



THE IMPORTANCE OF DIVERSIFICATION

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The General Manager of a baseball team has a job to put together a lineup that can win baseball games. To do so, you have to have a balance of players. You need players who can pitch, hit for average, hit for power, field and run. By stacking a team with only power hitters, you're likely to suffer on defense, pitching and running. Although you may be able to score more runs in a single game or manage a few winning streaks, it's likely you will not win the World Series without a balanced team.

Constructing portfolios is very similar in this regard. A high concentration of one or a few stocks or market sectors may have some good moments, but over long periods of time these highly concentrated portfolios will be subject to sharper swings and lower lows.

OWNING A SINGLE STOCK:

We are deluged with stories of stocks like Apple that made people millionaires over time. For example, Facebook, which started in a dorm room and transformed Mark Zuckerberg's life from "rags to riches". These are the kinds of stories that show us the great things that can be accomplished in America.

Pretend now to take a time machine back to the year 2000, and assume you had some money to invest.

1. You were smart enough to know the technology bubble was bursting, so you avoided buying tech stocks.
2. You were looking for a blue-chip name that paid good dividends.
3. You were looking for a stock that had a diversified business model in industries like: finance, manufacturing, healthcare, and telecommunications.

At the time, this company would also have a CEO who was one of the most admired on Wall Street and a list of awards in the year 2000 such as:

FORTUNE AMERICA'S GREATEST WEALTH CREATOR (3X)	FORTUNE AMERICA'S MOST ADMIRABLE COMPANY (3X)
BUSINESS WEEK #1 OF 25 BEST BOARDS OF DIRECTORS (2000)	FINANCIAL TIMES WORLD'S MOST RESPECTED COMPANY (3X)
FORTUNE WORLD'S MOST ADMIRABLE COMPANY (3X)	FORBES #1 SUPER 100 LIST (3X)

Obviously, this would seem like an excellent company to invest in, and you probably would have done so. This company is General Electric (GE).

At that time GE was an iconic brand with a rock-star CEO named Jack Welch. It seemed like a surefire investment in a diversified company that would continue to grow and dominate industries like they had over the course of the years.

Flash forward 18-years to the present-day. Since the year 2000, GE has performed far from what has been expected (at least with their share price). The share price has fallen almost 75% since the year 2000. Their iconic CEO, Jack Welch, retired. Their finance business almost pushed them to the brink in 2009, and their other business lines just haven't performed the way most expected.



UNSYSTEMATIC RISK:

This example is a cautionary tale to illustrate one of the main aspects of diversification. Owning just one stock (no matter how diversified its business lines are) presents an investor with a reasonable amount of “unsystematic” risk.

Unsystematic risk is better defined as company-specific risk. Here are some examples:

FRAUD (ENRON)	LAWSUITS (ASBESTOS)
POOR MANAGEMENT (GE)	TECHNOLOGICAL OBSOLESCENCE (EASTMAN KODAK)
GEOGRAPHIC CONSTRAINTS	REGULATORY RISK (FINANCE AND DRUG COMPANIES)
UNIQUE CIRCUMSTANCES	

If you take on unsystematic risk by owning a single company, you should be rewarded for taking excess risk. Said differently, you should expect a higher rate of return for owning one stock. In some cases, that works out and you can benefit greatly from taking that excess risk. In other cases, it backfires horribly.

