A WISER, SAFER AND BETTER WAY

TO BUILD DIVERSIFIED GLOBAL PORTFOLIOS

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Reducing portfolio losses or drawdowns is key to building long-term wealth. Proponents of the Efficient Market Hypothesis discovered an often overlooked (or ignored) fact during the 2008-09 financial crises that negative equity returns are correlated with higher standard deviations (volatility, a typical measurement of investment risk). These proponents generally modelled average volatility across both up and down markets; however, negative equity returns generally increase volatility (risk). Most models failed to account for the increased portfolio volatility (risk) that occurs during falling markets; this falling market environment is the precise moment when risk measurement and risk control matter the most. Volatility (or risk) is generally lower in rising markets thus lowering the overall measured volatility (risk) across an extended period that includes both up and down markets; however, investors really only care about risk (or volatility) in down markets. Downwards volatility is the true risk to the investor.

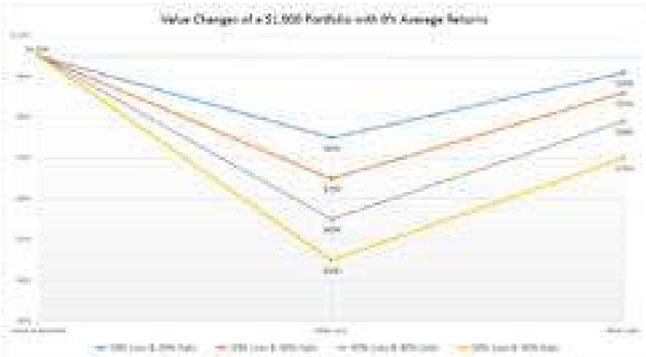
In addition, negative equity returns generally drive up correlations among stocks in global equity markets across sectors, capitalization, styles, and geographies. All equity markets tend to have higher cross correlations when the markets are down significantly like in 2008-09. Moreover, these down equity market correlation increases spill over into risk-based fixed income markets such as high-yield, asset-backed securities (ABS) and emerging market debt, all of which generally suffer during equity market selloffs. Even the U.S. investment grade fixed income market sometimes experiences higher correlations and can be impacted negatively during severe equity market drawdowns. Thus, the typical approach to Efficient Market diversification fails in down markets as volatility spikes and cross-correlations increase towards 1.0. The result (as demonstrated in the 2008-09 Global Financial Crisis) was many globally diversified portfolios were riskier than most investors estimated and losses were significantly larger than anticipated.

Wiser diversification requires the use of asset classes that have low correlation both between them and with stocks. Including low or non-correlated assets that can maintain low correlations in down equity markets is essential for building a less volatile or safer Diversified Global Portfolio Strategy.

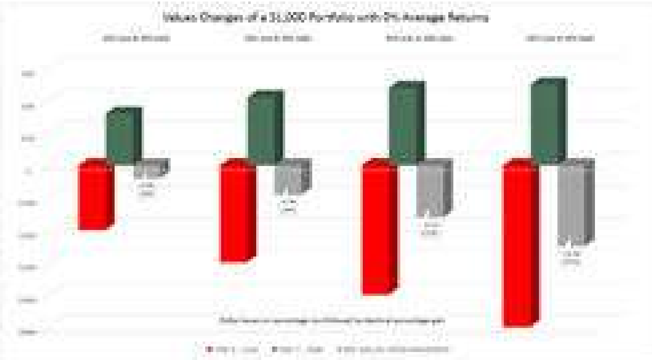
Concept 1: Volatility Drag

Our focus is on the preservation of capital. The graph below shows why this is so important and illustrates the necessary gain (green bar) needed to recover from a possible investment loss (red bar) and get back to break even. At every loss level, the necessary recovery gain to get back to breakeven is significantly larger on a percentage basis. Please see disclosures at the end of this document.

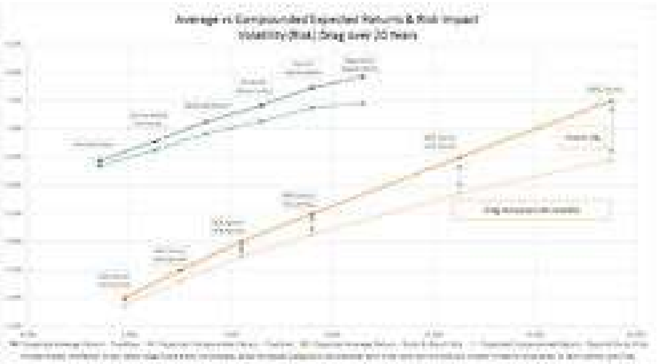
Another way of looking at this is to examine an arithmetic average return of 0% over a two-year period. The graph below shows four hypothetical $1,000 portfolios each with a loss in the first year and an equal percentage gain in the second year – generating a simple arithmetic average return of 0% over two years. The third point shows the value that the portfolio ends with after these two years – the difference between these ending values and the $1,000 beginning value is due to volatility drag.



