



Facet Wealth's Investment Management Program

Philosophy, Strategy and Implementation

Contents

<u>Executive Summary</u>	1
<u>Planning Focused Investment Management</u>	1
<u>Introduction</u>	2
<u>Part One: Drivers of Our Scientific Approach</u>	3
<u>Markets are Inherently Efficient</u>	4
<u>Active Management Fails</u>	5
<u>Impact of Fees</u>	6
<u>Market Timing Fails</u>	7
<u>Forecasting Fails</u>	8
<u>Investor Behavior Negatively impacts Returns</u>	9
<u>Market Volatility Impact</u>	10
<u>Risk Management through Diversification</u>	12
<u>Part Two: Portfolio Construction</u>	14
<u>Global Diversification</u>	15
<u>Equities: Specific Considerations</u>	17
<u>Fixed Income: Specific Considerations</u>	20
<u>Security Selection</u>	23
<u>Total Portfolio</u>	23
<u>Monitoring and Rebalancing</u>	25
<u>Commitment to Continual Improvement</u>	26

Executive Summary

The Facet Wealth Investment Approach is based on the work of Nobel Prize winners and industry leaders including Eugene Fama (Nobel Prize, economics, 2013), William Sharpe and Harry Markowitz (shared Nobel Prize, economics, 1990), John Bogle (Vanguard founder), Stephen Ross (Sterling Professor of Economics and Finance, Yale School of Management), and Franco Modigliani (Professor of Financial Economics, MIT Sloan School of Management). It is based on research that overwhelmingly demonstrates that a carefully constructed portfolio of low cost, globally diversified, tax-efficient investments that captures the total market will outperform an investing strategy that attempts to beat the market. Additionally, we enhance the foundation of our approach with ongoing monitoring and portfolio rebalancing. This allows us to take advantage of asset volatility (e.g., using large swings in securities prices to buy assets at lower prices) and capture tax-losses to maintain the appropriate risk profile across our portfolios.

Planning Focused Investment Management

Our investment management solution is provided as an integrated part of our subscription-based planning relationship. We believe that meeting one's financial goals directly impacts the goals one wants to achieve in their life. Part of the financial planning process with a CFP® professional is investing in a sensible long-term portfolio designed to capture the market's long-term compounding return while managing risk exposure to appropriate levels.

Introduction

Facet's sophisticated investment management program is based on the rigorous analysis of academic and practical research. The result is a series of portfolio models with the following characteristics:

- Investments that reflect a broad definition of the market
- Disciplined adherence to maintaining appropriate market exposure
- Low expense ratios and fees
- Global diversification
- Equities (stocks): Exposure across the market capitalization range, including large, mid and small caps and across growth and value styles to capture low valuation companies under-represented in the indexes
- Fixed income (bonds): A moderated approach to credit quality and duration and use of tax-efficient bonds where appropriate
- Tax efficiency from use of exchange traded funds (ETFs) and automated loss harvesting to offset realized capital gains
- Systematic rebalancing to manage risk and take advantage of asset volatility

What follows is a two-part discussion. First, we explain the science and theory behind the tenets of our investment management program. Second, we explain how our portfolios are constructed to optimize our clients' risk-adjusted returns, tax efficiency, diversification and costs.

Part One

Elements of Our Scientific Approach

Section Topics

Markets are Inherently Efficient

Active Management Fails

Impact of Fees

Market Timing Fails

Forecasting Fails

Investor Behavior Negatively Impacts Returns

Market Volatility Impact

Risk Management through Diversification

We have designed our investment approach based on the academic science of financial theory. The end result is a program that draws from peer-reviewed and time-tested scientific research of Nobel Laureates and incorporates up-to-date innovations from industry leaders.

Markets are Inherently Efficient

[The Efficient Market Hypothesis](#), based on ideas from as early as 1900 but made mainstream by Eugene Fama in the 1970s¹, is a cornerstone of all modern financial theory. The concept is that the market reflects all available information at a given time. Some anomalies have been identified and there is controversy around the specifics of exactly how efficient the market is, but most investors believe that the market is largely efficient over time.

For markets to clear, buyers and sellers must agree on a suitable price for a security. Millions of diverse players make decisions based on how new information affects securities prices, thereby creating an efficient overall market pricing mechanism². To be an active manager attempting to identify undervalued securities, you have to believe you have information that is not correctly incorporated into prices and that even in the presence of costs you can do better than millions of other competitive market participants analyzing that same information. Furthermore, if the stock picking active manager buys what they consider to be an undervalued stock, they also need to believe that the assumed mispricing of that stock will be corrected in order to profit from it. So, one must believe that a market will be efficient over time, even if there are pockets of inefficiency.

The millions of market participants have strong financial incentives to correct any perceived pricing error. [The Arbitrage Pricing Theory](#)³, developed by economist

¹Fama, Eugene (1965). "The Behavior of Stock Market Prices". *Journal of Business*

²[The Wisdom of Crowds](#) by James Surowiecki is an excellent book on this subject

³Ross, Stephen A (1976-12-01). "The arbitrage theory of capital asset pricing". *Journal of Economic Theory*

Stephen Ross in 1976 explains why any risk-return relationship that is not priced correctly creates strong profit incentives to be corrected. Small mis-pricings will thus naturally disappear.

Active Management Fails

If a market is largely efficient, it follows that paying high fees to someone to attempt to find underpriced stocks is unlikely to lead to value added over the long-term. In fact, the evidence that active managers cannot outperform their asset class after fees is extremely strong.

The Standard and Poors Index of Passive vs. Active Management, or SPIVA, shows how active managers have underperformed over time, and that their unnecessary concentration of stocks and higher fees produce a big drag on performance. The longer the time horizon of the analysis, the higher the percentage of underperformance. In the 20 years ending June 30, 2021, for example, 89% of all US domestic funds underperformed on an absolute basis, and 93% on a risk-adjusted basis⁴. Using a time horizon of ten years, the data clearly shows that active managers underperform.

Category	Index	% of managers who underperform over 10 yrs
US Domestic Equity	S&P 1500	88.58%
US Fixed Income	Barclays Long Gvt.	97.26%
Eurozone Equity	S&P Eurozone	91.96%

Security returns are very noisy and it is always possible for a manager to randomly outperform over a short period of time. Financial publications will highlight individual managers' outperformance in short time horizons, but we need to recognize that this outperformance may be due to random outcomes in noisy

⁴ https://www.spglobal.com/spdji/en/research-insights/spiva/?utm_source=pdf_spiva

markets. While this is a sensible approach for an industry that gathers fees based on how many dollars they can attract (the typical fee is 1.12% of assets under management, or AUM⁵), it is extremely misleading to consumers, given that the persistence of these short periods of outperformance is small. Consumers are drawn to managers who have recently outperformed, often just at the point that the manager begins to underperform. Our view is to accept that consistent outperformance from stock-picking is unlikely, and to accept a market rate of return compounded over time as the most advantageous to our clients.

Impact of Fees

One mechanism that explains the underperformance of active managers is the impact of fees. Nobel-Prize winning economist William Sharpe's work on this in 1991 and 2013 further underlined the lack of outperformance from active management. He showed the average active management fee was around 1.12% and highlighted the compounding impact that fees can have on an investor's long-term outcomes.