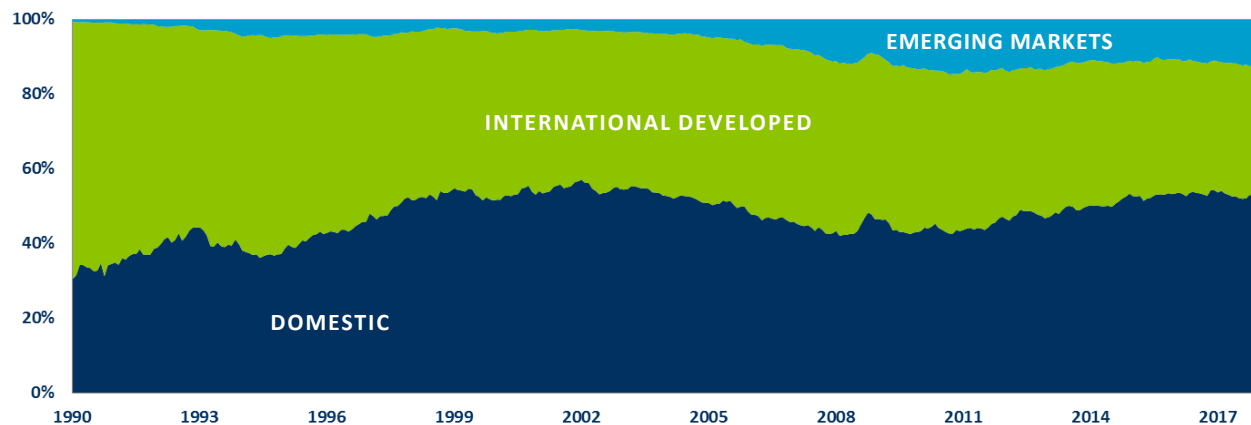
As investors we don't need to take unnecessary risks to generate returns. These risks have no increased expected return and are unnecessary if you have the opportunity to minimize them by diversifying. This is crucial when thinking about the entire nest-egg of assets you've saved for retirement. Why subject that nest egg to company-specific risk when there is the ability to diversify that risk away?

DIVERSIFYING AWAY UNSYSTEMATIC RISK ACROSS THE GLOBE:

Fortunately for investors, the ability to minimize this unsystematic risk is easily accessible in the form of diversified mutual funds and ETFs. In effect, the evolution of financial markets has given us extremely cheap ways to achieve diversification through these vehicles across the world which was nearly impossible 50 years ago.

MARKET CAPITALIZATION OF GLOBAL STOCK MARKETS JANUARY 1990-DECEMBER 2017

	Number of Countries	Number of Stocks	Total Value	WEIGHTS		
				December 31, 2017	Change from Previous Year	01/90-12/17 Average
US	1	3,367	29.7 Trillion	52.07%	▼ -2.14%	47.25%
Developed Markets ex US	22	7,038	20.18 Trillion	35.37%	▲ 0.62%	45.92%
Emerging Markets	23	6,384	7.17 Trillion	12.56%	▲ 1.53%	6.83%
Total	46	16,789	57.05 Trillion	100.00%		



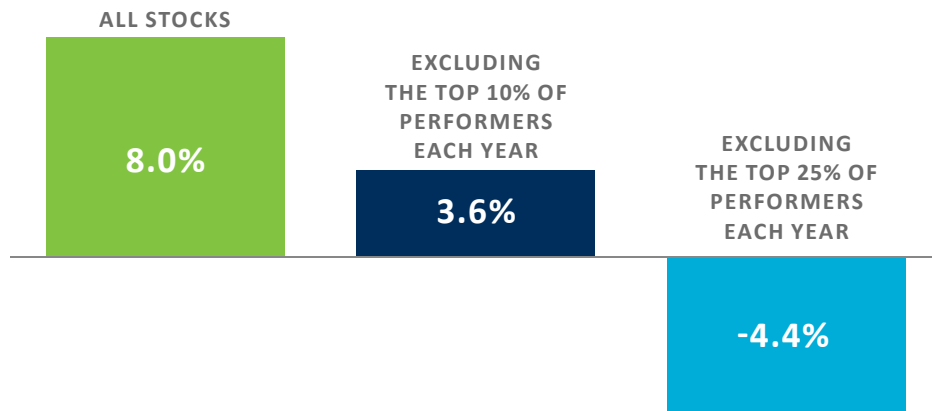
In US dollars. Market cap data is free-float adjusted and meets minimum liquidity and listing requirements. Data provided by Bloomberg.

While the US has approximately 50% of the world's publicly traded companies today, that number is expected to diminish as world economies expand at a faster pace. Having investments across the globe adds the element of geography and varied economic performance of different countries.

With more than 16,000 companies available for investment across the world, the question is how many does one need to own? In the graph below, all stocks across the globe had an 8% return from 1994-2017. The graph also shows that by excluding just the top 10% of those performers each year, the return would be more than halved across time. Meanwhile, excluding the top 25% of performers each year actually yielded a negative annual return.

