

Integrity in Investing Strategy Lesson from a Poker Professional



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*“Strategy without tactics is the slowest route to victory.
Tactics without strategy is the noise before defeat.”*

– Sun Tzu, *The Art of War*

This is part of a series exploring integrity in planning financial strategy

Key takeaways:

- The quality of a decision may differ from the quality of results
- Performance should not be measured solely by results
- The value premium is an important dimension of returns
- Short-term negative results should not change long-term strategy

Professional poker player Annie Duke explains in *Thinking in Bets* that a common mistake of amateur players is their tendency to equate the quality of a **decision** with the quality of its **outcome**. Poker players call this trait “resulting.”¹ Amateur players confuse before-the-fact strategy with after-the-fact results. By changing their betting strategy as their results change, their money inevitably passes to the professionals.

The tendency to see a result as inevitable after the outcome is known is a serious behavioral mistake. Duke explains: “When we say ‘I should have known that would happen,’ or, ‘I should have seen it coming,’ we are succumbing to hindsight bias.” Most people automatically connect their results with their decisions even though there are many indisputable examples where the relationship between decisions and results lacks perfect or even a strong correlation.²

The key lesson that must be learned in order to profitably make poker bets—as for successful investment planning—is that a decision wasn’t wrong just because a particular result (this hand or this year, as in investing) didn’t work out as planned. An even more critical lesson, however, is that *a decision wasn’t good just because it turned out well*. For example, “No sober person thinks getting home safely after driving drunk reflects a good decision or good driving ability,” Duke writes.

Don’t Judge Performance by Results

Fooled by Randomness author, mathematician and hedge fund manager Nassim Taleb agrees: “One cannot judge a performance in any given field by the results, but [only] by the costs of the alternative.”³

History as we know it could have played out very differently at pivotal junctures. In World War II, American naval forces in the Pacific were greatly disadvantaged after Japanese forces performed well at Pearl Harbor. Most men and arms were going to Europe to fight Nazis, but superior U.S. strategy at Guadalcanal and Midway against a numerically powerful enemy relying on tactics left Japan with a disaster—otherwise, the Pacific Basin, including Hawaii and Australia, might be speaking Japanese.



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“Clearly the quality of a decision cannot be solely judged based on its outcome,” Taleb continues, “but such a point seems to be voiced only by people who fail.” After all, those who succeed are not questioned, and invariably attribute their success to a “smart” decision even if it was essentially chance. Certain investors invariably remember those stocks and funds they purchased that did well, and point to them to prove their investing prowess—and forget to include their shortfalls and failures in accounting.

Once I had a new client who angrily criticized a portfolio decline, and in a tirade enumerated his successful calls. We happened to have access to his historical Schwab accounts. We confirmed his remembered claims were true, but meticulously reconstructing a decade of trading showed that the cumulative result of all the equity risk he took could have been earned in bank account. Prospects rarely do fair accounting.

Poker offers instructive ways to think about a disciplined process to play for profitable outcomes in a series of games. Imagine two players are left with cards in hand, with one card remaining to be drawn. Professional player X mentally calculates that he has an 84% chance of winning. He makes a large bet based on those odds. Unfortunately, the wrong card is dealt, and he loses that hand. However, he expected to lose 16% of the time. As a professional, he simply plays another round and follows his strategy—especially if the amateur who won the hand is likely to believe, due to his results, that he is smarter than the professional sitting on the other side and begins making bigger bets than before.

On the other hand, if the result was a loss, an amateur player will change his strategy because he concludes that such a bet was wrong. In contrast the professional knows probabilities and has statistical confidence: by playing a series of hands, taking the same decisive actions in similar situations with similar odds, he sensibly expects profitable outcomes—especially whenever amateurs are his marks.⁴

Flawed Wealth Strategy

Let’s consider Darek, a very smart individual who started his career as a software engineer and now is an executive in his 30s at Amazon. Almost his entire portfolio is comprised of Amazon stock and stock options. He came

to Amazon early, and is now a multimillionaire. Darek believes concentrating all your eggs in one basket—a basket that, as he is a senior executive can watch closely—is a smart strategy. He says diversification is only for ordinary people without his extraordinary sophistication.

