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Volume 16, June 2009

A Study of *Real* Real Returns

The Winners Are:
Common Stocks and Municipal Bonds

2008 delivered a credit and economic crisis of historic proportions. Most investment portfolios were under severe stress as markets posted some of the worst nominal performance numbers that most of us can remember.

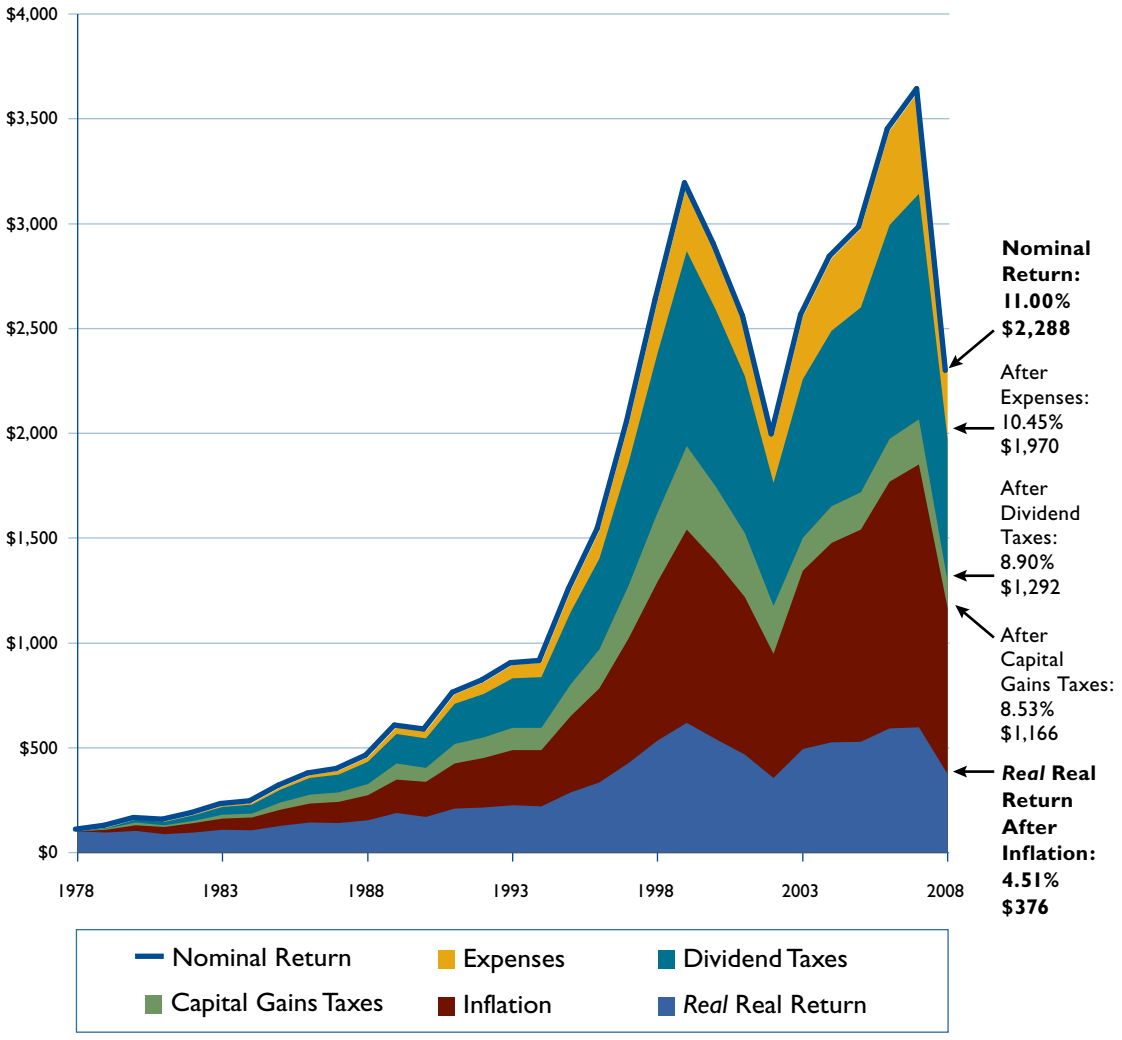
Today, our government is implementing unprecedented programs to stimulate growth. In "normal" periods, the Federal Reserve seeks to balance reasonable economic growth with low levels of inflation. Current actions are slanted towards stimulating the economy at all costs, with minimal concern about near-term inflation. On the fiscal front, the U.S. Treasury has undertaken a monumental spending program, with the accompanying deficit spending.