DIVERSIFICATION MAY PREVENT YOU FROM MISSING OPPORTUNITY

COMPOUND AVERAGE ANNUAL RETURNS: 1994-2017

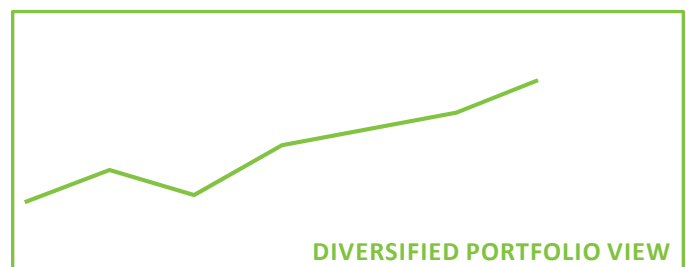
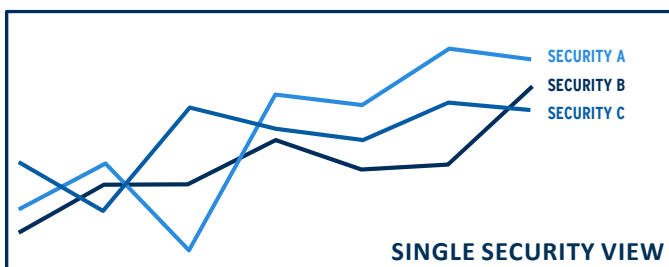


**Attempting to identify a group of future winners is a guessing game.
DIVERSIFICATION IMPROVES THE ODDS OF HOLDING THE BEST PERFORMERS.**

The "All stocks" portfolio consists of all eligible stocks in all eligible Developed and Emerging Markets. The portfolio for January to December of year t includes stocks whose free float market capitalization as of December t-1 is greater than \$10m in developed markets and \$50m in emerging markets and with non-missing price returns for December of year t-1. Annual portfolio returns are value-weighted averages of the annual returns on the included securities. The portfolios "Excluding the top 10%" and "Excluding the top 25%" are constructed similarly. Individual security data are obtained from Bloomberg, London Share Price Database, and Centre for Research in Finance. The eligible countries are: Australia, Austria, Belgium, Brazil, Canada, Chile, China, Colombia, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Hong Kong, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Republic of Korea, Malaysia, Mexico, Netherlands, New Zealand, Norway, Peru, Philippines, Poland, Portugal, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Kingdom, and the United States. Diversification does not eliminate the risk of market loss. Past performance is no guarantee of future results.

So, owning that large basket of global stocks provided an investor 8% returns over the time period from 1994-2017. While this seems pretty easy, there were extremely volatile times in the stock market over those years. Systematic risk, or market risk, is the inherent risk associated with owning public companies. The systematic risk of market movements is one that cannot be diversified away. While you cannot diversify away systematic risk across the board, owning shares in different companies allows you the benefit of smoothing out the portfolio's returns as companies, industries, sectors, and countries move differently at various times.

DIVERSIFICATION SMOOTHS OUT SOME OF THE BUMPS

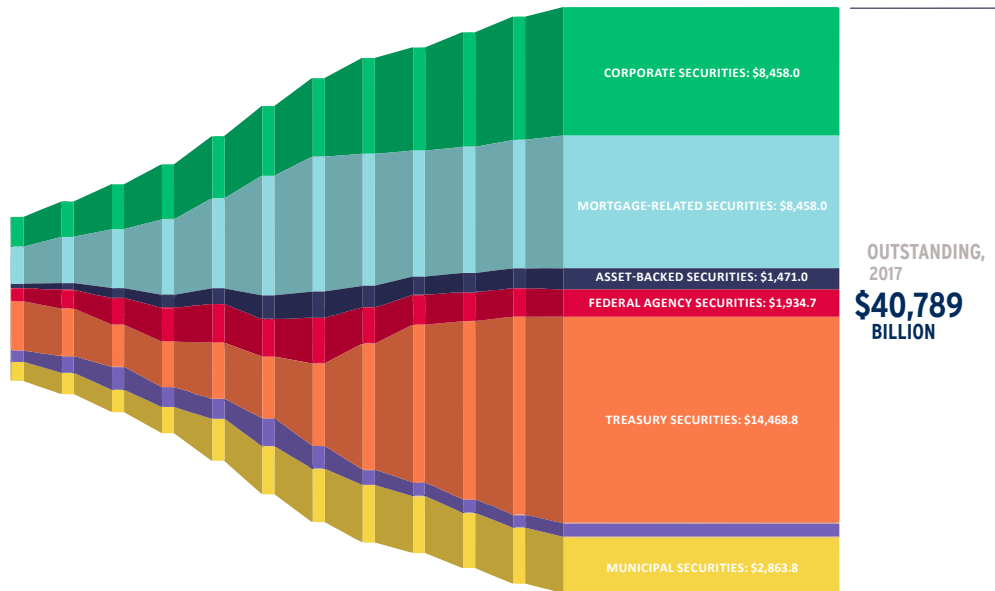


A WELL-DIVERSIFIED PORTFOLIO CAN PROVIDE THE OPPORTUNITY FOR A MORE STABLE OUTCOME THAN A SINGLE SECURITY.