To visualise the same concept in a different way here is a different graph that shows the dollar loss, gain, and net loss on initial investment for the same four hypothetical down then up identical percentage changes on a $1,000 portfolio.



There is a big difference in arithmetic average return and compounded return at different levels of portfolio volatility (or risk). The higher risk portfolio has a lower compounded annual return at the same arithmetic average return.



Volatility drag, at its simplest, is the reduction in performance over time caused by higher volatility which increases as volatility increases. Two investments with the same average annual return could end up with significantly different ending values after a period of time due to the negative pull of higher volatility. Volatility drag is present in any investments that have any degree of volatility but the magnitude of the negative effect increases in line with increases in volatility. Take for example a portfolio worth $100,000 with a -10% return in the first month followed by a 10% return in the second month. Simple arithmetic reveals an average return of zero. However, the average compounded return is actually less. At the end of the second month, you only wind up with $99,000, as the other $1,000 was lost to volatility drag. Due to continual fluctuations and movement in assets, the difference between the average rate of return and the rate at which your money actually compounds grows larger. The result is that you can wind up losing significant amounts of money to volatility drag.

Volatility drag can be controlled and kept in check by creating a diverse portfolio with low volatility. As shown in the graphs, the higher the volatility in a given portfolio, the greater the expected loss due to volatility drag. This is because the higher the volatility of a portfolio, the more frequent and sizeable fluctuations will be, resulting in more losses to drag. One of the numerous advantages of our portfolios, is they contain many unique asset classes that contain low correlations with each other. This diversification results in lower volatility for the portfolio overall, which keeps our expected compounded returns high and the volatility drag low.

Concept 2: Using Diversification to Reduce Risk

Modern Portfolio Theory (MPT) is the centre of our portfolio strategy modelling. Where we differ from most of our competition is our utilisation of low or non-correlated asset classes. We utilise proprietary estimates of return and risk as inputs into a Bloomberg Portfolio Optimizer. MPT is the most widely accepted framework for managing diversified investment portfolios. MPT has its limitations around correlations and volatility in down markets as these tend to behave adversely as discussed above. Wiser diversification through additional asset classes tends to improve the portfolios' risk-adjusted expected return profile.

The line graph above shows the volatility or risk of a portfolio as different types of assets are added. The red line represents a portfolio where its assets have a high correlation with each other. These type of portfolios are quite common and consist mainly of stocks. As you add more highly correlated assets to this portfolio such as other stocks, the risk begins to decrease. However, as you add more and more stocks to the portfolio, the line flattens out showing how the risk plateaus, remaining at a high rate. Even a portfolio of hundreds of U.S. and international stocks has a high volatility because of the high correlation between its assets. Consequently, if there is a major downturn, these portfolios with highly correlated assets can experience large losses, as all their assets will tend to move downward together.

Our portfolios, on the other hand, contain more diversifying assets that for the most part have small correlations with each other. The green line, representing a portfolio with low correlation assets, consists of assets with moderate diversity such as stocks and bonds. As you can see, the addition of low correlation assets decreases the overall risk; thus lowering overall portfolio risk more than the portfolio with highly correlated assets. A key difference from most other advisory firms is that we go a step further for our clients and use unique asset classes that often have no correlation with each other. For example, an asset class we employ in conjunction with stocks is reinsurance. The reinsurance market, whose returns are mainly impacted by accidents and natural disasters, has minimal correlation with the stock market. So if there is a downturn in the reinsurance market, your stocks will likely be unaffected and vice versa. Therefore, when we create a portfolio filled with low correlation assets such as stocks, reinsurance, variance risk premiums, and others, the overall risk decreases as shown by the purple line. Overall, we fill our portfolios with many asset classes that have small correlations with each other, and in turn, your risk is mitigated and controlled.

Asset Class Correlation Matrix

	Cash	Bonds	Alternative Lending	U.S. Stocks	U.S. Small Cap Stocks	Developed International Stocks	Emerging Markets Stocks	All Asset Variance Premium	Alternatives Other	Equity Variance Risk Premium	Reinsurance	Real Estate and Real Assets
Cash	1.000											
Bonds	[illegible]	1.000										
Alternative Lending	[illegible]	[illegible]	1.000									
U.S. Stocks	[illegible]	[illegible]	[illegible]	1.000								
U.S. Small Cap Stocks	[illegible]	[illegible]	[illegible]	[illegible]	1.000							
Developed International Stocks	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.000						
Emerging Markets Stocks	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.000					
All Asset Variance Premium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.000				
Alternatives Other	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.000			
Equity Variance Risk Premium	[illegible]	[illegible]	[illegible]	1.000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.000		
Reinsurance	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.000	
Real Estate and Real Assets	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.000

Research has consistently found the best way to maximise returns across every level of risk is to combine asset classes rather than individual securities (Markowitz, 1952; Sharpe, 1964; Brinson, Hood & Beebower, 1986; Brinson, Singer & Beebower, 1991; Ibbotson & Kaplan, 2000). Therefore, the first step in our methodology is to identify a broad set of diversified asset classes to serve as the building blocks for our portfolios. We analyse each potential asset class's long-term historical behaviour across different economic scenarios and provide reasonable go-forward estimates for characteristics of each asset class such as correlations to other asset classes, expected returns and expected risk.