Even after these programs are in place, most economists are predicting slower economic growth than previous periods, leading to lower nominal investment returns. There is little probability of taxes going down from current levels. While inflation is a back-burner issue for now, the liquidity being pumped into the economy by the Federal Reserve, along with massive spending by the Treasury, could cause inflation to rise in the future, eroding purchasing power.

Against such a backdrop, it will be imperative to look beyond nominal returns to what an investment generates after inflation, taxes, and expenses – the *real* real return. Last year was difficult; however, the good news is that over the long term, many asset classes continue to deliver reasonable returns, even on a *real* real return basis.

The results of Thornburg's 2009 study, for the first time extending back 30 years, are consistent with historical results. Two asset classes – common stocks and municipal bonds – have consistently provided the highest *real* real returns after inflation, taxes, and expenses.

Growth of a Hypothetical $100
S&P 500 Index from December 31, 1978 to December 31, 2008



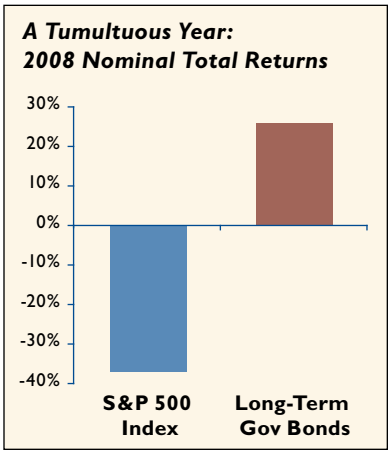
Thornburg Investment Management's *real* real return index illustrates that a $100 hypothetical investment utilizing the performance of the S&P 500 Index for the time period shown above would have grown to **$2,288** after 30 years – a very impressive nominal return!

However, that figure masks the impact of expenses, taxes on dividends and capital gains, and the insidious erosion of purchasing power caused by inflation. Once these influences are factored in, the *real* real value of that $2,288 is just **$376**.

Results reflect past performance and do not guarantee future results. The performance of an index is not indicative of any particular investment. Investors may not make direct investments into any index. Sources are provided at the end of this study.

A Look at the Results

The global economic recession and near meltdown of the financial system shattered investor psyches in 2008, causing a mass exit from any investment perceived to pose inherent risk. Equities, commodities, real estate, and corporate bonds were sold across the board, replaced in investor portfolios with t-bills and bonds issued by the U.S. government. By the end of 2008, long-term government bonds were the best-performing major asset class on a nominal basis, returning 26% vs. a negative 37% return for the S&P 500 Index for the year.



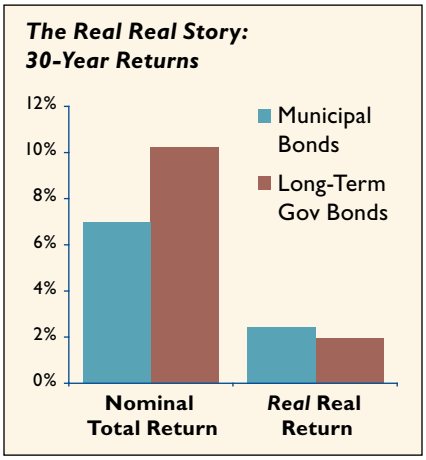
However, focusing too much on short-term results can be detrimental to investors on a *real* real return basis, especially for those with longer investment horizons. This year, for the first time, index data stretches far enough back for us to examine the impact of inflation, taxes, and expenses over 30 years for all the asset classes we study. The results, summarized on page three, are not surprising to us – over 30 years, stocks have dramatically outperformed government bonds on a *real* real return basis, even after accounting for what can only be described as an extraordinary year for government bond holders and a horrific one for equity investors. Following stocks, municipal bonds were the next-best-performing investment after accounting for inflation, taxes, and expenses. (For the remainder of this article, performance data given is always for the 30 years ended December 31, 2008, except as noted.)

Why Is This So?

Domestic stocks, both large and small cap, have posted nominal returns in excess of 10.5%, the best of any asset class examined. Enhancing stocks on a *real* real basis is the fact that the majority of their return is coming from capital gains, the taxes on which are deferred until sale. Once the gains are realized (if the stocks are held for at least a year), they are taxed at a relatively low 15% rate. Current legislation has also made the income received from stocks attractive, as most dividends are taxed at 15%. Changes in tax policy could be forthcoming, so we encourage you to keep an eye out for any impacts these changes could bring to your investment portfolio.

