away from any attempt to understand stock value and closer to constructing a portfolio based solely on the price volatility of underlying stocks. Markowitz’s approach became an exercise in managing a portfolio of prices, rather than a portfolio of businesses.

Initially, Markowitz suggested that a portfolio’s riskiness is simply the weighted average variance of all its individual stocks. Although variance may help gauge the riskiness of an individual stock, the average of two variances (or 100 variances) will tell you very little about the riskiness of a 2-stock (or a 100-stock) portfolio. To measure the riskiness of an entire portfolio, Markowitz introduced covariance to portfolio management.

Covariance measures the price direction of a group of stocks. Two stocks exhibit high covariance when their prices, for whatever reason, tend to move together. Two stocks that move in opposite directions are said to have low covariance. In Markowitz’s thinking, a portfolio’s risk lies not in the variance of individual stocks but in the holdings’ covariance. The more stocks move in the same direction, the riskier the portfolio. Conversely, a portfolio of low-covariance stocks is less risky. According to Markowitz, constructing a low-covariance portfolio should be an investor’s primary objective.

In 1959, Markowitz published his first book, *Portfolio Selection: Efficient Diversification of Investments*. It was based on his doctoral dissertation. Two years later, a young doctoral student named William Sharpe approached Markowitz, who at the time was working on linear programming at the Rand Institute. Sharpe needed a dissertation topic, and a professor at UCLA had suggested tracking down Markowitz. Sharpe published his dissertation a year later, in 1963. In “A Simplified Model for Portfolio Analysis,” he fully acknowledged

his reliance on Markowitz's ideas and suggested a simpler method that would avoid countless covariant calculations.

Sharpe contended that all securities bear a common relationship to some underlying base factor. For any specific security, this factor could be the stock market, the gross domestic product, or some other price index, if it were the single most important influence on the behavior of the security. Using Sharpe's theory, an analyst would need only to measure the relationship of the security to the dominant factor. It greatly simplified Markowitz's approach.

According to Sharpe, the *base factor* for stock prices—the single greatest influence on their behavior—was the stock market itself. Industry groups and a stock's unique characteristics were also important but less influential. Sharpe argued that if a particular stock's price is more volatile than the market, then adding the stock to a portfolio will make the portfolio more variable and therefore riskier. Conversely, if a stock's price is less volatile than the market, then adding this stock will make the portfolio less variable and less risky. The overall portfolio's variability, Sharpe said, could be easily determined by computing the simple weighted average volatility of the individual securities.

Sharpe's volatility measure had a name: the *beta factor*. *Beta* is the degree of correlation between different separate price movements: the market as a whole and an individual stock. Stock prices that rise and fall exactly with the market are assigned a beta of 1.0. If a stock rises and falls twice as much as the market, its beta is 2.0; if a stock's movement is only 80 percent of the market's movement, the beta is 0.8. Based solely on this information, Sharpe could ascertain a portfolio's weighted average beta. His conclusion, perfectly in line with Markowitz's view of price variance, was that any portfolio with a beta greater than 1.0 will be riskier than the market and any portfolio with a beta less than 1.0 will be less risky.

Warren Buffett and Modern Portfolio Theory

What would a young Warren Buffett have made of the earliest teachings of MPT? Let's think back. When Harry Markowitz was

writing his paper “Portfolio Selection” in 1951, Buffett was enrolled at Columbia University, sitting for Ben Graham’s spring investment seminar. When William Sharpe published his dissertation in 1963, Buffett was in his seventh year of managing the Buffett Partnership, posting outstanding investment results. At the time, Markowitz and Sharpe were both warning about stock price volatility as something an investor should guard against. For his part, Buffett, having learned lessons from Ben Graham, was attracted to price volatility, knowing that a big drop in a stock’s price may increase the investment’s rate of return while also reducing the investment’s riskiness by letting the investor purchase shares at prices below intrinsic value.

What did Warren Buffett think of MPT? He wasn’t a fan. In Berkshire’s 1975 annual report, Buffett distilled his thoughts on price and volatility. The year before, Buffett had purchased The Washington Post Company. At the time, it was Berkshire’s largest equity investment. By year-end 1974, the stock market was down 50 percent amid a brutal bear market. The share price of The Washington Post Company declined with everything else; however, Buffett remained steadfast and calm. In the annual report, he said, “Stock market fluctuations are of little importance to us—except as they may provide buying opportunities—but business performance is of major importance. On this score, we have been delighted with the progress made by practically all the companies in which we have significant investments,”¹⁹ The Washington Post Company included.