The pie chart above shows specific asset classes and depicts how much of the global marketplace they occupy. While many investors and advisors act like the S&P 500 is the end all be all, as you can see here it is merely a fraction of the global asset classes.

Even when you add the U.S. Fixed Income market which contains instruments such as bonds, these two asset classes add up to just under $60 trillion which again is just scraping the surface of the massive global market totalling about $450 trillion.

Therefore, a portfolio consisting of only U.S. stocks, international stocks, and U.S. bonds is missing out on many global asset classes that could further diversify and better the portfolio. Many of these alternative assets classes were not accessible to non-institutional investors until recently. Now that these markets are investable for more investors it makes perfect sense to take advantage of the portfolio diversifying benefits these assets can provide. At Tradition, we make use of the wide range of global asset classes ranging from reinsurance to real estate to international equities and much more, to create a diverse portfolio. In doing this we utilise more of the opportunities, the asset classes, in the global market rather than just a fraction of them so that you can build a portfolio with higher expected returns at the same level of risk – stronger portfolios for both good and bad economic times.

Asset classes fall under four broad categories: cash, bonds, stocks and alternatives. Cash is known for safety but in the current interest rate environment does not really provide a significant return; hence, is only used tactically for short periods or for liquidity needs.

Bonds and bond-like securities are the most important income-producing asset classes for income-seeking investors. Although bonds have lower return expectations than stocks, they provide a cushion and potential reserve for redeployment to stocks or other higher expected return investments during periodic financial market sell-offs. Bonds show modest volatility and low correlation with global stock markets.

Stocks have higher long-term expected returns but have higher risk and will have periods of significant losses. Stocks, however, do have some long-run inflation protection as stocks represent ownership in real businesses that will grow in nominal terms in an inflationary environment.

Individual stocks are tax advantaged investments in their own right, as long-term capital gains and dividends receive preferential tax treatment and capital gain taxes are deferred until the stock is sold.

ETFs and mutual funds enjoy some of this benefit although individual stocks are more tax advantaged. Alternatives, as we use the term, are assets that have not been typically available to most investors. Our alternatives will have at least one if not all of the following attributes compared to stocks, bonds, or cash: low correlation, low volatility, or low risk/return profile.

Asset Class	Benefits
Cash	Safety
Bonds	Yield, diversification and safety
Alternative Lending	High yield, low volatility, low risk
U.S. Stocks	Capital growth, long-run inflation protection, tax efficiency
U.S. Small Cap Stocks	Capital growth, long-run inflation protection, tax efficiency
Developed Countries International Stocks	Capital growth, long-run inflation protection, tax efficiency
Emerging Countries International Stocks	Capital growth, long-run inflation protection
All Asset Variance Risk Premium	Diversification and high expected return
Alternatives Other	Diversification and modest expected return
Equity Variance Risk Premium	High return with lower than stock market volatility
Reinsurance	Diversification and high expected yield
Real Estate and Real Assets	Income, diversification, inflation protection

Table 1: Asset classes and their functions

More detailed asset class descriptions are available at the end of the document. The asset classes we deploy may evolve somewhat over time, depending on long-term macroeconomic factors and their availability in an ETF or mutual fund.

Asset Class Assumptions

Nominal Expected Long-term Average Returns. Long-term being 10 to 20 years.

Asset Class Assumptions

Asset Class	Long-term Expected Return	Expected Risk
Cash	0.75%	0.10%
Bonds	2.50%	4.90%
Alternative Lending	6.50%	5.00%
US Stocks	7.50%	15.00%
US Small Cap Stocks	8.50%	18.00%
Developed International Stocks	8.25%	17.00%
Emerging Markets Stocks	11.00%	23.00%
All Asset Variance Risk Premium	8.50%	10.00%
Alternatives Other	6.00%	7.00%
Equity Variance Risk Premium	8.00%	12.00%
Reinsurance	7.90%	9.00%
Real Estate & Real Assets	7.00%	6.00%

Concept 4: Our Strategy

We review and update our estimates quarterly as market levels, and yields change. This could result in modest changes in our recommended Strategic Target Allocations. The Strategic Target Allocation, its corresponding asset class allocations, and the holdings recommended by Tradition are subject to change at any time and without notice. Moreover, the Strategic Target Allocation will be different than the actual current tactical allocation of your portfolio as we try to optimise transaction costs versus model divergence risk and occasionally make tactical decisions to deviate from the long-term Strategic Target Allocation based on the selected strategy. The actual tactical allocations will change without notice depending on our view of market conditions, risks and opportunities.