After domestic stocks, long-term government bonds posted the next highest nominal returns. However, they demonstrate well the need to take the next step and examine returns on a *real* real basis. In contrast to stocks, the majority of a bond's return comes from income that is received and taxed on an ongoing basis. Compounding this further is the fact that, unlike the dividends received from common stocks, interest income from taxable bonds is taxed at ordinary income tax rates. As a result, the difference between the nominal and *real* real returns on bonds is especially striking.

Municipal bonds, on the other hand, had lower nominal returns compared to the long-term government bond category. However, the income generated by municipal bonds is exempt from most taxes, providing a higher *real* real return for investors in higher tax brackets.



Single-family homes continued the declines begun in 2007, and in some previously "hot" markets, the drop in real estate values was staggering. Over longer time periods, home values have struggled to keep pace with inflation, even without accounting for ongoing maintenance costs, which as most homeowners know, can be significant. On a *real* real return basis, single-family homes have barely broken even.

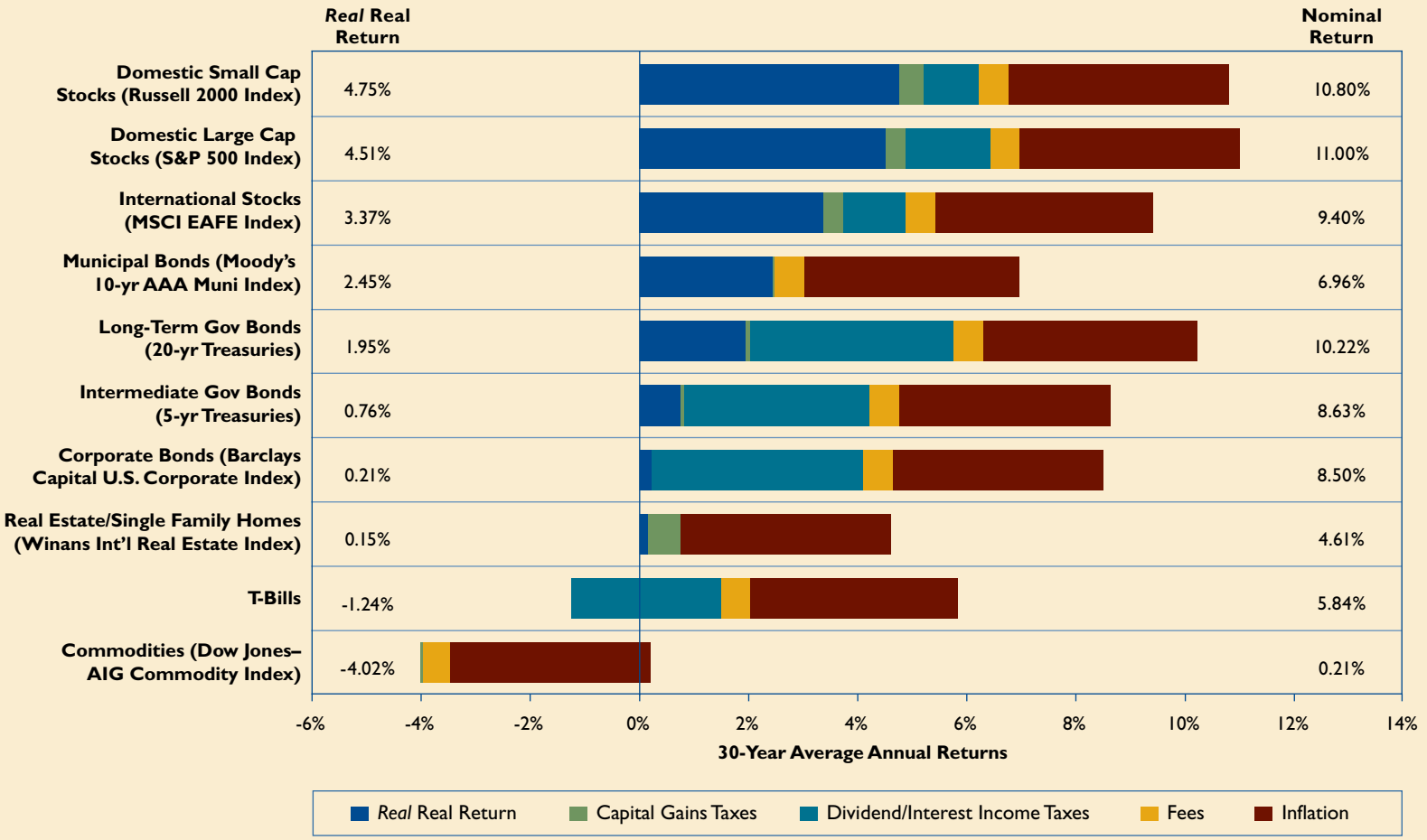
Two investments actually posted negative *real* real returns over the past 30 years. In 2008, investors flocked into t-bills for their safety and liquidity, driving their nominal returns towards zero. Even when examined over longer time periods, these investments, with their relatively low nominal returns, failed to generate real wealth for investors.