Darek no longer socializes with his former buddies working elsewhere, who are unable to afford his rich lifestyle. They’ve worked for years at mostly tech startups that merged out of existence or simply failed, leaving them with a bundle of worthless stock and stock options, despite using Darek’s smart strategy of concentrating risk in a fledgling tech company they could only watch as their assets shrunk.

I’ve met all too many in my career who created a small fortune out of a large one, confusing luck with skill, by concentrating their wealth in what had been big winners. One excuse for not diversifying relates to taxes if sold. Perversely for some, the market solved their tax problem and substituted an employment one.

Rochester itself is filled with such examples. Among the once-great companies whose stock prices collapsed are Eastman Kodak and Xerox, and start-up companies like Global Crossing and Danka. However, even though data shows there are far more Xeroxes than Googles—statistically evidencing that Darek’s wealth management strategy is flawed—his financial results (he is rich) based on his personal sample of financial history (his life experience) convinces him that his concentrated strategy is smart.”

Blindspot Bias in Beliefs

As Duke points out, and my professional experience amply supports, once a financial belief becomes firmly lodged, it becomes very difficult to dislodge. That belief takes on a life of its own, leading us to notice only the evidence confirming what we already believe. Behaviorally, this is called “cognitive dissonance.” Motivated reasoning actively discredits or simply ignores any contradicting information.⁵

But cognitive dissonance, once it’s established is worse for highly educated people, such as doctors or professors. Research shows being “smart” compounds the tendency toward behavioral biases: the smarter you are, the better you are at constructing a narrative that supports your personally-held beliefs.



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Exhibit 1: DIMENSIONS OF EXPECTED RETURNS

EQUITIES

Market	Company Size	Relative Price	Profitability
Equity premium— stocks vs. bonds	Small cap premium— small vs. large companies	Value premium— value vs. growth companies	Profitability premium— high vs. low profitability companies

FIXED INCOME

Term	Credit
Term premium— longer vs. shorter maturity bonds	Credit premium— lower vs. higher credit quality bonds

Source: Dimensional Fund Advisors.

West, Meserve and Stanovich tested the “blindspot” behavioral bias.⁶ They found people are much better at recognizing biased thinking in others than in themselves—in fact, many if not most people are almost blind to recognizing bias in themselves. West, Meserve and Stanovich surprisingly found that the better someone was with figures, the worse the bias. It seems that the better you are with numbers, the better you are at spinning those numbers to fit your narrative. We see this often when people pick and choose time frames and securities to compare investment results that fit what they want to do. Quoting Duke, referring to this research: “Our capacity for self-deception knows no boundaries.”

Academic research has long identified equity and fixed income dimensions which point to differences in expected