John Bogle, the founder of The Vanguard Group, spent a lifetime documenting the impact that expenses and fees have on regular investors. In this 2014 paper, Bogle laid out the impact not just of management fees for active managers versus passive managers (as explained by William Sharpe), but also the myriad of other costs (sales loads, transaction costs, and cash drag) that are applied to the products investors are generally sold. Bogle documents that the expense and cost drag for actively managed funds is 2.27%, not the 1.12% used by Sharpe⁶. Given the efficiency of markets, it is highly unlikely that an active strategy can make up for a 2.27% annual expense drag.

This expense drag costs investors dearly. As the chart below shows, if you had invested \$10,000 in the year 2000 through the end of 2020 in the Russell 3000 Index, a good measure of the broad domestic market, your investment would have

⁵ Sharpe, William F. "[The Arithmetic of Investment Expenses.](#)" Financial Analysts Journal, 2013.

⁶ Bogle, John C. "[The Arithmetic of "All-In" Investment Expenses.](#)" Financial Analysts Journal, 2014.

compounded to almost \$50,000 without fees. But, with a 2.27% fee you'd have only \$30,000⁷. While it may be unrealistic to expect no fees at all, a 2.27% rate is an extraordinary burden to bear and could affect whether or not an investor meets their long-term goals.

So, in an efficient market that incorporates information into prices, paying high fees is not expected to produce good outcomes. Using well diversified, low turnover investment solutions with low fees is a better approach.

Exhibit 1: Impact of 2.27% annual expense drag on compound returns 2000-2021



Market Timing Fails

Imagine being able to get in the market before it goes up and get out before it goes down. The idea sounds amazing, but if that was possible, everyone would do it and the market would adjust earlier due to everyone already knowing the next

⁷ Facet Wealth analysis, chart and data from YCharts using Russell 3000 index 12/31/99-12/1/2021

day's outcome. The idea of being able to time the market just does not work. As the SPIVA report shows, even professional managers do not do as well as a simple buy-and-hold strategy that keeps a focused asset allocation.

In addition to the reasons outlined in our discussion of market efficiency, we add three academically supported observations about the futility of market timing that leads us to an investment approach that does not attempt to time the market:

- Professional forecasters and economists often miss the mark with their predictions
- Investor behavior negatively impacts returns over time
- Market movements tend to be clustered in ways that make timing difficult

Forecasting Fails

Professional economists publish forecasts in the Wall Street Journal every month. They are consistently wrong. One of the simpler forecasts is a prediction of the Fed Funds rate one year out. We say this is simple since the variability of Fed Funds rates is much lower than the stock market, and the Federal Reserve is quite transparent about their intentions for raising or lowering this rate.

However, looking back to data starting in 1983, professional economists' estimates were wrong about the direction (up or down) of Fed Funds rates 42% of the time (8 years out of 19)⁸. Given it is a binary forecast, they had a 50% chance of being right.

Additionally, the magnitude of their incorrect forecasts was large. On average, the forecasts were off by 50%⁹, with the smallest error rate at 8% and the largest at 96%. To be fair, the 96% error was in 2008 when the financial crisis caused the Fed

⁸ Facet Wealth analysis, <https://fred.stlouisfed.org/series/FEDFUNDS>, <https://www.wsj.com/articles/economic-forecasting-survey-archive-11617814998>

⁹ Facet Wealth analysis, <https://fred.stlouisfed.org/series/FEDFUNDS>, <https://www.wsj.com/articles/economic-forecasting-survey-archive-11617814998>

to lower interest rates aggressively in the second half of the year, and none of these economists saw that coming. Even excluding 2008, however, their average error was 43%.

Another study analyzing the accuracy of market forecasters over various periods of time concluded that only 48% of all forecasts made were correct¹⁰. Simply stated, on average, professional economists and market forecasters are wrong more often than they are right and relying on their predictions to inform investment decisions is analogous to flipping a coin.

Investor Behavior Negatively Impacts Returns

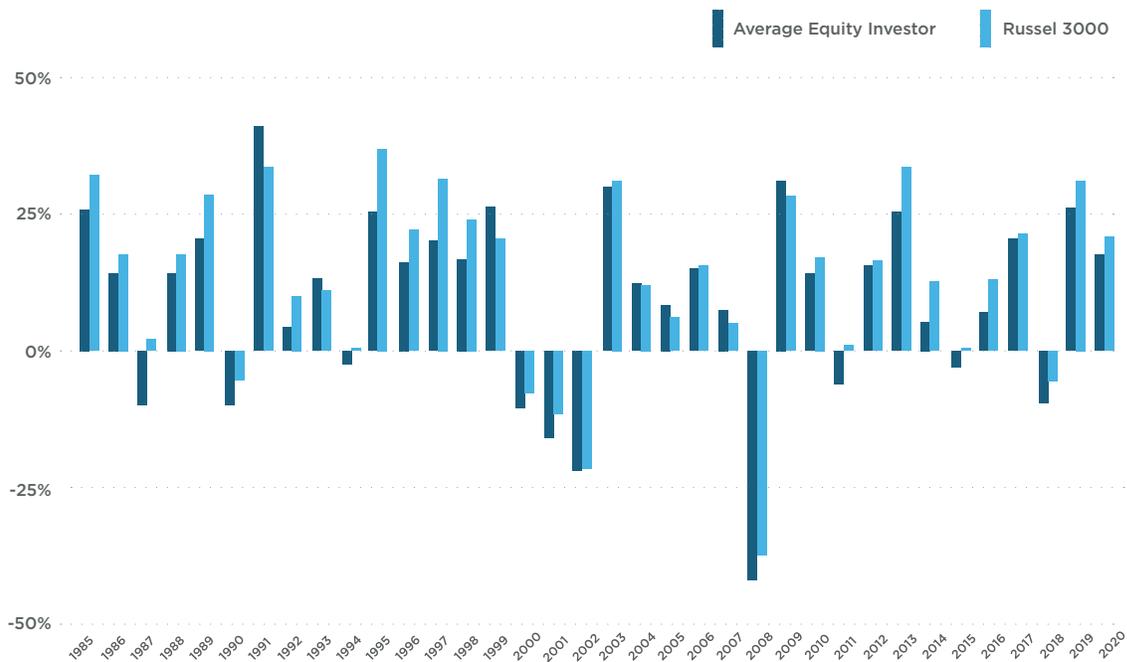
The academic field of Behavioral Economics is devoted to studying how human psychology impacts investment outcomes. For the purposes of this paper we assume human psychology is reflected in the outcomes (we may explore the tenets of Behavioral Finance at another time as it impacts our planning focus.)

The evidence that investors destroy value in their investment returns over time is strong. This is well documented by DalBar, a company that has tracked actual investor stock returns¹¹. Their reports show that investors earn less than the performance of the market or even than the performance of the funds in which they are investing. As shown in the following chart, the DalBar study shows that the average investor has underperformed the Russell 3000 index, a broad US market index, in 30 of the last 35 years. The average investor's average compound annual returns were over three percentage points worse than had they simply invested in the index. The reason for this underperformance is that investors cannot get out of their own way. This can be due to trying to chase the next hot investment or letting fear prevent them from participating in the market. Regardless of the reason, this desire to anticipate market returns tends to produce suboptimal returns over time.