Years later, in a 1990 lecture at Stanford Law School, Buffett fully laid out his thinking on price volatility as a measurement of risk. He began, “We bought The Washington Post Company at a valuation of \$80 in 1974. If you’d asked any one of 100 analysts how much the company was worth when we’re buying it, no one would have argued about the fact it was worth \$400 million.” Buffett continued, “Now, under the whole theory of beta and modern portfolio theory, we would have been doing something riskier buying stock for \$40 million than we were buying it for \$80 million, even

though it's worth \$400 million—because it had more volatility. With that, they lost me.”²⁰

How Does Warren Buffett Think About Risk?

Warren Buffett has always seen a drop in share price as an opportunity to make additional money, not something to avoid. Buffett believes that, after you determine a company's intrinsic value, a drop in share price *reduces* your risk as defined by the margin of safety. “For owners of a business—and that's the way we think of shareholders—the academic definition of risk is far off the mark, so much so that it produces absurdities,”²¹ he says.

Warren Buffett has a different definition of risk than the one MPT promotes. He is more aligned with Ben Graham's thinking on risk. Buffett says that risk is related to the intrinsic value of a business, not to the stock market's ongoing short-term price behavior. In Buffett's view, harm or injury comes from misjudging the primary factors that determine a business's future profits: (1) “the certainty with which the long-term economic characteristics of the business can be evaluated”; (2) “the certainty with which management can be evaluated, both to its ability to realize the full potential of the business and to wisely employ its cash flows”; (3) “the certainty with which management can be counted on to channel the rewards from the business to the shareholders rather than to itself”; and (4) “the purchase price of the business.”²²

The fault line that separates MPT from Buffett's business-driven investing approach is the difference in how an investor who owns public securities thinks about risk versus how a private business owner thinks about risk. Why would someone who owns publicly traded common stocks think differently about risk than an individual who owns the entire business? Buffett says that just because a business has a daily price doesn't mean the owner needs to panic over short-term price volatility when their economic interests are long-term.

Buffett points out that risk is inextricably linked to an investor's time horizon. If you buy a stock today with the intention of selling

it tomorrow, he explains, then you have entered into a risky transaction. The odds of whether share prices will be higher or lower in a short period are the same as the odds for a coin toss: you will lose half the time. However, says Buffett, if you extend your time horizon out several years, then the transaction's risk declines meaningfully, as long as you made a sensible purchase in the first place. "If you ask me the risk of buying Coca-Cola this morning and selling it tomorrow morning," Buffett says, "I'd say that is a very risky transaction."²³ But Buffett saw little risk when he bought Coca-Cola in 1998 with the thought of holding it for ten years, no matter how the stock market performed over that time period.

At best, the MPT's concept of risk may apply to short-term investors. It is meaningless for long-term investors. MPT's definition of risk—how much a stock price bounces around within the overall bounciness of the market—is relevant to someone who treats their investment portfolio like a money market account, flinching whenever its net asset value drops below \$1.

Even so, we must ask why an investor would be short-term reactive if their investment goals and objectives are long term. First, managing a portfolio to minimize short-term price volatility has the unhappy effect of suboptimizing long-term investment returns. Second, and more problematic, an investor who obsesses over short-term price dips is more likely to embrace speculative habits, frenetically buying and selling stocks in a vain attempt to prevent their portfolio from declining in price. Warren Buffett puts it succinctly: "If the investor fears price volatility, erroneously viewing it as a measure of risk, he may, ironically, end up doing some very risky things."²⁴

"To invest successfully," says Buffett, "you need not understand beta [or] modern portfolio theory. You may, in fact, be better off knowing nothing of these." He adds, "That, of course, is not the prevailing view at most business schools, whose finance curriculum tends to be dominated by such subjects. In our view, investment students need only two well-taught courses, 'How to Value a Business' and 'How to Think About Market Prices.'"²⁵