Illustrative examples. Diversification does not eliminate the risk of market loss.

BONDS:

In addition to equities, there are other asset sectors that can also aid in diversification and the reduction of risk. While we've spent a majority of time talking about the diversification of equities, it's also important to diversify in bonds as well.



SOURCE: [HTTPS://WWW.SIFMA.ORG/RESOURCES/RESEARCH/BOND-CHART/](https://www.sifma.org/resources/research/bond-chart/)

SECTORS IN THE BOND MARKET VARY BY: TAXABILITY • MATURITY • COUPONS • CREDIT RATING • COLLATERAL TYPES

As you can imagine, bonds also vary in performance under different economic and interest rate environments. Because of their issuers (governmental organizations), better treatment in liquidation (Corporate Bonds), and collateral, most bonds are considered safer instruments than equities. Thus, their safety causes them to have lower annual return expectations than equities.

MODERN PORTFOLIO THEORY:

In 1952, Harry Markowitz wrote an essay titled "Portfolio Selection" that became the basis for what is now known as Modern Portfolio Theory (MPT). MPT holds that when various uncorrelated assets are combined in a portfolio, the return can be improved and risk can be lowered. Essentially, Markowitz argues that you want assets within a portfolio to complement each other.

If we can all agree that the future has an obvious amount of uncertainty, we can deduce theories based only on past performance. We know that in the past, different types of assets don't necessarily correlate together.

MODERN PORTFOLIO THEORY CONTINUED:

Take the following examples from 2003-2017. The following chart illustrates different asset classes; US Large Stocks, US Small Stocks, REITs, International Small Stocks, Emerging Markets Stocks, Short Treasury Notes, Intermediate-Term Treasury Notes and International Bonds (hedged to the dollar).

HAVING A DIVERSE SET OF ASSETS THAT PERFORM DIFFERENTLY IN UNLIKE ENVIRONMENTS IS WHAT COMPRISES A WELL-ROUNDED PORTFOLIO.

