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The economic picture for many Americans continues to be discouraging. Unemployment remains high and home prices have yet to find a floor. In an effort to spur growth, monetary and fiscal authorities have undertaken unprecedented measures. The Federal Reserve has tripled the size of its balance sheet in recent years and fiscal authorities have enacted enormous spending measures, compounding already high structural deficits.

Many are now questioning how this debt will be repaid. Recent action in Washington, DC has been focused on the first steps needed to reign in deficit spending; however, even the most optimistic realize that further measures need to be taken. On the surface, various proposals call for raising future taxes, cutting expenditures, reforming entitlements, or some combination thereof.

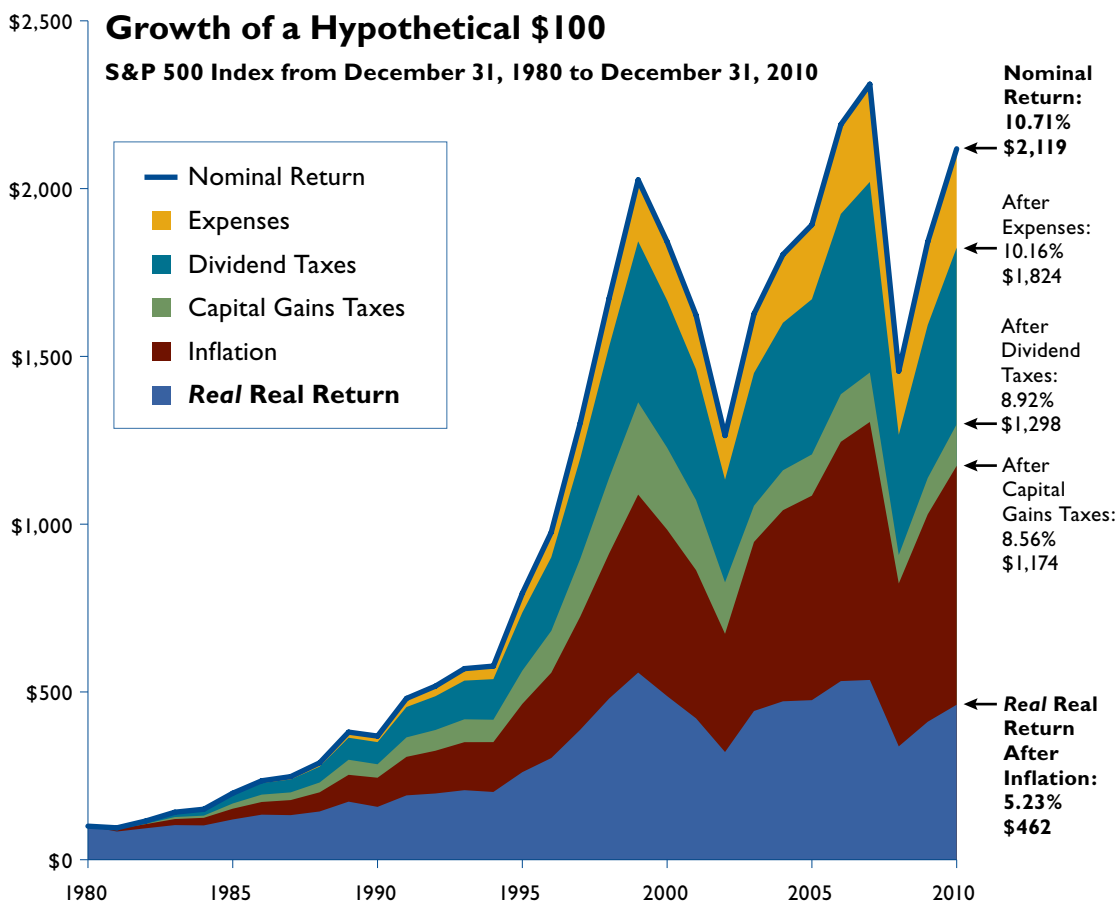
There is another, indirect form of taxation that governments have used for centuries to relieve themselves of heavy debt burdens – inflation. During the mid-16th century, King Henry VIII began debasing his currency. Over a five-year period ending in 1547, the pound had an 83% reduction in the amount of silver in its coins, resulting in a reduction in the real value of the King's debts.¹ More recently, France chose a similar path during the mid-1940s, inflating its way out of the debts brought on by the Second World War. This course of action relieved its taxpayers of the burden to repay the debt. However, it imposed severe penalties on its debtors.²

While these are extreme examples, they reinforce concepts which today's investors should keep in mind. Tax rates change over time, impacting the relative merits of various asset classes and investment vehicles. And, inflation is a by-product of the federal government printing new dollars that are worth less than the dollars they borrowed.