Value investors look at stock market price volatility as a periodic opportunity—nothing else. Otherwise, they rarely give stock price variance much thought, if they think about it at all. Rather than obsessing over price changes, they focus on the economic progress of the companies they own. “In business schools,” Buffett said, “volatility is almost universally used as a proxy for risk. Though this pedagogic assumption makes for easy teaching, it is dead wrong. Volatility is *far* from synonymous with risk. Popular formulas that equate the terms lead students, investors, and CEOs astray.”²⁶

Warren Buffett and Portfolio Diversification

The second leg of MPT is portfolio diversification. In his paper “Portfolio Selection,” Markowitz said the reason he rejected John Burr Williams’ NPV rule, which he called the *expected return rule*, was “that it never implied the superiority of diversification.” Markowitz then added, in no uncertain terms, that an investor must reject the idea of a concentrated portfolio. In his view, because error rates do occur, a diversified portfolio is always preferable to a nondiversified one. But not just any portfolio. “It is necessary to avoid investing in securities with high covariances,”²⁷ he wrote. Markowitz believed investors should diversify across industries because stocks in different industries have lower price covariances than stocks of firms within an industry.

Warren Buffett thinks differently. In Berkshire Hathaway’s *1991 Annual Report*, Buffett explained how he approaches portfolio management. “If my universe of business possibilities was limited, say, to private companies in Omaha, I would, first, try to assess the long-term economic characteristics of each business; second, assess the quality of the people in charge of running it; and third, try to buy into a few of the best operations at sensible prices. I certainly would not wish to own an equal part of every business in town. Why, then, should Berkshire take a different tack when dealing with the larger universe of public companies?”²⁸

The portfolio management approach at Berkshire Hathaway is called focus investing. As Buffett explains, “We just focus on few outstanding companies. We’re focus investors.”²⁹ Buffett continued, “Charlie and I are *not* stock pickers,” at least not the stock pickers outlined in MPT. “We are business pickers,” he said. “We own publicly traded stocks based on our expectations about their long-term *business* performance, not because we view them as vehicles for adroit purchases and sales.”³⁰ That crisp definition of the key difference between being a “business picker” rather than a “stock picker” is critical to understanding why someone would choose to manage a focus portfolio instead of a broadly diversified portfolio.

Thirty years ago, Warren Buffett wrote, “We continually search for large businesses with understandable, enduring, and mouth-watering economics that are run by able and shareholder-oriented managements. This focus doesn’t guarantee results: We both have to buy at a reasonable price and get business performance that validates our assessment. But this investment approach—searching for superstars—offers us our only chance at real success.”³¹

Buffett then confessed, “Charlie and I are simply not smart enough, considering the large sums we work with, to get results by buying and selling portions of far-from-great businesses. Nor do we think many others can achieve long-term investment success flitting from flower to flower. Indeed, we believe according the name ‘investors’ to institutions that trade actively is like calling someone who repeatedly engages in one-night stands a romantic.”³²

The best thing Warren Buffett has said about MPT’s recommendation for portfolio management is that “diversification serves as a protection against ignorance.” He went further: “If you want to make sure that nothing bad happens to you relative [to] the market, you should own everything.” Recall that Buffett’s advice for “know-nothing” investors is to own an index fund. “There is nothing wrong with that,” he said. “It’s a perfectly sound approach for somebody that doesn’t know how to analyze businesses.” But that protection comes with a price. According to Buffett, “Modern Portfolio Theory will tell you how to do average. But I think almost anybody can figure out how to do average by fifth grade.”³³

Rethinking Modern Portfolio Theory

The intertwined threads of MPT that Markowitz and Sharpe wove during the 1950s and 1960s attracted the intense interest of theorists and academic journals, but Wall Street paid no attention. That changed in December 1974, with the culmination of the worst bear market since the Great Depression.

Without question, the 1973–1974 bear market shook the confidence of the stock market establishment. The financial damage was just too deep and widespread to deny. Star portfolio managers who rose to fame touting the Nifty Fifty stocks of the late 1960s disappeared, leaving behind the rubble that was their portfolios. The self-inflicted wounds caused by years of senseless speculation were simply too grave to ignore.