Commodities posted strong returns for several years going into 2008 and the financial community rolled out a host of new products to meet investor demand for the asset class. Unfortunately, commodities declined significantly in 2008, and even prior to this decline, the 30-year performance was sobering – negative 4% *real* real return on average.

A Note on Asset Location

A combination of asset allocation and tax planning is important. An investor's *real* real return can be significantly impacted by asset location. Asset location refers to how investments are distributed across taxable and tax-deferred accounts. For example, based

Erosion of Total Returns Over 30 Years (As of 12/31/2008)



Real Real Returns

	U.S. Small Cap Stocks	U.S. Large Cap Stocks	Int'l Stocks	Municipal Bonds	Long-Term Gov Bonds	Intermediate Gov Bonds	Corporate Bonds	Real Estate	T-Bills	Commodities	Inflation
30 Years	4.75%	4.51%	3.37%	2.45%	1.95%	0.76%	0.21%	0.15%	-1.24%	-4.02%	3.85%
20 Years	3.37%	3.76%	-0.60%	3.77%	3.88%	1.88%	1.04%	-0.38%	-0.62%	-3.13%	2.82%
15 Years	1.93%	2.39%	0.09%	2.64%	3.18%	1.17%	-0.03%	0.70%	-0.65%	-1.16%	2.47%
10 Years	-0.55%	-4.64%	-2.33%	1.38%	3.02%	1.38%	-0.86%	0.30%	-1.01%	0.51%	2.52%
5 Years	-4.16%	-5.47%	-1.48%	-0.37%	4.85%	1.11%	-2.99%	-2.12%	-1.19%	-5.82%	2.67%

Methodology: The chart above shows how fees, taxes on dividends and capital gains, and inflation erode real wealth. The amount at the far right shows the nominal return of an investment, while the area in gold reflects the amount eaten away by fees (in our example, fees of 50 basis points (0.50%) were applied to the investment, with the exception of real estate). The impact of taxes on income from the investment (either dividend or interest income) are represented by the area in teal. Taxes on capital gains provide a further drag on performance and are represented by the area in green, while the silent tax of inflation, in burgundy, can often turn a positive nominal return into a negative real real one. Sources and descriptions of each index and asset class are provided at the end of this study.

on *real* real returns, one may conclude that taxable bonds do not make sense for investors. This is not necessarily the case. Looking back 30 years, corporate bonds provided a very healthy 8.5% nominal return, over 1.5% ahead of municipal bonds. The risk-reduction characteristics of high-quality bonds can provide an essential anchor for an investor's portfolio. Since tax-exempt municipal bonds should usually not be in a tax-deferred account, government bonds and investment-grade corporate bonds may be a good choice for the fixed income allocation. Depending on an investor's time horizon, tax bracket, income needs, and other factors, taxable bonds may make sense in a taxable account as well. Investors should consult a tax professional or financial advisor to determine which asset classes make the most sense on an individual basis and the appropriate asset location for those investments.

Analyze Every Investment for its *Real* Real Return

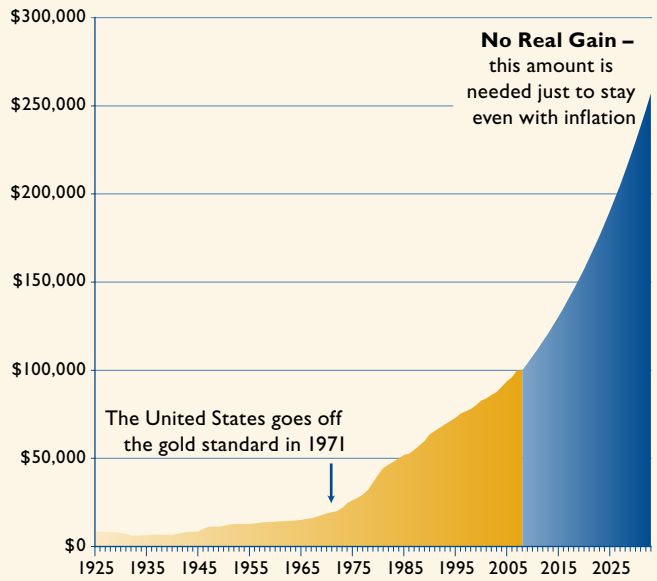
Taxes and inflation are an investor's two primary concerns. Inflation has averaged 3.85% annually over the last 30 years. For the investor in the top tax bracket, marginal Federal tax rates averaged 42%.