Rebalancing and Ongoing Monitoring of your portfolio is part of our management process. As market conditions change, our view of the opportunities and risks will evolve; this could result in changes to our Strategic Target Allocations. In addition, changes in market values will cause your actual portfolio allocations to vary from the initial targets. We will review for possible rebalancing at a minimum of every six months and more frequently if we deem appropriate or if cash flows in or out of the portfolio demand. We will execute trades to move towards the current Tactical Target Allocation where model divergence and trading costs warrant based on our judgement of this trade-off between divergence and transaction costs.

Model Strategies

Strategic Allocation Ranges

	Income Focus	Conservative Balanced	Balanced Return	Balanced Opportunity	Capital Appreciation	Aggressive Appreciation
Cash						
Cash & Money Market	0-30	0-25	0-15	0-15	0-15	0-15
Fixed Income						
Short Term	0-25	0-20	0-15	0-15	0-10	0-10
Int. under 10 year	0-75	0-50	0-40	0-20	0-20	0-20
Long over 10 year	0-30	0-20	0-20	0-20	0-20	0-20
High Yield	0-20	0-20	0-30	0-30	0-30	0-30
International	0-20	0-20	0-20	0-20	0-20	0-20
Other & Alternative	0-25	0-25	0-20	0-20	0-20	0-20
Equity						
Domestic - All Cap	0-40	15-50	15-65	20-70	20-80	20-80
Small and Microcap	None	None	0-10	0-20	0-20	0-20
Convertible Securities	0-20	0-20	0-20	0-20	0-20	0-20
Developed International	0-10	0-20	0-20	0-25	0-30	0-30
Emerging Markets	None	0-10	0-15	0-20	0-15	0-25
Miscellaneous						
Commodities	0-10	0-10	0-15	0-15	0-20	0-20
Alternatives - Equity	0-15	0-15	0-15	0-15	0-20	0-20
Alternatives - Other	0-30	0-30	0-30	0-30	0-40	0-40
Real Assets	0-15	0-15	0-15	0-15	0-15	0-15

Given the long-term orientation of our strategies and limited liquidity in our some of our investments, funds allocated to Tradition's strategies should have a minimum one-year time horizon. If you expect to need the funds in less than a year, these strategies are not the appropriate investment.

If you are expecting to make withdrawals, please let us know at least three months in advance so we can attempt to obtain the needed liquidity, but we can make no guarantee that it will be completely available. Some of the funds in your Strategic Target Allocation may have limited liquidity on both the buy and the sell transactions and therefore we may not be able to execute buys or sales until the next purchase or sale window opens. This could result in being unable to sell a position even during periods of significant drawdown. Depending on timing and circumstances, the entirety of your portfolio may not be available for purchase for three months or more, and on the sale side, may not be available as cash for three months or more. On the buy side, we may substitute a liquid security to enhance possible returns if we are forced to wait for a window to open in order to execute the buy of a targeted fund.

Given these liquidity issues, Tradition requires a minimum investment of $1,000,000 and a minimum one year time horizon. Some of our initial investments will have both limited windows of availability and transaction costs, further emphasising the need for a long-term horizon. We are not opposed to liquidity but are more than happy to participate in lower liquidity investments as a tradeoff for having a superior targeted risk/reward profile. Limited liquidity often provides extra expected return; daily liquidity has a cost of lower expected returns. A portion of your portfolio will be in stocks, bonds and daily liquidity ETFs and available immediately.

Tradition utilises individual stocks and bonds when cost-effective, or low-cost ETFs that trade commission free whenever possible; however, we recognise certain asset classes require higher fund fees to either access or obtain specifically desired exposure. Most of our alternatives fall into this higher fund fee category; we do analyse this cost and develop our expected returns for our models on net returns, after fund fees. These higher cost funds give us exposure to assets that may not be available in a low-cost ETF. Tradition does not participate in these fees; the only fees that Tradition collects are from our clients for our advice and services. Since Tradition is a Registered Investment Adviser (RIA) with fiduciary responsibility, we always put your interests first.

Conclusion

Tradition combines the judgment of our experienced and knowledgeable investment team, Bloomberg portfolio optimisation, individual stocks and bonds, low-cost ETFs and unique diversifying assets to build an efficient portfolio for you. Our goal is to provide a superior risk-adjusted, net-of-fee, expected investment return for each client's risk tolerance. Minimising drawdowns and risk is, in our opinion, the best way to achieve expected long-term returns.