“No one emerged unscathed,” said Peter Bernstein, head of Bernstein-Macaulay, Inc., a wealth management firm that managed billions of dollars of individual and institutional portfolios, including numerous pension funds. According to Bernstein, employees found the decline in their pension assets alarming. Many wondered if they could afford to retire. This distress, which reverberated through the world of finance, called for a change in how professionals managed client accounts.³⁴

“The market disaster of 1974 convinced me that there had to be a better way to manage investment portfolios,” said Bernstein. “Even if I could have convinced myself to turn my back on the theoretical structure that the academics were erecting, there was too much of it coming from universities for me to accept the view of my colleagues that it was ‘a lot of baloney.’” Peter Bernstein soon became the founding editor of *The Journal of Portfolio Management*. There, he said, “my goal was to build a bridge between the gown and the town: to foster a dialogue between academicians and practitioners in language they could both understand and thereby enrich the contributions of both.”³⁵

For the first time in history, neither Wall Street nor business owners dominated investing. As the financial industry moved forward into the early 1980s, university professors defined the

investment landscape. Working from ivory towers, they became the high priests of modern finance.

Although Bernstein's intention "to foster a dialogue between the academicians and the practitioners" was well-meaning, the fact remained that the two groups were speaking different languages. MPT was founded by academics, outside observers of the stock market who believed stock price volatility was the demon that must be defeated. Everything else, including portfolio management and its subsequent investment returns, had to submit to this goal. Conversely, business-driven investors were the insiders, the practitioners who owned businesses or at least thought of stocks as business ownership. Their charge was not to defeat stock price volatility but to outwit it to enhance their investment return. Today, we can say with certainty that business-driven investing is the philosophical antithesis of MPT.

Even so, value investing is not the antichrist. Business-driven value investors did not cause the 1973–1974 bear market. No, that debacle lies at the feet of speculators who masked themselves as investors. Pining for the performance returns of the Nifty Fifty stocks, these speculators had no idea what value they were receiving for the prices they paid. It's been said that, when you use the word *value* and it means something besides *price*, you'll probably have to explain the difference between price and value.³⁶ The speculators who blew up the stock market had no interest in hearing the message of value investing, much less trying to understand it.

Some observers thought the value camp would take back the wheel from these reckless speculators and help drive the stock market back onto the tracks. But value investors were few and their attention was diverted. By default only, the high priests of modern finance stepped into the breach. When Peter Bernstein said there was too much research on MPT to ignore, I don't think he fully appreciated how deeply the teachings of MPT had reached into academia. Dissertation committees at major universities were constantly anointing new disciples (PhDs) who would soon become the new cardinals (professors) and whose self-interest would ultimately drive them to solicit more disciples. PhD dissertations circled MPT

and became fodder for a growing library of academic journals all spouting the same message.

Looking back, we can see that the tidal wave of academic research that crashed down on Wall Street occurred at a fortuitous time. As the dust settled from the 1973–1974 bear market, a new bull market began. As they customarily do after enough time has lapsed, investors returned to the stock market in droves.

Investment firms were rapidly being organized; everything was on the table. Investment firms were rewriting their objectives. They outlined their trading strategies. Advisors and clients agreed on performance standards. Risk tolerance questionnaires were invented. More than half of the questions asked how the investor felt about price volatility. The more risk averse an investor was, the more conservative their portfolio should be.

MPT was easily scalable, which helped speed up its takeover of the money management industry. This unleashed leviathan preached low price volatility, broadly diversified portfolios, and conservative returns. Before most financial professionals fully recognized what was occurring, MPT had taken root and become the standard approach for investment management. It still is today.

The Efficient Market Hypothesis

The Efficient Market Hypothesis, which is also called the efficient market theory and is closely associated with MPT, is the third leg that holds up modern finance. Although several academicians have written about efficient markets, Eugene Fama is the person most credited with developing a comprehensive theory of stock market behavior.

Born in Boston in 1939, Fama attended Malden Catholic High School, where he lettered in football, basketball, and baseball and joined the school's Athletic Hall of Fame. In 1960, he graduated *magna cum laude* from Tufts University with a degree in Romance languages, then earned both an MBA and a PhD in economics and finance from the University of Chicago.³⁷

Fama began studying stock market prices the minute he arrived in Chicago. An intense reader, he absorbed all the written

work on stock market behavior then available, but it appears he was especially influenced by Benoit Mandelbrot, a French mathematician. Mandelbrot was a maverick. He spent thirty-five years at IBM's Thomas J. Watson Research Center before moving to Yale University, where, at the age of 75, he became the oldest professor in the university's history to receive tenure. Along the way, Mandelbrot received more than fifteen honorary degrees.