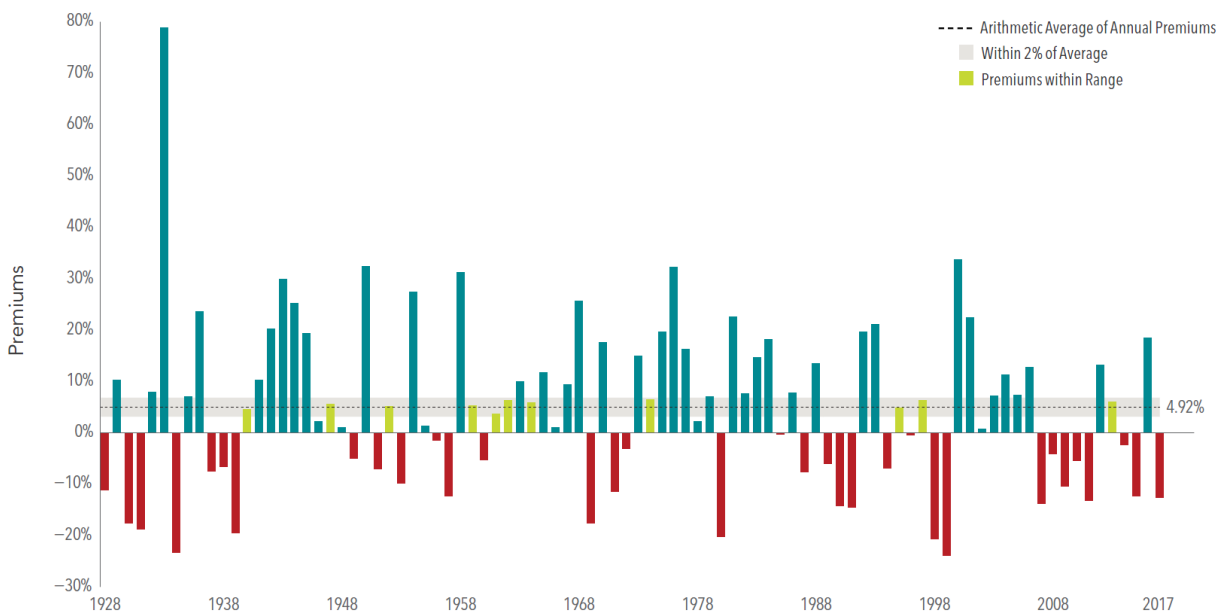
returns. In equities, these are: market, company size, profitability and relative price or “value.” Structuring portfolios around these dimensions positions investors to pursue higher expected returns. However, many have observed in recent years that value, both U.S. and internationally, has resulted in a prolonged period of relative underperformance, and wonder if that should be cause for concern.

Betting on Value

Unfortunately resulting, hindsight and recency bias has led a few to conclude that planning with value factor equity weightings is a mistake and has negatively impacting their decision-making. Since no one has crystal balls to aid their investment process, just as in professional poker, our investment strategy structures multi-dimensional portfolios positively tilted towards that factor and rebalances regularly.

Exhibit 2: HISTORICAL VALUE PREMIUMS BY YEAR

Value minus Growth: U.S. Markets, 1928-2017



In US dollars. The one-year relative price premium is computed as the one-year compound return on the Fama/French US Value Research Index minus the one-year compound return on the Fama/French US Growth Research Index. Fama/French indices provided by Ken French. Index descriptions available upon request. **Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is no guarantee of future results.**