Investment expenses can also have a significant effect on the accumulation of real wealth. These at least can be managed. Financial advisors and their clients must understand the long-term impact of expenses on the *real* real return of an investment portfolio.

Every investment professional and investor should deflate nominal gain numbers to account for inflation and apply appropriate expenses and tax rates to the interest, dividend, or capital gains. If an investment is not earning *real* real returns after inflation, taxes, and expenses, it is gradually losing wealth.

In the real world, a 3% *real* real return is a fair objective. In most cases, investors over longer periods of time, especially 20- and 30-year time periods, can accumulate real wealth and achieve specified financial objectives. Common stocks, municipal bonds, and for tax-advantaged investors, government and corporate bonds, play a vital role in accumulating real wealth. Investors should aim for a 3% *real* real return with more volatile stocks. On the opposite end of the spectrum, they should expect a *real* real return below 3% from less volatile bonds.

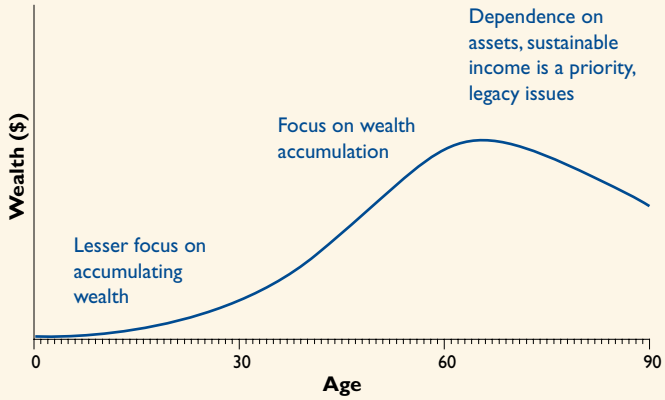
A Picture of Inflation



The gold area in the graph shows the equivalent of $100,000 in 2008 dollars, based on CPI for each year. So, $8,527 in 1925 had the same purchasing power as $100,000 today. The blue area shows nominal amounts representing no real gain on $100,000 starting in 2008 if inflation averages 3.85%, the 30-yr average inflation rate.

Source: Calculated by Thornburg Investment Management using data presented in the Ibbotson SBBI® 2009 Yearbook, ©2009. All rights reserved. Used with permission.

Investment Priorities by Age



Real Real Returns in Real Life

The market turmoil of the past few years, and even the past decade, has caused investors and financial advisors to re-evaluate their philosophy concerning investment and portfolio management. Since nominal returns have typically been used by a majority of individual investors, the euphoria experienced in rising markets as well as the depression experienced in down markets may have been exaggerated. Today, there is more realism about future market performance expectations. This new realism, accompanied by a review of the *real* real returns of the past 20 and 30 years, is leading many to change the way they invest. This may also lead to a change in the way financial goals and objectives are initially established and then measured.

This new realism should be applied in the beginning of an individual's investment lifetime. When viewing historical real returns and equating the accumulation of wealth with purchasing power in the future, it becomes apparent that budgeting and saving are much more significant factors in the achievement of financial goals and objectives. We may be recycling back to that paradigm where avoiding loss and generating real returns are the mantra of the day, along with increased saving disciplines. The combination of these three fundamental tenets of investment may be the only way for baby boomers to accumulate a sufficient amount of wealth to live comfortably in retirement.

A Realistic Time Frame

This new 30-year result is important for several reasons. First, longer time frames are more realistic for most investors, and the data becomes more robust, if for no other reason than there are a greater number of data points. It should be noted that after the

extraordinary market turmoil of 2008, long-term government bonds actually posted the highest *real* real returns over the 20-year period. But more importantly, the 30 years of data corresponds with a typical investor's life experiences.

Taking a simplistic view of an investor's lifetime, there are three 30-year periods that most experience. The first 30 years of life include a period going from infancy to adulthood. For most people in this period, investing and accumulating wealth are not priorities. Even if an individual is focused on these objectives, there generally are inadequate resources available for investing.