Mandelbrot developed the field of fractal geometry (he coined the term) and applied it to physics, biology, and finance. When Mandelbrot examined the stock market, he argued that prices fluctuate so irregularly, they would never oblige any fundamental or statistical research; furthermore, these irregular price movements caused unpredictably large and intense shifts in the market.

Like Harry Markowitz and William Sharpe, Eugene Fama was a newcomer to finance, a graduate student looking for a dissertation topic who was neither an investor in the market nor the owner of a business. Instead, like Markowitz and Sharpe, he was an academician through and through. Even so, Fama's PhD dissertation, "The Behavior of Stock Prices," caught the attention of the financial community. Published in 1963, a synopsis of the dissertation was excerpted in the *Financial Analysts Journal* and *Institutional Investor* magazine.

Fama's message was very clear: stock prices are not predictable because the market is too efficient. Essentially, an efficient market is one in which at any given time, stock prices reflect all available information and trade at exactly their fair value. In an efficient market, as soon as market information becomes available, a great many smart people (Fama called them *rational profit maximizers*) aggressively apply the information in a way that causes prices to adjust simultaneously, before anyone else can profit. Predictions about the future, therefore, have no place in an efficient market because share prices adjust too quickly.

The Great Debate

When Ben Graham retired in 1956, Roger Murray took over Columbia's Value Investing Program. Murray not only taught

Graham's seminar. He added David Dodd's fall class on value investing when Dodd retired in 1961.

Murray was well known on Wall Street and enjoyed a respectable career at Bankers Trust as chief economist, becoming the youngest vice president in the bank's history. He advised members of Congress and was the originator of the concept of the individual retirement account (IRA). While Graham and Dodd will be remembered for teaching value investing to Warren Buffett, Roger Murray was a gifted professor who taught some of the best-known names in value investing, including Leon Cooperman, Mario Gabelli, and Chuck Royce.

Throughout the 1960s, Graham and Dodd's teachings were still highly regarded. However, the late 1960s and early 1970s saw a pronounced shift away from value investing to growth investing. "Go-Go" stocks like Xerox, Polaroid, and Avon Products, newly minted members of the Nifty-Fifty, were substantially outperforming slower-growing value stocks. Investors became infatuated with these new growth companies and loaded up their portfolios with the best performers. This approach worked out well until it didn't. The 1973–1974 bear market put a stop to the reckless speculation.

One might have thought that value investing would rise again to fill the void, but the rally calls for the value approach went unanswered. In the years following the brutal bear market, overall interest in investing and the stock market dwindled. Roger Murray retired from Columbia University in 1977, and with that, the Value Investing Program Graham and Dodd started was gone.

Years later, in 1984, Columbia Business School hosted a conference to celebrate the fiftieth anniversary of the publication of the first edition of *Security Analysis*. Warren Buffett, Columbia's most famous student, was asked to present a talk about Ben Graham's value investing approach. Michael Jensen, a finance professor from the University of Rochester and a former student of Eugene Fama, spoke on behalf of the Efficient Market Hypothesis. Looking back, Warren Buffett's speech, titled "The Superinvestors of Graham-and-Doddsville," was the intellectual defibrillator Columbia Business School needed to revive its Value Investing Program.³⁸

Jensen, backed by the high priests of modern finance, began by saying that the market quickly and accurately prices stocks, so active management is a waste of time. No one, he said, could beat the market other than by random chance. Buffett, not surprisingly, believed otherwise and offered in evidence the track records of several well-known value investors.

Buffett presented the long-term performance records of two former colleagues, Walter Schloss and Tom Knapp, who both worked with him at Graham-Newman. In addition, he brought the performance records of Bill Ruane and Rick Cuniff (of Sequoia Fund), Rick Guerin (of Pacific Partners), Stan Perlmeter (of Perlmeter Investments), Charlie Munger's partnership, and his own partnership. Each of these portfolio managers was well versed in the value investing approach, and each generated results that blistered broader market returns.