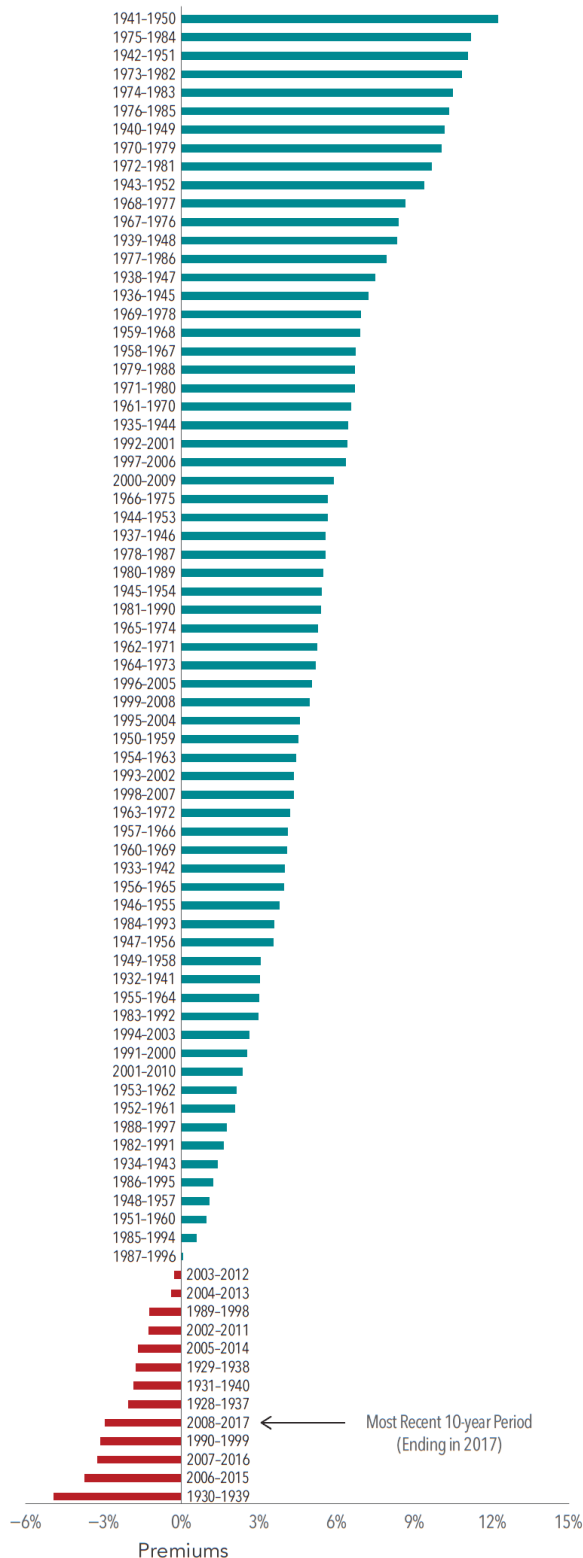
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Exhibit 3: HISTORICAL 10-YEAR VALUE PREMIUMS

Value minus Growth: U.S. Markets 10-Year Periods ending, 1937–2017



From 1928–2017 the value premium⁷ for the U.S. had an annualized return of approximately 3.5%.⁸ Unlike the previous decade, in seven of the last 10 calendar years the value premium in the U.S. has been negative. The value premium for that same period was -2.3%.⁹ But are extended periods of relative underperformance in the value premium (or other dimensional premiums) unusual? Examining years of academic research and historical evidence helps estimate odds of positive results for planning outcomes.

Short-Term Value Results

Exhibit 2 shows yearly observations of the U.S. value premium going back to 1928. The annual arithmetic average for the premium is close to 5%, but in any given year the premium has varied widely, sometimes experiencing extreme positive or negative performance. In fact, there are only a handful of years that were within a 2% range of the annual average—most other years were farther above or below the mean. In the last 10 years alone there have been premium observations that were negative, positive, and in line with the historical average. This data illustrates that there is a significant amount of variability around how long it may take a positive value premium (or any premium, including the market premium) to materialize.

Long-Term Value Results

But what about prolonged periods of underperformance? While the current stretch of extended value premium underperformance may be disappointing, it is not unprecedented. Exhibit 3 documents 10-year annualized performance periods for the value premium, sorted calendar year from lowest to highest.

This chart shows us that the best 10-year period for the value premium was from 1941–1950 (at top), while the worst was from 1930–1939 (at bottom). The value premium was positive over most 10-year periods. As the arrow indicates, however, the value premium for the most recent 10-year period (ending in 2017) was negative, one of 13 periods since 1937 that had a negative annualized

In US dollars. The 10-year rolling relative price premium is computed as the 10-year annualized compound return on the Fama/French US Value Research Index minus the 10-year annualized compound return on the Fama/French US Growth Research Index. Fama/French indices provided by Ken French. Index descriptions available upon request. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is no guarantee of future results.



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value premium. Of these, it has been middle-of-the-road in magnitude.