During the second 30-year period, from age 30–35 to age 60–65, life takes on a more serious aspect. Young and middle-age adults become more responsible for themselves and others that depend on them, discretionary income becomes available, and they begin to accumulate assets for the future. It is during this time that a successful investing venture should begin. It is also when the task, practice, and discipline of investing and investment management becomes critical – it may mean the difference between enjoying a pleasant retirement and either not being able to retire or having an uncomfortable retirement due to insufficient assets.

The final 30-year period begins around age 60–65 when most people cease working and begin to depend on their assets for their income. In many cases, they are not only concerned with having sufficient assets to generate the income they need to live comfortably, but also with leaving a legacy for heirs.

Even though each of these 30-year periods is unique and requires a different investment mentality, the three handicaps of investing remain constant and never-ending – inflation, taxes, and expenses. In order to successfully navigate the last two 30-year periods, investors must consider the *real* real return of their investments.

A New Reality

This year's study confirms what we always knew: making money is not easy, and accumulating real wealth is even harder. The process of accumulating wealth is under attack every day from a combination of outside events – economic cycles and realities, political decisions, tax policies, and market movements. Yet, most investors believe they are accumulating wealth whenever they have a positive nominal return. Our studies over the years consistently prove that nominal returns are only part of the story.

Most investors who work with financial advisors are keenly aware of how much money they have and how much they will need to meet a financial goal. But these nominal dollar figures may be misleading. While current retirees have already established their net worth goals and spending patterns, and have successfully accomplished the mission of "having enough," their children may not be in such an enviable position. Only if they have run the "real" numbers will they know what their task is. Many people, unfortunately, simply won't have enough time. Others must confront the seriousness of their mission to accumulate real wealth.

The entire focus will shift from chasing the latest, greatest performer in both the mutual fund and managed account industries toward finding the most efficient and most-likely-to-succeed investment strategy that contributes to the accumulation of real wealth. The shift from a total return model to an after-tax, after-inflation total return model will make comparisons to indices less important. And advisors will need to begin to talk in terms of "real" returns with the new adjustments embedded in them.

Clients will need to change the way they view investments, dramatically altering their whole frame of reference as they assimilate this new definition of investment total return and then determine their real needs and goals in this framework. The concept of time to accumulate and time to spend will become more crucial, and historical reviews of long-term "real returns" will be necessary. For those who start early and understand these concepts, time will be their friend. For those who start late or fail to recognize

Creating Realistic Expectations

Financial Advisor's Responsibilities

1. Educate your clients about the distinction between Real and Nominal returns.
2. Help clients redefine their expectations regarding their financial future.
3. Determine clients' future financial goals and liabilities.
4. Adjust each client's future dollar goal to represent "real wealth."
5. Guide your clients through times of economic turmoil.
6. Examine every potential investment in terms of its *real* real return.

Investor's Responsibilities

1. Focus on *real* real returns instead of nominal returns.
2. Be willing to change your expectations.
3. Be realistic about timing. Prepare to invest for the long term.
4. Re-evaluate your financial goals. You may need greater wealth accumulation than you initially planned.
5. Separate emotion from long-term decision making.
6. Examine every potential investment in terms of its *real* real return.

the significant impact of inflation, taxes, and expenses, time will become their greatest enemy.

This shift in thinking means a bigger role for the financial advisor. Clients will develop a greater dependence on their advisors as they begin to realize how difficult it is to generate real returns within constricted risk parameters. Financial advisors must learn to ask new questions and have new kinds of discussions with their clients to present the more realistic objectives.

Building Real Wealth

By looking at the probability of achieving success, there is a subtle shift in focus from things you can't control (inflation and markets) to things you can, like expenses, taxes, and investment expectations. By taking this approach, advisors can more accurately respond to clients' most pressing question: "What are my actual chances of achieving my financial goals?"

This is particularly important, as in most clients' minds the real risk is not the volatility of returns, but rather the probability of not meeting their financial goals. While investing surely isn't solely a random event, the probabilities of success can be increased somewhat by understanding and applying some fundamental principles that have historically had a major impact on returns.

Switching the focus of an investment philosophy to manageable variables – taxes and investment expenses, along with portfolio structure – allows advisors to incorporate ideas and strategies that increase the probability of future success for their clients.

Client meetings should begin by discussing the *real* real return chart and the absolute dollars required to satisfactorily meet their investment objectives. Investment strategies that have the highest probability of achieving those results should then be introduced. But the point must be reinforced that attainment of the dollar goal alone is not sufficient. Rather, that dollar goal must be adjusted to represent the "real wealth" required to satisfy the financial objective, whatever it may be.