Warren began by recapping the central argument of the Efficient Market Hypothesis: the stock market is efficient, all stocks are priced correctly, and therefore, anyone who beats the market year after year is simply lucky. Maybe so, he said, but I know some folks have done it, and their success can't be explained away simply by random chance.

To give the must-be-luck argument its fair hearing, Buffett asked the audience to imagine a national coin-flipping contest in which 225 million Americans would bet \$1 on their guesses. After each flip, the losers would drop out, and the winners would keep the pot and advance to the next round. After 10 tosses, 220,000 winners would each have gained \$1,064. After 10 more tosses, 215 winners would each have gained \$1 million.

These coin tossers demonstrated no exceptional skill. The event could be easily replicated with a group of 215 million coin-flipping orangutans. Buffett granted the statistical possibility that, by sheer chance, the orangutans might get the same result. But what if the 215 winning animals came from the same zoo? Wouldn't we want to ask the zookeeper what he feeds his now very rich orangutans?

Whenever a high concentration of anything occurs in one specific area, something unusual may be going on at that spot, Buffett said. It bears investigation. And then, the clincher: what if the members of this unique group are defined not by where they live but by their instructor?

That brings us to what Buffett called the “intellectual village of Graham-and-Doddsville.” All the examples he presented that day were centered on individuals who had managed to beat the market over time. They weren’t just lucky. They followed principles learned from the same source: Benjamin Graham and David Dodd.

Each investor called the flips differently, Buffett explained, but the investors were all linked by a common approach that seeks to take advantage of discrepancies between market price and intrinsic value. “Needless to say, our Graham and Dodd investors did not discuss beta or covariance of returns,” Buffett said. “These are not subjects of any interest to them. In fact, most of them would have trouble defining those terms.”³⁹

If the Efficient Market Hypothesis is correct, there is no possibility, except by random chance, that any one person or group could outperform the market, and certainly no chance that the same person or group could consistently do so over the long term. Yet the Superinvestors of Graham-and-Doddsville and their investment returns are *prima facie* evidence that it is possible to outperform the market. What does this say about the Efficient Market Hypothesis?

“Proponents of the theory have never seemed interested in discordant evidence,” said Buffett. “Apparently, a reluctance to recant and thereby demystify the priesthood is not limited to theologians.”⁴⁰

Warren Buffett’s problem with the Efficient Market Hypothesis rests on one central point: it makes no provision for investors who analyzed all the information, gained a competitive advantage by doing so, and then acted rationally in executing an investment decision. As a corollary, professors who taught the Efficient Market Hypothesis said that someone throwing darts at stock tables could

select a stock portfolio with prospects just as good as one selected by the brightest and hardest-working analyst.

In one of Buffett's most insightful observations, he gave a slight nod to the academics, although with one important caveat. "Observing correctly that the market was frequently efficient," said Buffett, "they went on to conclude incorrectly that it was always efficient. The difference between these propositions is night and day."⁴¹

One side note: Paul Samuelson, an American economist and early proponent of the Efficient Market Hypothesis, was an early investor in Berkshire Hathaway, buying shares at an average price of \$44 per share in 1970, the same year he won the Nobel Prize in economics. He learned about Warren Buffett from Conrad Taff, a private investor who attended the Columbia Business School and studied with Ben Graham. Although Taff trumpeted Buffett's track record, it appears that Samuelson was most attracted to the idea of compounding money tax-free, since Berkshire didn't pay dividends.

Even so, Samuelson, who for years had been assailing fund managers' mediocrity, knew lightning had struck. He began buying shares of Berkshire, adding more over the years. Samuelson bequeathed his shares to his children and grandchildren, and to various charities. If he had kept his Berkshire shares, they would have been worth more than \$100 million as of 2018. "Professor Samuelson believed the same [as I do]," said Buffett. "Markets are efficient but not perfectly efficient."⁴²

Nonetheless, business schools still religiously teach the Efficient Market Hypothesis, a fact that gives Buffett no end of satisfaction. "Naturally, the disservice done students and gullible investment professionals who have swallowed EMH has been an extraordinary service to us and other followers of Graham," he wryly observed. "In any sort of contest—financial, mental, or physical—it's an enormous advantage to have opponents who have been taught it's useless to even try. From a selfish standpoint, we should probably endow chairs to ensure the perpetual teaching of the Efficient Market Hypothesis."⁴³

Forty years after Warren Buffett delivered his argument at the Columbia Business School, the concept of an efficient market and the inability of most portfolio managers to beat the market remains a hot topic in money management.