How long value underperformance may last is uncertain. Historically, however, over longer time horizons positive value premiums are much more frequent. **Exhibit 4** shows the percentage of years that the value premium was positive over rolling time periods going back to 1926. As the measurement periods increased, the chance of a resulting positive value premium correspondingly increased. For example, when the time period measured goes from five years to 10 years, the frequency of positive average value premiums relative to growth premiums increased from 75% to 84%. Positive average values continues to increase as the evaluation period increases. The probability of positive premium a result moves toward 100% over twenty years as a professional investor maintains his dimensional allocation strategy “bets.”

Strategically Playing the Odds

We believe successful investing with the greatest confidence is achieved by structuring portfolios along the dimensions of expected returns based on client goals and preferences. Financial capital plays a vital role in wealth creation. Stocks and bonds are conduits for capital, and capital markets have long rewarded long-term investors who expect a return *on* their money, as well as the return *of* their money.

But importantly, decades of economic research have shown that markets competing for capital compensate investors for non-diversifiable risks. Dimensional portfolios are built on the science of capital market, focused on the opportunities different dimensions offer investors. Structured portfolios pursue higher expected returns using a sophisticated dynamic implementation process that integrates research, portfolio design and portfolio management and trading in cost-effective and tax-efficient ways.

So, how does managing multi-dimensional structured portfolios relate to winning poker pots more often? Someone without cognitive dissonance will observe that over successive 10-year periods since 1927, value stocks outperformed growth stocks 84% of the time—the *same percentage as in the poker hand that was played and lost earlier in this paper*. The value premium’s underperformance was not unexpected, in the sense we had calculated that in 14% of 10-year periods that the value premiums will underperform.

Investor commitment to their strategy and discipline in their process will be tested again and again. Investing is risky. However, the longer investors play the same game the same way, the more likely they will participate in periods of premium over-performance, such as during 2000-2009. The ten-year period 1990-1999 that preceded had value premiums more disappointing than the period investors are now experiencing. However, overall outcomes due to balanced multifactor allocation portfolios and ways Dimensional Funds Advisors captures returns from trading has **not** been disappointing for clients of Professional Financial.

Recently we’ve encountered several intelligent prospective clients with very similar portfolio approaches. Careful examination of the aggregated portfolios in each case showed concentrated allocations of U.S. larger company stocks and underweighted international and fixed income allocations. They had significant U.S. market-beta risk and growth dimension risk. They had a diversity of several funds, but apparently seeking return greater than the fixed income markets offered, they lacked broad global diversification for reducing risk and creating rebalancing opportunities to buy low in an eventual cyclical market downturn.

Exhibit 4: HISTORICAL VALUE PREMIUMS OVER ROLLING PERIODS

July 1926–December 2017

Value Beat Growth



Value is Fama/French US Value Research Index.

Growth is Fama/French US Growth Research Index.

There are 979 overlapping 10-year periods, 1,039 overlapping 5-year periods, and 1,087 overlapping 1-year periods

In US dollars. Based on rolling annualized returns using monthly data. Rolling multiyear periods overlap and are not independent. Fama/French data provided by Fama/French. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is no guarantee of future results. Index descriptions available upon request.



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From January 2010 (following the market lows of 2009) to June 2018 the S&P 500 index of large U.S. stocks grew 191.2%. While market-beta premium has been realized since the market cycle recovered in 2010, market-beta data show *negative premiums in 9% of the 10-year periods since 1927*—not that much different than for the value premium at 14%. Notably, the cumulative return for the immediate prior ten-year period 2000-2009 was only 0.9%! We think it unlikely these investors had substantial S&P 500 equivalent allocations at the beginning of 2010. Thus substantial portion of that 191.4% gain is in doubt because for most of that period, their equity positions were in costly actively managed funds, rather than low-cost equity index funds, in addition to greater levels of fixed income positions.