THE RANDOMNESS OF RETURNS

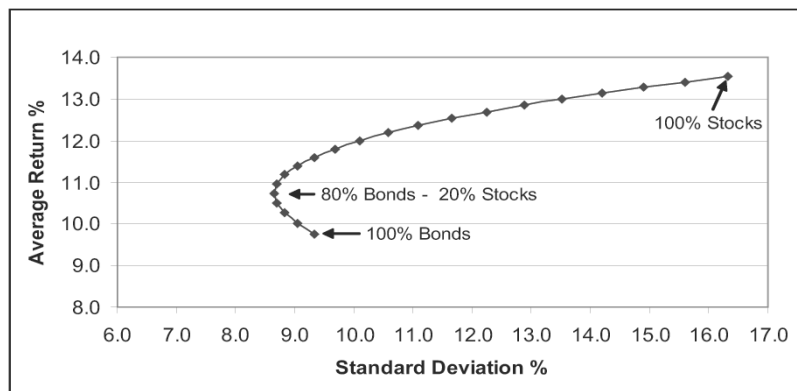
ANNUAL RETURN (%)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Highest Return	62.6	34.2	34.5	36.0	39.8	8.8	79.0	28.1	9.4	20.1	38.8	32.0	5.8	31.7	37.8
	60.2	33.2	25.5	32.6	8.2	6.6	53.3	26.9	3.4	18.6	34.5	13.7	4.5	21.3	31.5
	56.3	29.9	21.1	29.6	7.9	4.7	51.4	24.9	2.3	18.1	32.5	13.5	1.5	17.3	28.6
	47.3	26.0	13.8	27.9	6.3	-28.9	37.2	24.5	2.1	17.9	32.4	4.9	1.4	12.0	21.8
	46.0	22.4	13.1	23.5	5.9	-33.8	28.5	21.2	0.6	17.8	28.3	4.2	1.0	11.6	20.9
	41.8	22.2	7.0	22.2	5.5	-36.8	27.2	19.2	0.4	17.5	26.0	1.9	0.9	8.4	14.6
	36.2	18.3	4.9	19.8	3.6	-37.0	26.5	15.5	-4.2	17.1	21.7	1.2	0.2	8.0	13.7
	30.0	16.5	4.7	18.4	2.5	-39.2	20.6	15.1	-5.5	16.3	1.2	0.2	-3.8	6.7	7.8
	28.7	10.9	4.6	15.8	-0.2	-44.3	19.7	3.8	-10.6	16.0	0.6	-1.8	-4.4	4.7	3.8
	2.0	2.7	3.1	4.3	-1.6	-45.6	2.3	3.7	-15.5	2.1	0.3	-5.0	-7.5	1.5	1.1
Lowest Return	1.9	1.3	2.4	4.1	-9.8	-47.8	0.8	2.0	-16.4	0.9	-0.1	-5.4	-8.0	1.0	0.7
	1.5	0.8	1.3	3.8	-17.6	-53.2	0.2	0.8	-18.2	0.2	-2.3	-5.6	-14.6	0.8	0.6
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
US Large Cap	28.7	10.9	4.9	15.8	5.5	-37.0	26.5	15.1	2.1	16.0	32.4	13.7	1.4	12.0	21.8
US Large Cap Value	30.0	16.5	7.0	22.2	-0.2	-36.8	19.7	15.5	0.4	17.5	32.5	13.5	-3.8	17.3	13.7
US Small Cap	47.3	18.3	4.6	18.4	-1.6	-33.8	27.2	26.9	-4.2	16.3	38.8	4.9	-4.4	21.3	14.6
US Small Cap Value	46.0	22.2	4.7	23.5	-9.8	-28.9	20.6	24.5	-5.5	18.1	34.5	4.2	-7.5	31.7	7.8
US Real Estate	36.2	33.2	13.8	36.0	-17.6	-39.2	28.5	28.1	9.4	17.1	1.2	32.0	4.5	6.7	3.8
International Large Cap Value	41.8	22.4	13.1	29.6	7.9	-44.3	37.2	3.8	-10.6	17.8	21.7	-5.6	-8.0	8.0	20.9
International Small Cap	62.6	29.9	25.5	19.8	3.6	-47.8	51.4	24.9	-15.5	17.9	26.0	-5.0	5.8	4.7	31.5
International Small Cap Value	60.2	34.2	21.1	27.9	2.5	-45.6	53.3	21.2	-16.4	20.1	28.3	-5.4	1.5	8.4	28.6
Emerging Markets	56.3	26.0	34.5	32.6	39.8	-53.2	79.0	19.2	-18.2	18.6	-2.3	-1.8	-14.6	11.6	37.8
One-Year US Fixed	1.5	0.8	2.4	4.3	5.9	4.7	0.8	0.8	0.6	0.2	0.3	0.2	0.2	0.8	0.6
Five-Year US Government Fixed	2.0	1.3	1.3	3.8	8.2	8.8	0.2	3.7	3.4	0.9	-0.1	1.2	0.9	1.0	0.7
Five-Year Global Fixed	1.9	2.7	3.1	4.1	6.3	6.6	2.3	2.0	2.3	2.1	0.6	1.9	1.0	1.5	1.1

In US dollars. US Large Cap is the S&P 500 Index, data copyright 2018 S&P Dow Jones Indexes LLC, a division of S&P Global. All rights reserved. US Large Cap Value is the Russell 1000 Value Index. US Small Cap is the Russell 2000 Index. US Small Cap Value is the Russell 2000 Value Index. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. US Real Estate is the Dow Jones US Select REIT Index, data copyright 2018 S&P Dow Jones Indexes LLC, a division of S&P Global. All rights reserved. International Large Cap Value is the MSCI World ex USA Large Cap Value Index (gross div.). International Small Cap is the MSCI World ex USA Small Cap Index (gross dividends). International Small Cap Value is the MSCI World ex USA Small Cap Value Index (gross dividends). Emerging Markets is the MSCI Emerging Markets Index (gross dividends). MSCI data copyright MSCI 2018, all rights reserved. One-Year US Fixed is the ICE BofAML One-Year US Treasury Note Index, ICE BofAML index data copyright 2018 ICE Data Indexes, LLC. Five-Year US Government Fixed is the Bloomberg Barclays Treasury Bond Index 1-5 Years. Bloomberg Barclays data provided by Bloomberg. Five-Year Global Fixed is the FTSE World Government Bond Index 1-5 Years (hedged to USD), copyright 2018 by FTSE Fixed Income LLC. Indexes are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. Index performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