¹⁰ Bailey, Borwein, Salehipour, Lopez de Prado, 2017 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2944853

¹¹ DalBar Quantitative Analysis of Investor Behavior Q3 2021, Facet Wealth Analysis

Exhibit 2: Average Equity Investor vs. Russell 3000 Index Returns 1985-2020



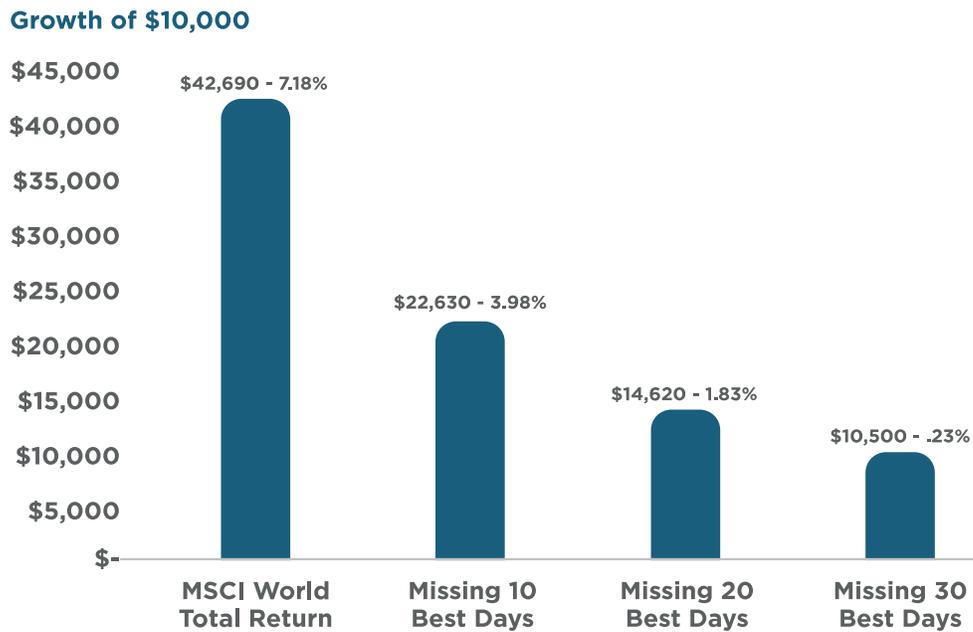
Market Volatility Impact

A last illustration of the futility of market timing is to look at how the best and worst days in the market have contributed to overall returns. The global stock market, using a broad developed market index (the MSCI World Index), has returned about 7.2% per year for the 20 year period from 2000-2020. So, if an investor had invested \$10,000 in the market for 20 years it would be worth \$43,000 today¹².

However, if that investor missed the 10 best days of the market, their annual return would have only been 4%, and the value of their investment would be \$23,000. Missing 20 days drops the return to 1.83% and the investment value to \$14,500, and missing 30 days puts returns at nearly 0%.

¹²Facet Wealth Analysis, data from YCharts

Exhibit 3: Impact of missing 10, 20 and 30 best days in the market 2000-2020

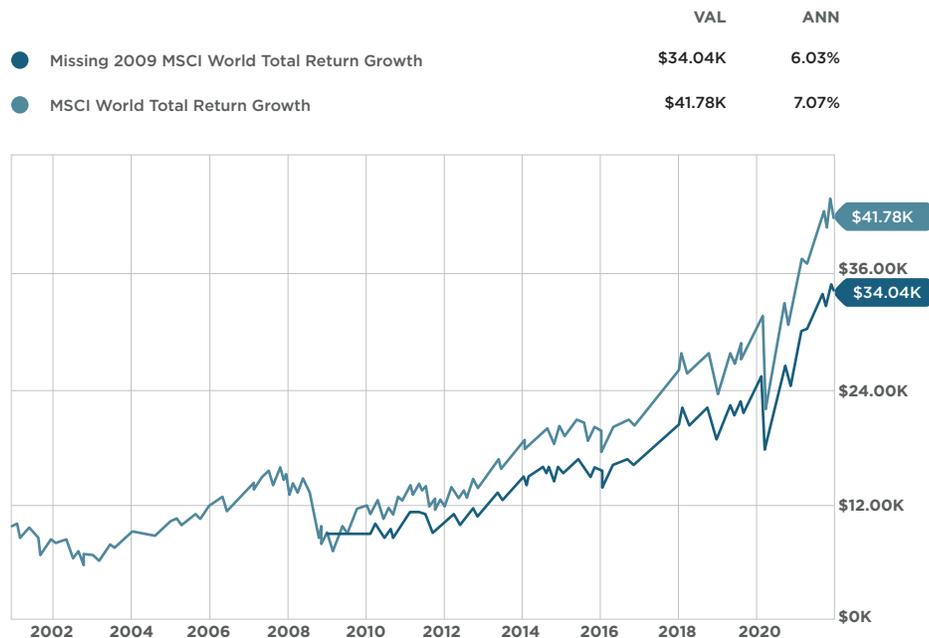


A possible retort to this data is that one would have done well to miss the worst days. However, it would be nearly impossible to achieve since the best days and the worst days are almost always clustered together. Eight of the 10 “best days” and seven of the 10 worst days above were during the financial crisis of 2008-2009 when fear was extremely high. Given that forecasting accuracy by experts and market timing by investors is poor, as shown previously, it follows that anyone who traded out of the market to avoid the bad days would be highly unlikely to be back in time for the good days.

Selling at the end of 2008 and returning at the end of 2009 is a good proxy of how a typical investor may have traded based on emotions. Had a theoretical investor missed all of 2009, their 20-year return would have been a full 1% per year lower than if they had not. This market timer’s \$10,000 investment would be worth \$34,000 instead of nearly \$42,000¹³.

¹³ Facet Wealth Analysis, YCharts

Exhibit 4: Theoretical return for market timing without 2009



Risk Management through Diversification

Modern Portfolio Theory (MPT) is another scientific financial theory we rely upon in our investment management program. MPT was developed by Nobel Laureate Harry Markowitz in 1952. The basic idea is that a portfolio can be constructed of multiple securities (or multiple asset classes) in ways that maximize return for a given level of risk¹⁴.

To understand this, let's first take a step back and recall that in financial theory, risk and return are related¹⁵. According to MPT, a portfolio of securities can be constructed using measures of covariance and correlation between securities,

¹⁴ Markowitz, 1952, https://www.math.hkust.edu.hk/~maykwok/courses/ma362/07F/markowitz_JF.pdf

¹⁵ We're not delving deeply into this here since it is a widely accepted tenet of financial theory, but we can have a deep conversation about the nature of risk in another document. For the purposes of discussing risk as it related to financial theory we are referring to volatility and standard deviation

whereby total return can be increased while risk remains static. Each security or asset class added to the portfolio has an associated return expectation and risk level. Depending on the level of covariance and correlation, adding a security to a portfolio can create a portfolio with similar return characteristics while actually lowering the total risk of the portfolio. Put differently, a portfolio diversified across multiple securities lowers risk while maintaining potential for return. As you can see in the example below, combining US stocks and international stocks into one portfolio resulted in a strong average annual return (11.05%) while reducing risk (13.73% standard deviation)¹⁶.