The overall objective is to get clients to view their financial goals as future liabilities – money the clients owe themselves at some point in the future. By setting hard-dollar goals and understanding the risks and constraints inherent in various investments, advisors and their clients can develop strategies that have a higher probability of success. Set both a target goal, what the investor would optimally like to have, and a fallback goal, what the investor minimally must achieve. By identifying all the known variables – such as time periods, tax rates, required cash flows, and fees – and then attempting to solve for unknown variables such as future capital market returns, the advisor can make choices based on expected real returns; thereby, increasing the accuracy of projections. With a realistic total return analysis using historical real rates of return and with more realistic client expectations of future financial goals and objectives, the value of an advisor's guidance is eminently enhanced.

One final aspect of the "new" investing philosophy utilizing *real* real returns is the concept of "realistic expectations." Reviewing the results of the 2009 study, one can see a wide variance of returns over all asset classes and over most time periods. However, it is interesting that, despite what some consider as the harshest investment environment in memory, several asset classes over the past 20- and 30-year time periods have realized an accumulation of real wealth. Unfortunately, however, most investors approach the practice of investing with a much shorter time frame in mind, either because they started late and are running out of time or they have not been presented with realistic historical investment results. Lack of preparation and education causes investors to lose patience or have unrealistic expectations.

> **". . . most investors believe they are accumulating wealth whenever they have a positive nominal return. We know better, and the Thornburg studies over the years consistently prove that nominal returns are only part of the story."**

Because most typical investors experience a broad swing of emotions, depending mostly on short-term investment results, the probability of making "mistakes" is enhanced without a deeper understanding of what can realistically be expected from a diversified portfolio of stocks, bonds, and other asset classes. The study of *real* real returns over time periods of 5, 10, 15, 20 and 30 years helps contribute to a better understanding of what constitutes realistic return expectations. Given that the overriding goal of all investors is to accumulate real wealth, maintain purchasing power, and preserve capital over long periods of time, it is incumbent upon financial advisors to better set the stage of investor expectations.

In summary, the financial planning industry and its advisors need to evolve to a more realistic discussion of investment returns and investors' needs. This entails a shift away from evaluating investment and portfolio strategies using absolute total return concepts, to an evaluation process that fully incorporates the

impact of inflation, taxes and expenses. By incorporating the concepts included in Thornburg's "A Study of *Real* Real Returns," the quality of the discussion between a financial advisor and his/her client is enhanced – as are the probabilities of successful attainment of investment goals and objectives.

Comments

A note on the use of total return: we used so-called total return figures in this study because total return is the standard measure used in the financial community. Total return is really only an adequate measure of the return one could achieve with U.S. Treasury bills, because investors in T-bills effectively roll the entire portfolio every 90 days. There is simply no perfect way to track a hypothetical portfolio, whether it consists of fixed income or equity securities. In addition, similar criticisms can be made of single-family homes: for purposes of this study, we have ignored leverage, tax deductibility, and maintenance costs. While some details may be unclear, the general picture of *real* real returns – after inflation, taxes, and expenses – for the different classes of investments is clear and indisputable.

Important Information

This information should not be considered tax advice. Any tax statements contained herein are not intended to be used, and cannot be used, for the purpose of avoiding tax penalties. Please consult your independent tax advisor as to any tax, accounting, or legal statements made herein.

Statements contained herein are based upon information furnished to us from independent sources. While we do not guarantee their correctness, we believe them to be reliable and have ourselves relied upon them.

The Consumer Price Index (CPI) measures prices of a fixed basket of goods bought by a typical consumer, including food, transportation, shelter, utilities, clothing, medical care, entertainment and other items. The CPI, published by the Bureau of Labor Statistics in the Department of Labor, is based at 100 in 1982 and is released monthly. It is widely used as a cost-of-living benchmark to adjust Social Security payments and other payment schedules, union contracts, and tax brackets. Also known as the cost-of-living index.

Sources

Real real returns were calculated by Thornburg Investment Management using data obtained from the following sources:

Inflation/Consumer Price Index–Urban (CPI-U) and Treasuries data were obtained from the Ibbotson SBBI® 2009 Yearbook, ©2009. All rights reserved. Used with permission.

Municipal bond, commodity, and real estate data were obtained from Global Financial Data.

Corporate bond data was obtained from Barclays Capital.

Index data for the S&P 500, MSCI EAFE, and Russell 2000 were obtained from FactSet.