As you can see, returns of the various asset classes are random and somewhat uncorrelated during a single year. It's difficult to deduce a pattern or a reasonable guide for future performance based on the past performance. What can be inferred going forward? First, it's important to know that the pattern will be random and owning a collection of asset classes will help smooth out the risk. Second, avoid owning just the lowest performing asset classes over longer periods.

The mixture or amount of equities versus fixed income owned in a portfolio is known as asset allocation. This asset allocation decision is a choice based on your risk tolerance, and the risk necessitated to reach your goals; such as funding a comfortable retirement. Markowitz formulated that there is a line at which a portfolio produces the ideal amount of return for a given level of risk. This is known as the efficient frontier. **There is no perfect portfolio, only a portfolio that makes the most sense for the investor and their risk preference.**



SOURCE: IBBOTSON ASSOCIATES.

ALTERNATIVE INVESTMENTS

Looking at other types of investments for additional diversification, investors often look into the world of alternative assets. While “alternative assets” is a far-reaching word, for this purpose, we are going to focus on hedge funds, private equity, and commodities.

	HEDGE FUNDS	PRIVATE EQUITY	COMMODITIES
ABOUT	Make bets on global-macro trends, currency, commodities, distressed debt, mergers and acquisitions, and short-selling.	Many of the same characteristics of hedge funds. Difficult to gauge the performance of the industry. Performance is reported on a voluntary basis.	Commodities are different. Long-run considered a diversifier as an inflation hedge. Their price has only a long-term reason to rise with inflation. Short-run prices can be very volatile. Could be subject to a big short-term gain or loss.
CONS	High Management Compensation (typically 1.5% of assets and 20 percent of profits above a hurdle rate) • Low Liquidity • Often Employ a Degree of Leverage	Typically Higher in Cost • Less Diversified • More Leveraged • Less Liquid	Commodities Tie Up Capital Without Expected Income Stream • Interest or Dividends
OPINION	Does not add diversification to a globally diversified portfolio, only increased risk.	Tend to add increased risk to the portfolio.	Speculative bet of winning at end of trade. Many companies in the commodities sector offer exposure to commodities when you own a diversified stock portfolio.

Alternative assets are buzz words or great cocktail party banter, but we believe you do not need alternative assets to have a diversified portfolio, and ultimately, a successful investment experience. This is especially true when considering the high costs, lack of diversification, and liquidity constraints.



CONCLUSION

A diversified portfolio of global stocks and multi-sector bonds has worked to provide adequate returns throughout history. It works because of simple economics and the fact you are putting capital to work. The return on your capital is the cost of capital that a company or entity is paying you for using. This is not a free lunch as that capital is put at risk, however, deploying that capital across various markets in a diversified manner is a way you can control and minimize those risks.

We live in an age where we have the ability to diversify broadly at a low cost. Why not stack the chips in our favor by subscribing to a diversified portfolio that owns several uncorrelated asset classes. It's important that we take advantage of that opportunity when allocating our nest egg to give us the best possible chance at a long-term successful investment outcome.

EXPERIENCE THE LUTZ FINANCIAL DIFFERENCE

Lutz Financial is an SEC Registered Investment Advisor and an affiliate of Lutz, a leading Midwest CPA firm. Lutz Financial provides comprehensive financial planning and investment advisory services to a premier clientele. Let us help you craft a financial future that grows and flourishes into a secure legacy.

We offer investment advisory services to individuals, endowments, foundations and small to medium size business retirement plans. We take the time to understand your needs and provide personalized, ongoing attention that never feels cookie-cutter or rushed. We'll never sell you products and we don't work for commission. Our fee-based financial counseling is specifically designed to ensure your financial decisions are not only based on sound financial principles, but also on your comfort level and goals.

Learn more today at www.lutzfinancial.com or by calling 402.827.2319.