Name	Total Return (Since 1979)	Standard Deviation (Risk Measure)	Sharpe Ratio (Return per level of risk)
Russell 3000 Total Return	11.94%	16.40%	0.8403
Globally Balanced Portfolio 65% US/35% International	11.05%	13.73%	0.9209
MSCI World Ex USA Standard	8.96%	16.94%	0.6513

Identifying a perfect mix of investments means that the resulting allocation offers the highest level of return for a certain level of risk. This is known as the optimal portfolio, which lies along the Efficient Frontier. Diversification across asset classes and geographies to optimize portfolios for the Efficient Frontier is the basis of our portfolio construction process detailed in Part Two.

¹⁶ Facet Wealth Analysis, YCharts

Part Two

Portfolio Construction

Section Topics

Global Diversification

Equities: Specific Considerations

Fixed Income: Specific Considerations

Security Selection

Total Portfolio

Monitoring and Rebalancing

As we explained above, the risk of the portfolio is different from the risk of any individual security or asset class. So, we have carefully selected a model portfolio of ETFs that we believe represents a diversified, global portfolio that sits upon the Efficient Frontier to optimize return at any given level of risk. We begin with a global definition of the market, and explain below the importance of global diversification. We further improve the risk/reward profile and expected returns of the stock portfolio by using ETFs that capture the most appropriate definition of “the market” as we described it above: all market caps and representation from low valued companies. Finally, we mix in high quality bonds dependent on the investor’s specific risk and goal considerations based on conversations with their CFP® Professional.

Global Diversification

Global market performance shows how diversification can improve long-term portfolio outcomes. The broad categories of US, International Developed and Emerging Markets perform in cycles of return that are a perfect example of how diversification can smooth returns through cycles.

There are two key concepts here. One, there are periods of poor performance in some regions that are offset by better performance in others, resulting in a diversification benefit. Take for example the difference between the first two decades of this century. This chart shows the absolute returns for each decade¹⁷:

	2000-2009	2010-2019
US Market (Russell 3000)	-2.02%	252.20%
International (MSCI ex US)	35.91%	69.96%
Emerging Markets	162.0%	48.62%

¹⁷ Facet Wealth Analysis, YCharts

US investors in a portfolio that was not globally diversified would have had negative returns in the ten years ending in 2009, often referred to as the “lost decade”. In contrast, US markets outperformed international markets in the following decade.

In fact, outperformance of different regions or asset classes does not persist over time in any scientifically identifiable way. The [“Periodic Table of Returns”](#), sometimes also called the “Asset Class Quilt” shows how certain classes that perform the best for a year or two often become the worst performers in another. Similarly, those at the bottom do not remain there for long periods. The colors representing different asset classes form an apparently random order as one asset class performs well, then doesn’t, year to year¹⁸.

Exhibit 5: Periodic Table of Returns 2010-2020

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
US Small Cap 26.85%	US Bond 7.84%	Emerging Markets 18.63%	US Small Cap 38.82%	US Large Cap 13.69%	US Large Cap 1.38%	US Small Cap 21.31%	Emerging Markets 37.75%	Cash 1.82%	US Large Cap 31.49%	US MidCap 20.95%
US MidCap 26.11%	International Bond 4.36%	Developed Markets 17.02%	US MidCap 34.95%	US MidCap 12.45%	US Bond 0.55%	US MidCap 12.43%	Developed Markets 24.81%	US Bond 0.01%	US MidCap 30.84%	US Small Cap 19.96%
Emerging Markets 19.2%	US Large Cap 2.11%	US MidCap 16.73%	US Large Cap 32.39%	US Bond 5.97%	Cash 0.03%	US Large Cap 11.96%	US Large Cap 21.83%	International Bond (2.15%)	US Small Cap 25.52%	Emerging Markets 18.69%
US Large Cap 15.06%	Cash 0.07%	US Small Cap 16.35%	Developed Markets 21.57%	US Small Cap 4.89%	US MidCap -1.59%	Emerging Markets 11.6%	US MidCap 19.75%	US Large Cap (4.38%)	Developed Markets 23.16%	US Large Cap 18.4%
Developed Markets 9.43%	US MidCap (0.83%)	US Large Cap 16.00%	Cash 0.05%	Cash 0.02%	Developed Markets (2.6%)	Developed Markets 3.29%	US Small Cap 14.65%	US MidCap (9.37%)	Emerging Markets 18.88%	International Bond 10.11%
US Bond 6.54%	US Small Cap (4.18%)	US Bond 4.21%	US Bond (2.02%)	Emerging Markets (1.82%)	US Small Cap (4.41%)	US Bond 2.65%	International Bond 10.51%	US Small Cap (11.01%)	US Bond 8.72%	Developed Markets 8.09%
International Bond 4.95%	Developed Markets (11.78%)	International Bond 4.09%	Emerging Markets (2.27%)	International Bond (3.08%)	International Bond (6.02%)	International Bond 1.49%	US Bond 3.54%	Developed Markets (13.64%)	International Bond 5.09%	US Bond 7.51%
Cash 0.13%	Emerging Markets (18.17%)	Cash 0.08%	International Bond (3.08%)	Developed Markets (3.88%)	Emerging Markets (14.6%)	Cash 0.26%	Cash 0.82%	Emerging Markets (14.24%)	Cash 2.21%	Cash 0.54%

This is especially important to remember now in early 2022 as the largest companies in the US have experienced a very strong run, which has led to outsized performance of the S&P 500 in recent years. Investors may make the error of de-emphasizing

¹⁸ Facet Wealth Analysis, YCharts

diversification given this one asset class's consistent outperformance as of late. This is a classic behavioral economic mistake called [recency bias](#), when humans take a recent experience and overweight it relative to long-term data.

Equities - Specific Considerations

We adjust the foundation of our globally diversified stock allocations to capture the so-called anomalies of the Small Cap Effect and the Value Premium, explained below. We do not believe they are anomalies at all, but rather flaws in the definition of an appropriate representation of "the market". Most indexes of markets are weighted by market cap¹⁹. For example, the top ten companies in the S&P 500 Index account for 28.76% of the index and the top 50 account for 54.27%²⁰. Investing in the S&P 500 as a representation of the US market is thus making a deliberate bet on large-cap stocks that have recently shown price appreciation. This creates a distortion of underweighting smaller companies and lower valued companies.

We make adjustments to try and capture the large companies of the future, not just the current ones. A few recent anecdotes of this: Tesla was not added to the S&P 500 until December 2020, and Amazon until November 2005. The companies' total returns before they were added were 14,450% and 2,350% respectively²¹. Research from JP Morgan shows only about 7% of companies outperform the Russell 3000 by more than 2,000% over their lifetime. The majority (two-thirds) of companies underperform the Russell 3000 over their lifetime. If we were mostly concentrated into large companies we could miss those 7% of companies that drive excess return²².