Markets Compensate Non-Diversifiable Risk

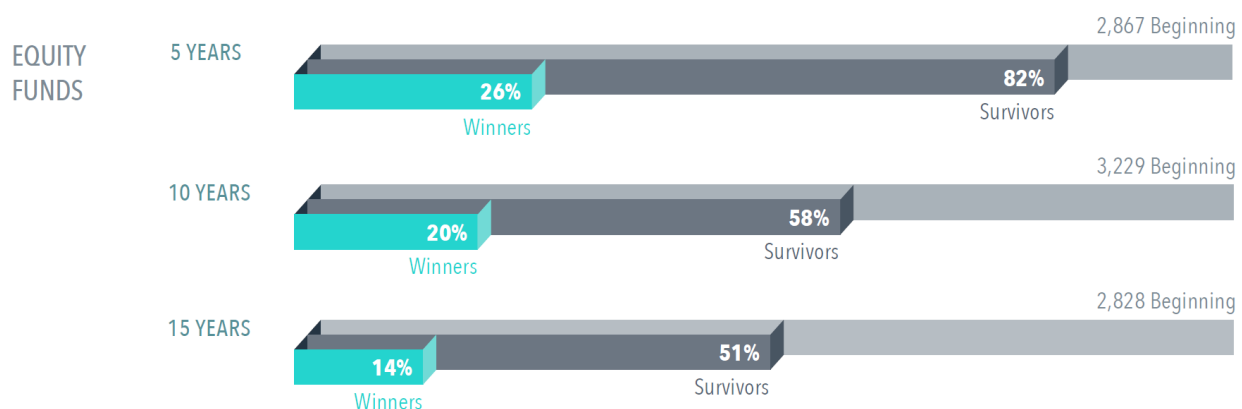
Risk is a complex concept—it is always present, even if not been previously realized. Risk cannot be directly observed until it occurs. However, the sources of risk are known and directly observable. Decades of academic research have advanced our understanding of them. Academic research has identified dimensions of market, size, profitability and value pointing to differences in expected returns, all well-documented in markets around the world and across different time periods.

Investors balance risk and return by incorporating their expectations and preferences into securities prices. More than 50 years have passed since the idea of stock prices containing all relevant information was put forth. Information is incorporated into security prices through the buying and selling process. There will be periods, sometimes a decade or longer, when a sensible investment management strategy leads to relatively poor results compared to a possible alternative allocation. Even at 20-year horizons, data shows the market beta premium has been negative 3% of the time, which is why informed investors when planning for retirement should choose global allocations across all dimensions of expected returns.

Due to past disappointing results based on their investment management method, investors usually end up seeking better returns on their capital. A 15-year period study in **Exhibit 5** shows that only 14% of traditional active mutual fund managers both survived the period and beat comparable benchmarks. Many studies over the past 50 years have documented similar results. As a group, traditional actively managed equity funds collectively (and separate account managers) look similar to the market but have lower returns due to higher fees and costs. So it is unlikely that on expectation and due to erratic trading that traditional active managers have the ability to cover their cost after accounting for their exposure to the market, size,

Exhibit 5: MUTUAL FUND SURVIVORSHIP AND OUTPERFORMANCE OVER 15 YEARS

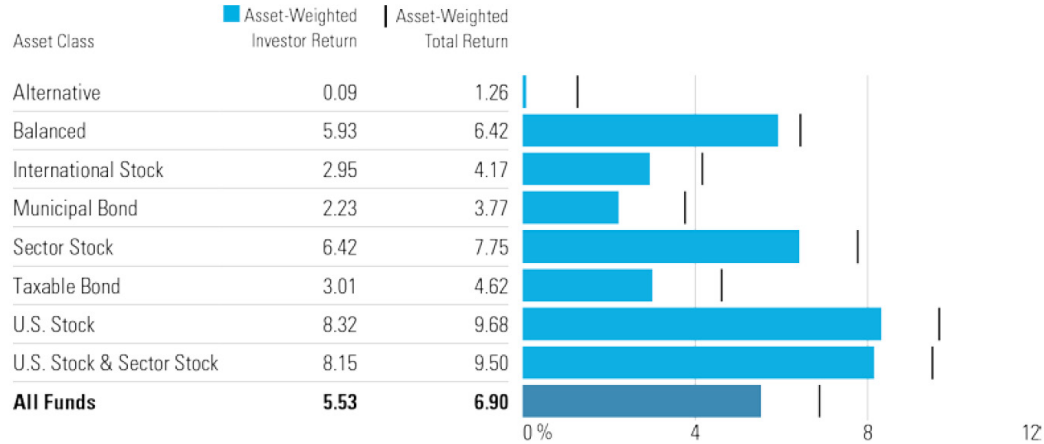
15-Year Period through December 31, 2017