For his part, Eugene Fama continues to defend the core principle of his hypothesis, even though he's altered his original viewpoint, confessing that markets are not perfectly efficient. Anomalies do exist. In addition, Fama believes that a small fraction of professional investors might have an information advantage that contributes to their outperformance. But for most investors, says Fama, the stock market remains largely efficient. Unbeatable. In his opinion, it's best for investors to stick with index funds.

We examined the long-term track records of professional investors and discovered that, in fact, most portfolio managers have been unable to beat the market.⁴⁴

Every year since 2002, S&P Global has published its annual S&P Indices Versus Active managers (SPIVA) Scorecard. It tracks the performance of active portfolio managers versus the passive S&P indices. The results are eye-opening. No matter whether portfolios are large, midsize, small, or multicapitalization, no matter whether the portfolio strategies are value, growth, or core, active managers have atrocious results.

As of year-end 2024, for the trailing one year, 65 percent of portfolio managers of large-cap mutual funds underperformed their benchmark, the S&P 500 Index. Over three years, 85 percent underperformed. For five years, the number was 76 percent; it was 84 percent over ten years, 89 percent over fifteen years, and 92 percent over the past twenty years. With these performance results, no wonder Fama remains wedded to his Efficient Market Hypothesis.

A few portfolio managers did beat the market over the long term. Warren Buffett said, "I have always found the word 'anomaly' interesting. Columbus was an anomaly, I suppose—at least for a while. What it means is something academicians can't explain. And rather than re-examining their theories, they simply discard any evidence of that sort as anomalous."⁴⁵

Was anomalous SPIVA outperformance the result of an informational advantage or a portfolio advantage? That is, did the very few portfolio managers who beat the market have information that underperforming portfolio managers never saw, or did they simply employ more effective portfolio strategies?

In 2000, Regulation Fair Disclosure (Reg FD) was adopted by the US Securities and Exchange Commission (SEC). The regulation works to prevent the selective disclosure of nonpublic information by public companies to market professionals, helping ensure that all investors have equal, simultaneous access to important company information.

This doesn't mean that all investors always take all available information into consideration, nor does it mean that all investors always make smart decisions about how to invest. "Unintelligent investing"⁴⁶ happens. Both failures can contribute to market price inefficiencies.

But instead of continuing to debate informational efficiency, we will move to the next chapter and examine the features, benefits, and challenges of managing a focus, low-turnover portfolio. Our hypothesis? Most investors don't beat the market, not because of market efficiency but because of the half-witted portfolio strategies put forth by MPT. It's not that active management doesn't work. It's that most active managers use strategies that don't work.

Here is a summary of the major differences between the two major competing investment strategies.

The standard approach to investing accepts MPT as its guiding principle. It believes that price variance and volatility is a risk that must be managed. Portfolios are broadly diversified to minimize variance returns, while turnover ratios (how much buying and selling occurs) are elevated to keep variance in check. In the standard approach to investing, short-horizon arbitrage and short-term out-performance are the game.

In *business-driven focus investing*, the guiding principle is the economic returns of stocks: the businesses you own. Portfolios are focused and have low turnover ratios, to benefit from economic compounding. Stock price volatility is not risk. Return variance is

an afterthought to take advantage of or ignore. Short-term performance is *not* considered a useful gauge of progress. Instead, business-driven focus investors measure the long-term economic performance of the companies they own. Business-driven focus investors frequently quote Ben Graham's famous dictum: "In the short run, the market is a voting machine, but in the long run, it is a weighing machine."⁴⁷

In the standard approach, investors are in a constant, frenetic chase for short-term performance. In the business-driven focus investing approach, investors are less anxious about the short term. Instead, they keep a careful eye on the economic weights of what they own, knowing full well that the scales will eventually balance. In business-driven focus investing, long-horizon arbitrage and long-term returns are the game.