Both factor adjustments we make are based on work from Professors Eugene Fama

¹⁹ The term "Market Cap" is the dollar amount the market has determined the entire company is worth - equal to the number of shares outstanding multiplied by the current price per share

²⁰ Facet Wealth Analysis, YCharts

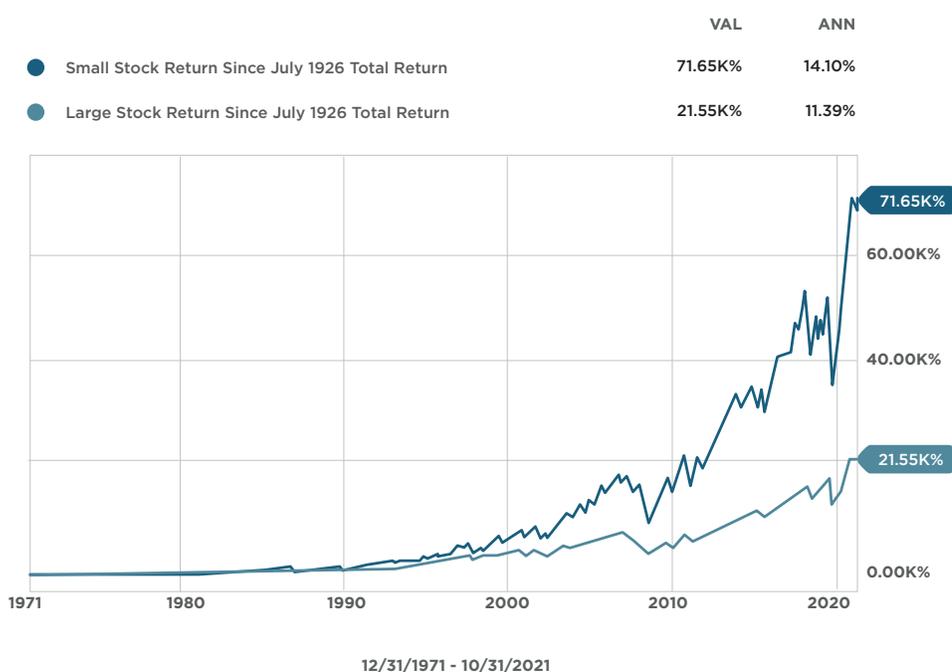
²¹ Facet Wealth Analysis, YCharts

²² The Agony and The Ecstasy: The Risks and Rewards of a Concentrated Stock Position, JP Morgan Chase, 2014

and Kenneth French in their three-factor model²³, which was designed as a tool to describe stock returns.

The market cap effect was first identified in a 1981 paper by Rolf Banz²⁴ and further documented by Fama and French. Since 1971, US small cap stocks have compounded 14.06% annually. In contrast, US large-cap stocks have compounded 11.31% annually. This 2.75% difference, compounded over many years, can make a significant difference to a portfolio's return. If we look at data since 1926, the difference is almost identical at 2.81% per year²⁵.

Exhibit 6: Fama French Data on Small Cap vs. Large Cap stocks 1971-2021



An additional observation from Fama and French in the same paper identified the [“Value Premium”](#). The initial work showed that the valuation of companies, as measured by low price/book value, had a material impact on performance over time.

²³ Fama, Eugene and Kenneth French. [“The Cross-Section of Expected Stock Returns.”](#) The Journal of Finance, 1992.

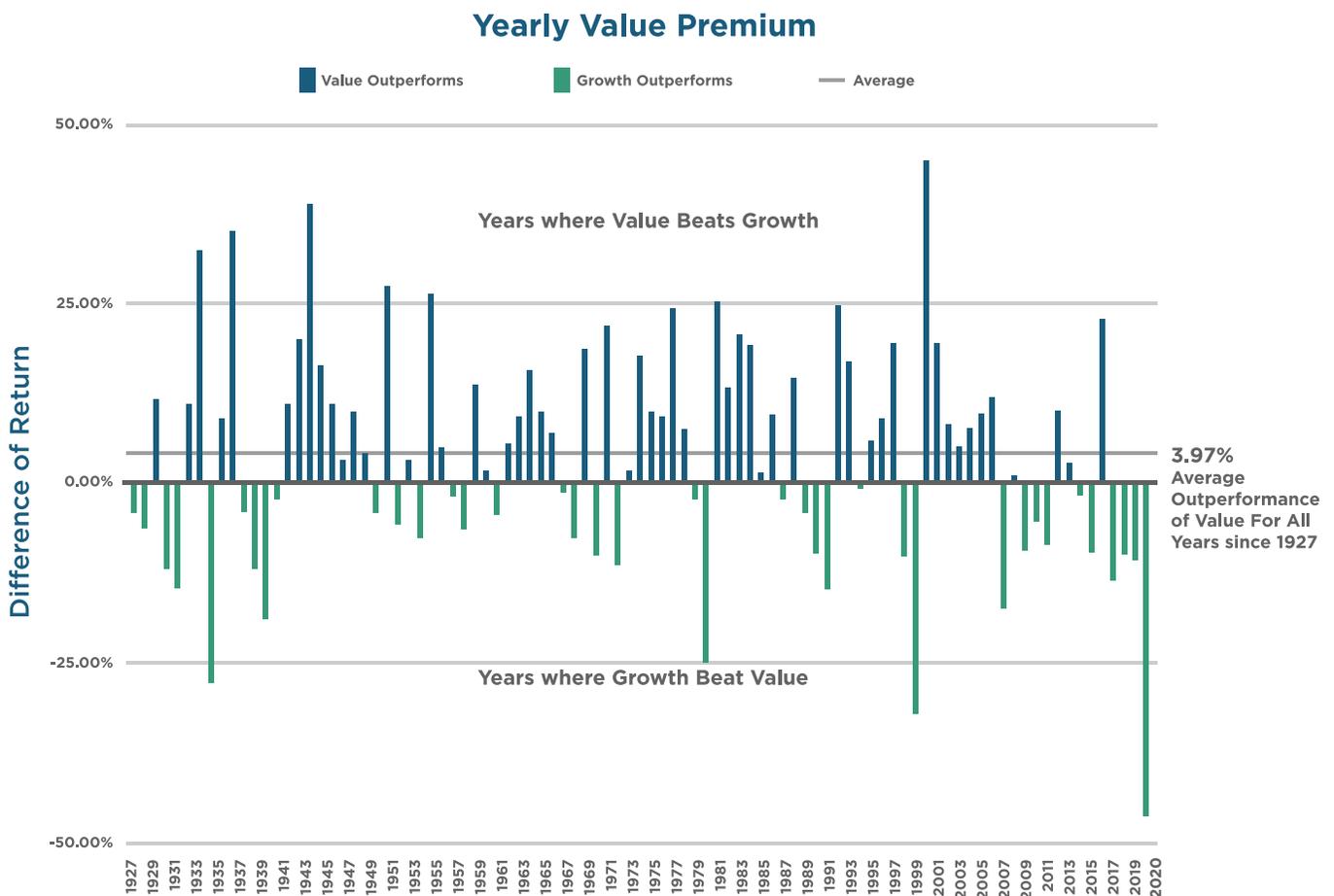
²⁴ Banz, 1981. “The Relationship between Return and Market Value of Common Stocks.” Journal of Financial Economics, 1981.