Sources: US-domiciled open end mutual fund data is from Morningstar and Center for research in Security Prices (CRSP) from the University of Chicago. In the study results, "benchmark" refers to the Morningstar category index used to evaluate the performance of each respective mutual fund in the sample. The sample includes funds at the beginning of the 5-, 10-, and 15-year periods ending December 31, 2017. Past performance is no guarantee of future results. Index funds and fund-of-funds are excluded from the sample. Net asset for funds with multiple share classes or feeder funds are a sum of the individual share class total net assets. Each fund is evaluated relative to the Morningstar category index assigned at the start of the evaluation period. Indices are not available for direct investment.



Exhibit 6: ASSET-WEIGHTED INVESTOR RETURNS BY ASSET CLASS OVER 10 YEARS



Sources: Morningstar, Inc. Data through 3/31/2018. All funds figures are ex-fund of funds. The other grouping are not. Each fund is evaluated relative to the Morningstar category index assigned at the start of the evaluation period. Past performance is not guarantee of future results. Indices are not available for direct investment.

value, profitability and investment factors of Fama and French.¹⁰

If professional fund managers generally fail to capture market returns due to higher fees and costs, it is unsurprising that individual investors lose even more returns due to resulting selection behaviors as they switch among managers, asset classes and investment vehicles. Morningstar finds a “behavior gap” between official mutual fund total returns and those experienced by investors based on asset-weighted returns as they consistently mis-timed their fund selection based on resulting rather than strategy.¹¹ The gap for all classes was 1.37% per year over 10 years ended March 2018, similar to the gap between U.S. stock funds only at 1.36% per year. We note investors choosing “Alternative” investments seeking to avoid market risk after the global financial crisis earned close to a risk-free annualized rate for the same period.

Investors have little control over markets, but they can make strategic decisions that improve their odds of having better planning outcomes. Since the worth of securities in the distant future—much less next year, next month or even tomorrow—is uncertain and unknowable, investors should think in terms of tilting portfolios targeting higher expected returns and avoiding equities with lower expected returns. Holding other factors constant, the lower the price you pay, the higher the expected return.

Price-to-Book Value is a relatively stable method of comparing relative price over time periods. We may aggregate all U.S. public securities by dimensional groups for a macroeconomic overview of expected returns. Dimensional Advisors quarterly breaks down key financial ratios. Here are the changes since 2008:

Price-to-Book	4Q2008	2Q2018	Change
US Aggregate	1.47	2.98	103%
US Value	0.63	1.42	125%
US Neutral	1.54	3.94	156%
US Growth	3.45	12.03	249%

The firm’s cost of capital is the investor’s return, as late Nobel laureate Merton Miller always taught. The lower P-to-B, the higher expected returns; the higher P-to-B, the lower expected returns. The U.S. aggregate price-to-book today is about 50% above its long-term average of about 2. This implies lower returns going forward. But the current U.S. growth P-to-B is astonishing—implying returns for the next decade will be very poor, likely close to fixed income but with much more volatility.