Tax rates were obtained from the Internal Revenue Service. The study applied the highest marginal tax rate in each calendar year allowable per the IRS to compute hypothetical dividend and interest taxes. The study assumes all equity dividends are qualified for the periods covered under The Jobs and Growth Tax Relief Reconciliation Act of 2003.

Index & Asset Class Descriptions

Bonds are debt investments in which an investor loans money to an entity (corporate or governmental) which borrows the funds for a defined period of time at a fixed interest rate. Bonds are subject to certain risks including loss of principal, interest rate risk, credit risk, and inflation risk. The value of a bond will fluctuate relative to changes in interest rates; as interest rates rise, the overall price of a bond falls.

Government bonds, or Treasuries, are negotiable debt obligations of the U.S. Government, secured by its full faith and credit and issued at various schedules and maturities. Income from Treasury securities is exempt from State and local, but not Federal, taxes. Treasury bill data is based on a one-bill portfolio containing, at the beginning of each month, the bill having the shortest maturity not less than one month. Intermediate government bond data is based on a one-bond portfolio with a maturity near five years. Long-term government bond data is based on a one-bond portfolio with a maturity near twenty years.

Municipal bonds are debt obligations issued by States, cities, counties, and other governmental entities. Municipal bonds offer a predictable stream of income which is free from Federal and, in some cases, State and local taxes, but may be subject to the Alternative Minimum Tax. Because of these tax savings, the yield on a muni is usually lower than that of a taxable bond. Higher grade munis have higher degrees of safety with regard to payment of interest and repayment of principal and marketability in the event you must sell before maturity. This study uses Moody's 10-Year AAA Municipal Bond Index as a general representation of the municipal bond market. The index consists of munis with a AAA credit rating from across the United States.

A corporate bond is a debt security issued by a corporation. Corporate bonds are taxable and have more credit risk compared to Treasuries. This study uses Barclays Capital U.S. Corporate Investment Grade Index, which is a general representation of the investment-grade corporate bond market.

A stock is a share in the ownership of a company. As an owner, investors have a claim on the assets and earnings of a company as well as voting rights with the shares. Compared to bonds, stock investors are subject to a greater risk of loss of principal. Stock prices will fluctuate, and there is no guarantee against losses. Stock investors may or may not receive dividends. Dividends and gains on an investment may be subject to Federal, State or local income taxes.

Standard & Poor's 500 Stock Index is an index consisting of 500 stocks chosen for market size, liquidity and industry grouping, among other factors. The S&P 500 is designed to be a leading indicator of U.S. equities and is meant to reflect the risk/return characteristics of the large-cap universe.

The Russell 2000 Index measures the performance of the small-cap segment of the U.S. equity universe. The unmanaged index is a subset of the Russell 3000® Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership. Small-cap stocks are subject to greater volatility than large-cap stocks.

The Morgan Stanley Capital International (MSCI) Europe, Australasia, Far East Index (EAFE) is a generally accepted benchmark for major overseas markets. Index weightings represent the relative capitalizations of the major overseas developed markets on a U.S. dollar-adjusted basis. The index is calculated with gross dividends reinvested in U.S. dollars. There are special risks associated with international investing, including currency fluctuations, government regulation, political developments, and differences in liquidity.

Compared to the other investments in this study, single-family homes are relatively illiquid. Property values can fluctuate and there are no guarantees. Gains on the sale of a property may be taxable at the Federal, State, or local level. Real estate data in this study uses the Winans International Real Estate Index,™ which tracks the prices of new home prices in the United States with Census Bureau data.

A commodity is a physical good – such as food, grain, oil, natural gas, and metals – which is interchangeable with another product of the same type, and which investors buy or sell in an active market, usually through futures contracts. If you buy a futures contract, you are basically agreeing to buy something that a seller has not yet produced for a set price on a specific future date. The futures market is extremely liquid, risky, and complex. Commodity prices can be affected by uncertainties such as weather and war and there are no guarantees against losses. In this study, commodities are represented by the Dow Jones-AIG Commodity Index (DJ-AIGCI),® from 1990 to present. Prior to that, returns are represented by the Dow Jones Futures Price Index. The DJ-AIGCI is designed to be a highly liquid and diversified benchmark for commodities traded on U.S. exchanges. For purposes of this study, it is assumed that commodity exposure is obtained through a vehicle tracking the index and not by purchasing the underlying futures contracts.

The performance of an index is not indicative of the performance of any particular investment. Unless otherwise noted, index returns reflect the reinvestment of income dividends and capital gains, if any, but do not reflect fees, brokerage commissions or other expenses of investing. Investors may not make direct investments into any index.

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