²⁵ Facet Wealth Analysis. Kenneth French Database https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html, YCharts

Their work shows that stocks trading at a low price relative to their book value outperformed stocks with a very high price/book value.

This Value Premium, like the other factors we use to create the optimal portfolio for our clients, has proven true over time, but like all premiums the short-term outcomes are noisy. For example, in the last few years, high price/book (growth) stocks have been outperforming – contrary to expectations based on the value premium. Despite the level of attention growth stocks have received in the media during this time, history leans in favor of the Value Premium. Since 1927 value stocks have outperformed growth stocks by 3.97% per year. Looking forward, while the level of outperformance may not be what it once was, the Value Premium is expected to persist²⁶.

Exhibit 7: Fama French Data on Low Price/Book vs. High Price/Book 1927-2020

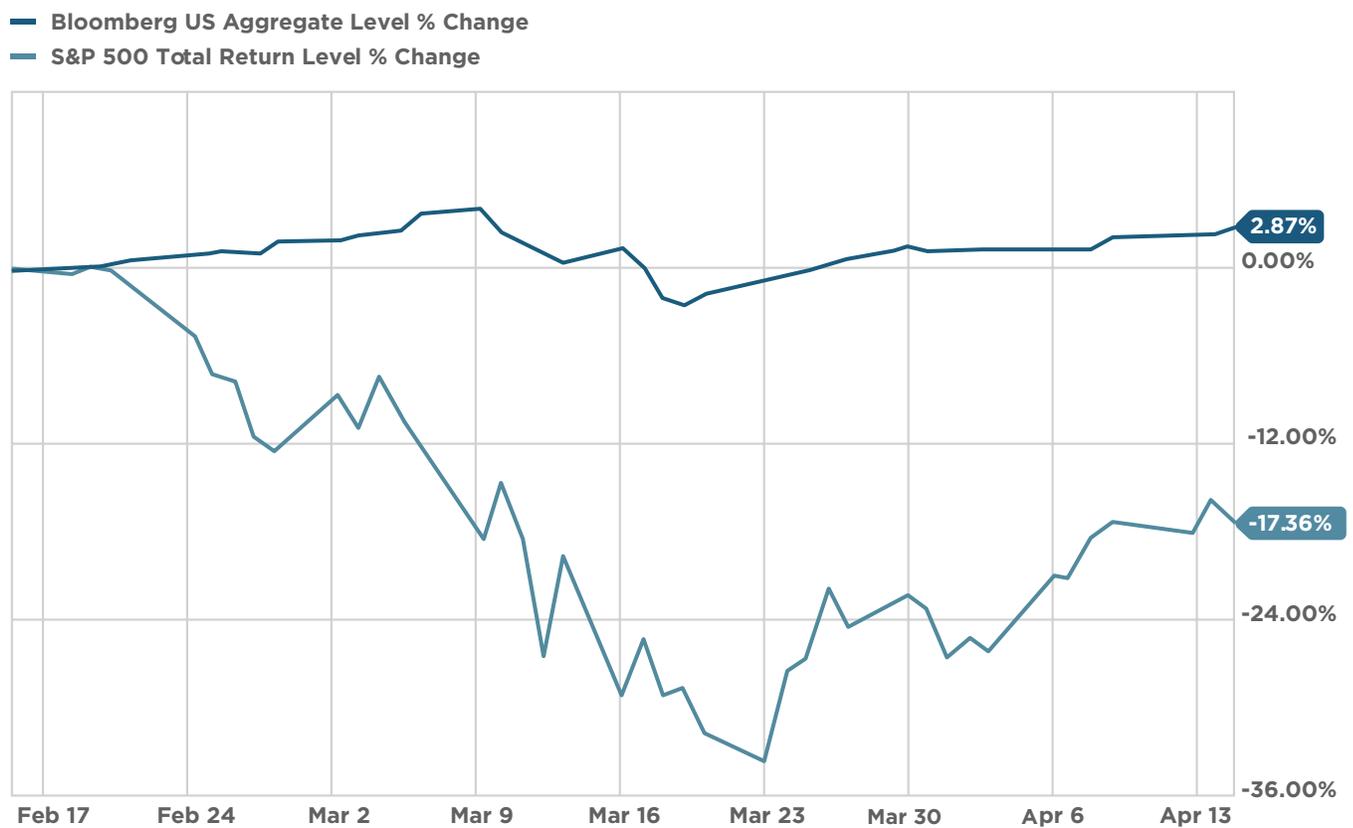


²⁶ French library, Facet Wealth Analysis, Annual Factors premiums 3 factor model, https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

Fixed Income - Specific Considerations

The simple combination of fixed income (bonds) and equities (stocks) is a primary tool for risk management. These are the largest asset classes with the lowest correlations. Most importantly, bonds generally perform best when stocks perform worse, so bonds can protect principal if we have a significant drop in the stock market. During the last two major downturns, the Covid-correction in 2020 and the Great Financial Crisis in 2008, bonds remained stable while stocks plummeted²⁷.