Asset appreciation of the inflated U.S. stock market likely is related to the Federal Reserve’s grand experiment where \$4 trillion of bonds were purchased to stimulate the economy by driving interest rates down to historic lows—causing an asset boom in stock prices. Europe and



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Japan central banks also “stimulated” their economies resulting in high P-to-B stock appreciation. With official U.S. debt over \$21 trillion and borrowing at \$5.4 billion PER DAY, America’s financial situation is unsustainable with government debt at 100 percent of GDP. The Fed is raising interest rates, but that also increasing the cost of financing. Facebook just suffered the biggest one-day price drop ever, and venerable General Electric has seen similar declines. Those are portents of price declines impacting all U. S. stocks.

Conclusion

The path to success in business is paved with hard work, intense activity and constant focus on results. For investment activities involving financial markets, that is not the case. In Taoist philosophy, students are taught to let go of what they cannot control. The phrase “wei-wu-wei” translates as “do without doing.” In some areas of life as in investing, more activity does not necessarily produce better results.

A corollary to our Sun Tzu quote at the beginning could be, “Smart strategy with proven tactics leads

to victory.” Long periods of disappointing portfolio performance happen. Quitting a sensible strategy and making changes just to “do something” should not happen. Insights from behavioral financial science tell us that investors should focus on what they can control, and “let go” of what they cannot. The wisdom of a trusted professional in seeing how can make all the difference.

Ten years sometimes may be too short to benefit from every dimensional premium. Yet betting on strategies grounded in financial science and working with proven professionals like those at Professional Financial is perhaps the best way to take control of your financial future, manage uncertainty, and have peace of mind.

While the past does not repeat, it does echo. With all the summer pleasantness of economic prosperity, a cyclical fall for an aging bull market is due. Let me warn those pursuing U.S. growth stocks ever higher, and trusting in fund selection and timing tactics: there is no free lunch. After the tech bust and later the global financial crisis, we ate the lunch of many making bad bets. After this coming crisis, I bet I’ll eat many dinners.

Endnotes

- 1 Annie Duke, *Thinking in Bets: Making Smarter Decisions When You Don't Have All the Facts*, Penguin Random House (2018).
- 2 Think of getting to a sports event, and you are short of time. Google maps tells you the expressway is shorter and faster than the route you customarily take that might be slow at rush hour. So you get on only to find a mile down gridlock and no way to exit due to an accident or minor road patching that day. As a result, you miss the start of the program.
- 3 Nassim Taleb, *Fooled by Randomness: The Hidden Role of Chance in Life and in Markets*, Thompson/Texere (2004).
- 4 If you don't have the knowledge or the discipline to strategically invest, then engage a wealth management professional.
- 5 If you don't believe this, just read the front page and opinion pages of *The New York Times* and *The Wall Street Journal* for the next month as they cover (or ignore) events and situations related to the current U.S. President. For extra credit if time and patience permit, consider watching politically oriented topical features on CNN and Fox.
- 6 Richard F. West, Russell J. Meserve and Keith E. Stanovich, “Cognitive Sophistication Does Not Attenuate the Bias Blind Spot,” *Journal of Personality and Social Psychology* Vol. 103, No. 3, 506-519 (2012).
- 7 The value premium is the return difference between stocks with low relative prices (value) and stocks with high relative prices (growth).
- 8 Computed as the return difference between the Fama/French US Value Research Index and the Fama/French US Growth Research Index. Fama/French indices provided by Kenneth French. Index descriptions available on request.
- 9 Source: Dimension Fund Advisor Returns, Fama/French value indices.
- 10 Eugene F. Fama and Kenneth R. French, “Luck vs. Skill in the Cross-Section of Mutual Fund Returns,” *The Journal of Finance*, 65(5), 1915-1947 (2015). Also, Philipp Meyer-Brauns, “Luck vs. Skill Across Different Fund Categories,” *Research Matters*, Dimensional Fund Advisor (March 2017).
- 11 Russel Kinnel, “Mind the Gap 2018,” *Morningstar Manager Research*, Morningstar (June 2018).

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