Exhibit 8: Performance of Stocks and Bonds during the Covid-Correction in 2020

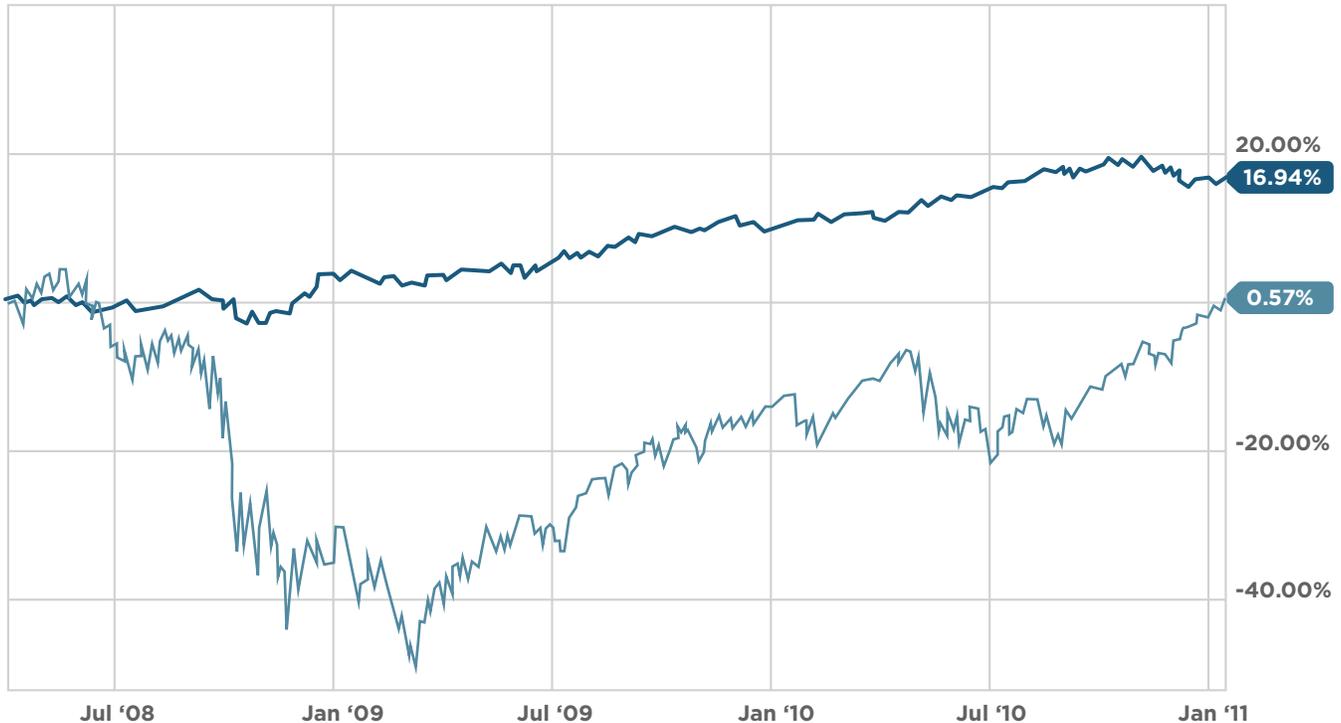


Date Range: 02/14/2020 - 04/15/2020

²⁷ Facet Wealth Analysis, YCharts

Exhibit 9: Performance of Stocks and Bonds during the Great Financial Crisis in 2008

— Bloomberg US Aggregate Level % Change
— S&P 500 Total Return Level % Change



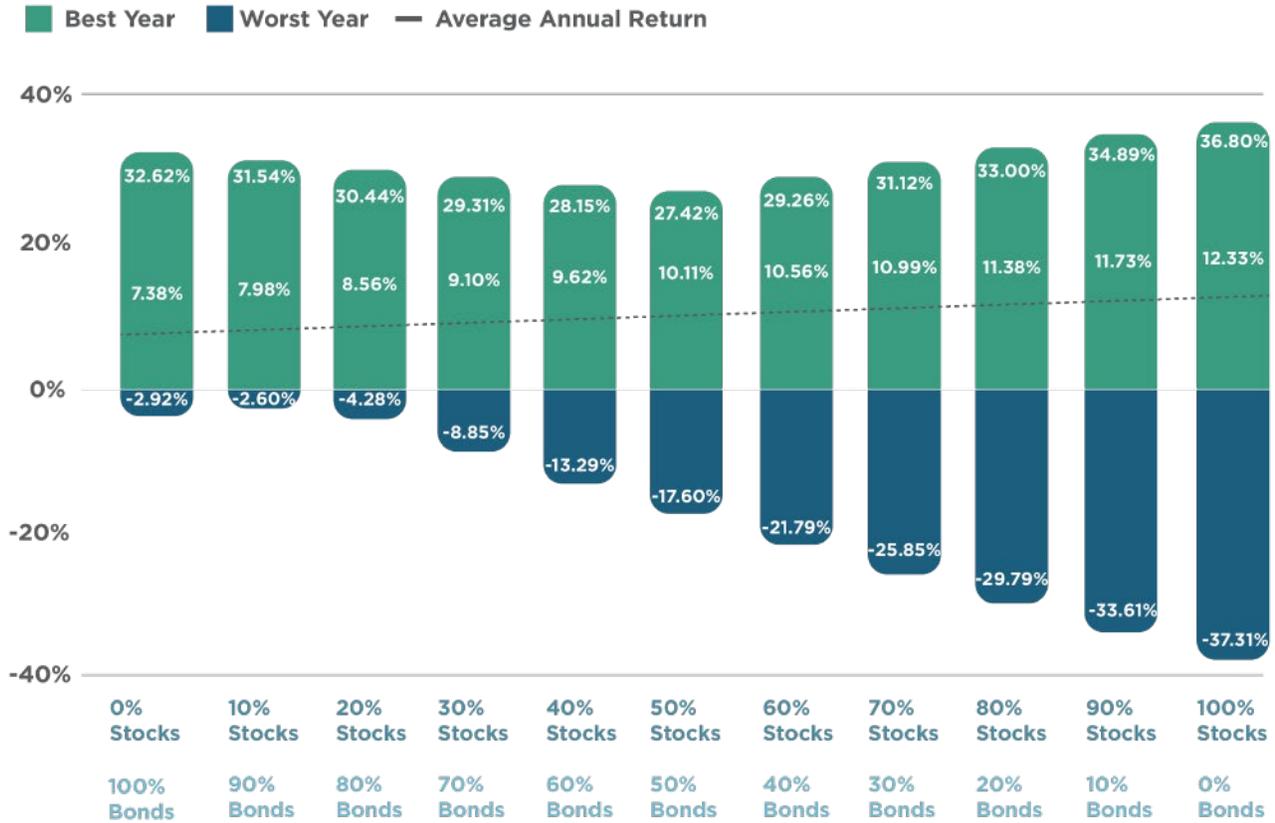
Date Range: 04/01/2008 - 01/14/2011

The relative stability from bonds is their primary diversification benefit. The more sensitive a client might be to a potential large stock drawdown, the larger their allocation to relatively stable bonds should be. The asset allocation between stocks and bonds is a personal decision each client makes with their CFP® Professional. Incorporating bonds alongside a stock allocation can mitigate risk, and reduce the probability of loss. For example, a 60% stock and 40% bond portfolio did give up returns to a 100% stock portfolio, averaging 10.56% per year over the last 40 years versus 12.33% for the 100% stock portfolio. However, the risk was drastically reduced with its worst one year decline being only -21.79% versus -37.31% for the 100% stock portfolio²⁸.

²⁸ Ycharts, Facet Wealth Analysis, Stocks- Russell 3000 Total Return, Bonds- Bloomberg US Agg Total Return Value Unhedged USD Index

Exhibit 10: Average Annual Returns and Range of Returns for Different Asset Allocations

Asset Allocation Comparison 1979-2019



This risk mitigation is our primary reason for holding bonds, so we approach portfolio construction using a total return strategy and do not reach for yield. Given that income generation is secondary to stability, we choose not to invest in high-yield (or what are called “junk”) bonds at this time. All of our bond portfolios are investment-grade.

Our fixed income models, similar to our equity portfolios, are made up of low cost, diversified portfolios of ETFs that represent the total market. Our model is diversified across durations, issuer types, security types, and geography, resulting in a portfolio of US and international corporate, government and securitized bonds. We also utilize the tax benefits of municipal bonds for taxable accounts.

Security Selection

Across our portfolios, we choose to use ETFs to achieve our desired market exposure. ETFs are very low cost, which allows us to keep portfolio costs low. Our total portfolio expense ratio is 0.08%²⁹.

We choose our ETFs with the following criteria in mind:

- Asset Class Accuracy: We look for ETFs that accurately reflect the part of the market we are looking to have exposure to with minimal tracking error
- Liquidity: ETFs trade daily in the market, so we use high volume ETFs to minimize potential market price impact
- Expenses: We seek to create an extremely low-cost portfolio
- Fund Company Reputation: We analyze the longevity of the sponsoring organization and its reputation for shareholder stewardship
- Tax Efficiency: ETFs are very tax efficient (especially compared to mutual funds but we look for select funds with low turnover (trading), which have the benefit of being the most tax efficient³⁰

Total Portfolio

We capture all of the academic research discussed above in the way we construct our portfolios. Our Equity Model is a globally diversified portfolio with a tilt towards value and exposure across market caps. Our Bond Model is a globally diversified portfolio with exposure across all durations and high quality issuers.

Using industry standard definitions, our stock portfolio is classified as Core by Morningstar³¹. The Morningstar framework looks at “styles” and breaks them down

²⁹ Expense ratios as of January, 2022. Facet’s portfolios are continually optimized and models occasionally change. Changes in underlying security selection can impact expense ratios

³⁰ Johnson, Ben and Alex Bryan. “Measuring ETFs Tax Efficiency Versus Mutual Funds.” Morning Star, 2019.

³¹ See http://news.morningstar.com/pdfs/FactSheet_StyleBox_Final.pdf for a definition of Morningstar’s style boxes in more detail

into Value, Growth and Core. The “Core” style is considered to be a balance between the different styles, so we are fairly well diversified between the value and growth styles, and our portfolios are designed to capture the Value Premium discussed above.

We are also well diversified between large cap, mid-cap and small cap stocks, so our portfolios are well designed to capture the small cap premium over time.

Here is a summary of our Value, Growth, and Capitalization characteristics³²:

Exhibit 9: Facet Portfolio characteristics ³³

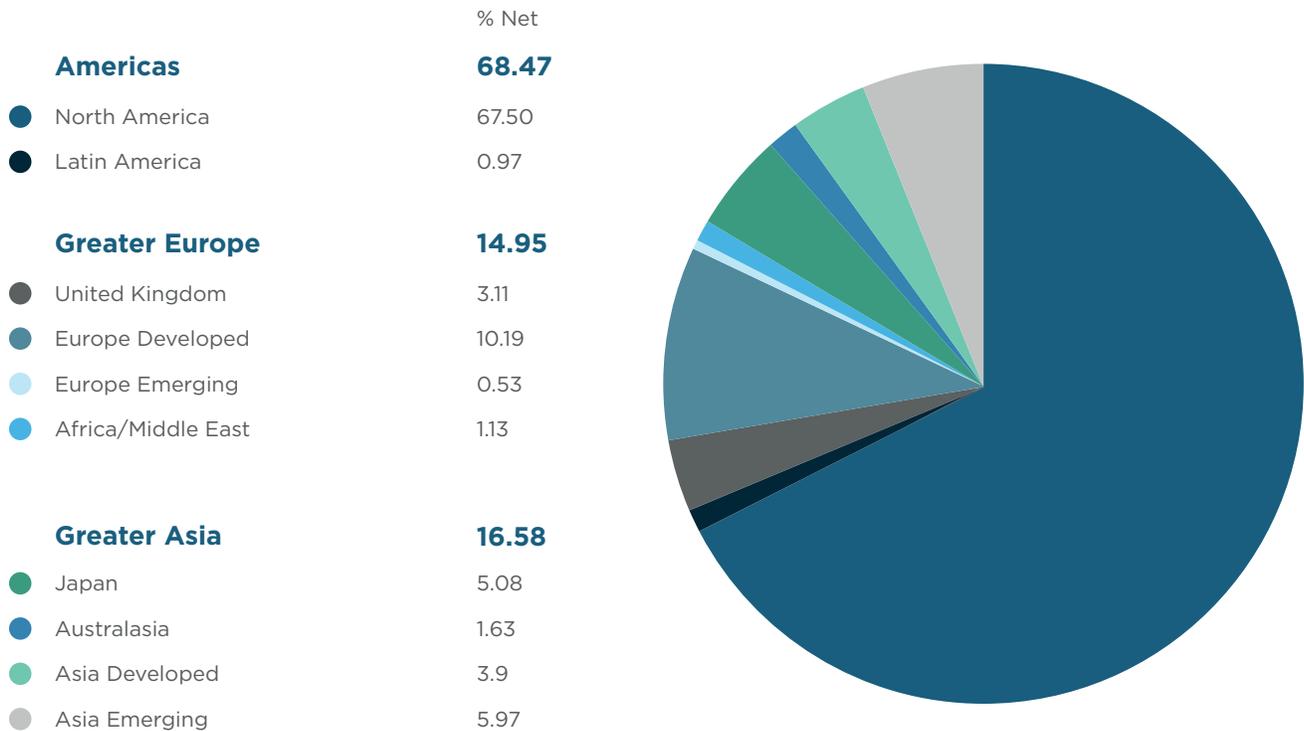
Stock Style Diversification Holdings Detail			Valuation			Size
	Your Portfolio	Wilshire 5000	Value	Core	Growth	
Large Cap Value	27.98	29.88	16	25	19	Large
Large Cap Growth	31.36	43.68				
Mid/Small Value	25.74	14.04				
Mid/Small Growth	14.92	12.40	7	8	4	Medium
Your overall portfolio style: Core						
Your portfolio’s stock exposure is spread evenly across the market and includes a good mix of small medium and large companies, as well as a fairly even mix of conservatively priced value stocks and high flying growth stocks. For most investors, maintaining such broad-based market exposure is a prudent way to invest.			11	9	2	Small

We are also well diversified internationally.

³² Facet Wealth analysis, Morningstar

³³ Morningstar, Facet Wealth analysis using model portfolio target weightings

Exhibit 10: Facet Portfolio International Diversification³⁴



Our Bond Portfolio is similarly balanced. Our overall interest rate sensitivity (as modeled by duration) and credit quality are both classified as moderate, according to Morningstar³⁵. In addition, we have a 40% allocation to investment grade non-US international bonds to create global diversification.

Monitoring and Rebalancing

We rebalance portfolios when the weightings of asset classes move 20% or more. This means that we are systematically selling the classes that have moved materially higher (relatively) and buying the classes that have moved materially lower. This solves two big issues. First, it keeps our portfolios in-line with our target weights which means we are managing risk. Without rebalancing, portfolios would become highly concentrated and measures of risk such as volatility and standard deviation would increase.

³⁴ Morningstar, Facet Wealth analysis using model portfolio target weightings

³⁵ Morningstar, Facet Wealth analysis

Second, rebalancing can create a volatility harvesting return or a Rebalancing Premium³⁶. Rebalancing is a tool to use the volatility of the market to our advantage by using large swings in securities prices to buy assets at lower prices or sell at higher prices.

Commitment to Continual Improvement

Theoretical finance is continually evolving, and markets change constantly. We are committed at Facet to constantly staying up to date on the best way to serve our clients. Changes in theory and availability of implementation strategies may impact choices we make in the future. We will continue to adapt to keep our investment approach theoretically sound and scientifically supported.

³⁶ Bouchey, Paul et al.(2012). “Volatility Harvesting: Why Does Diversifying and Rebalancing Create Portfolio Growth?”. The Journal of Wealth Management, 2012.



Facet Wealth, Inc. (“Facet”) is an SEC registered investment adviser located in Baltimore, Maryland. Intended for the recipient only. Distribution to other parties is prohibited. This is not an offer to sell securities or the solicitation of an offer to purchase securities. This is not investment, financial, legal, or tax advice. Past performance is not a guarantee of future performance.