As such, it's important for investors to keep abreast of pending developments and look beyond nominal returns to what an investment returns after inflation, taxes, and expenses – the *real* real return.

A Study of Real Real Returns

It's easy to get caught up in performance figures. At Thornburg Investment Management, we believe investors should look carefully at total returns, and many investors have seen the value of looking past the nominal figures to the real (post-inflation) data. We've gone beyond stated performance numbers for several asset classes and calculated returns that are adjusted for inflation, taxes, and investment expenses. We call them the *real* real returns.



Thornburg Investment Management's *real* real return study illustrates that a hypothetical \$100 investment in large-cap stocks (as measured by the S&P 500 Index) would have grown to \$2,119 over the past 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 \$2,119 is just \$462.

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

Equity, commodity, and taxable fixed-income markets were materially positive on a nominal basis in 2010, municipal bonds more modestly so. Treasury bills delivered a return of essentially zero. And real estate prices continued to slide.

Despite the range of outcomes in 2010, the long-term results of this year's study remain unchanged. When looking at the past 30 years (shown on page three), common stocks and municipal bonds delivered the strongest returns to investors in taxable accounts after adjusting for inflation, taxes, and expenses.

The results of this year's study also reinforce the lessons of previous ones. First, that time-tested, common sense investment strategies are a better path to real wealth accumulation and real income generation than short-term trading and speculation. Second, the range of returns over the past 10, 20, and 30 years highlights the need for well-diversified portfolios of assets that can generate *real* real returns. Finally, investors should take a comprehensive approach to asset allocation, examining their own circumstances and the investment vehicles available to them, and allocate their investments accordingly.

In 2010, U.S. common stocks, represented by the S&P 500 and the Russell 2000 Indices, generated positive returns of 15.06% and 26.85%, respectively, on a nominal basis. The market was able to shake off concerns about the strength of the economic recovery and the stubbornly high unemployment rate.

While not as strong as U.S. markets, international equities were able to look past worries of a double-dip recession, as well as the sovereign debt crisis in Europe. Returns for U.S. investors in foreign equities were given a further tailwind by weakness in the dollar. The nominal return for the MSCI EAFE Index on a local currency basis in 2010 was just above 5%, while the return in U.S. dollars exceeded 8%.

Performance for the major fixed-income asset classes was mixed in 2010. Continued low interest rates led to relatively strong returns in the taxable bond markets. Intermediate and long-term government bonds, as well as corporate bonds, delivered solid returns for 2010 in aggregate.

Municipal bond prices faced headwinds in 2010, particularly late in the year. The pending expiration of the Build America Bond program at the end of 2010 led to a rush to market by issuers, heightening already elevated seasonal supply. This drove prices lower, leading to redemptions from municipal bond mutual funds, prompting a wave of selling. High-profile, in some cases incendiary, reports about the health of municipalities put the exclamation point on a tough year. When 2010 is looked at in aggregate, broad municipal bond indexes delivered modest gains.

Looking past 2010, equities over the long term have provided the highest returns after inflation, taxes, and expenses, with large-cap, small-cap, and international equities all generating *real* real returns in excess of 4.5% over the past 30 years.

Relatively strong nominal returns explain some of this; however, the source and taxation of returns also plays a role. As an example, over the past 30 years, long-term government bonds have provided higher nominal returns than U.S. small-cap stocks; however, small-cap stocks provided a higher *real* real return, at least for wealthier investors in taxable accounts.

Why is this so? First, the majority of the return from equities comes in the form of capital gains, the taxes of which are deferred until sale. Currently, realized gains are taxed at a relatively low 15% rate.

Income in the form of dividends also currently receives favorable tax treatment. Bonds, on the other hand, receive the majority of their returns from coupon payments, which, for corporate and government bonds, are taxed at ordinary income tax rates as the income is received.

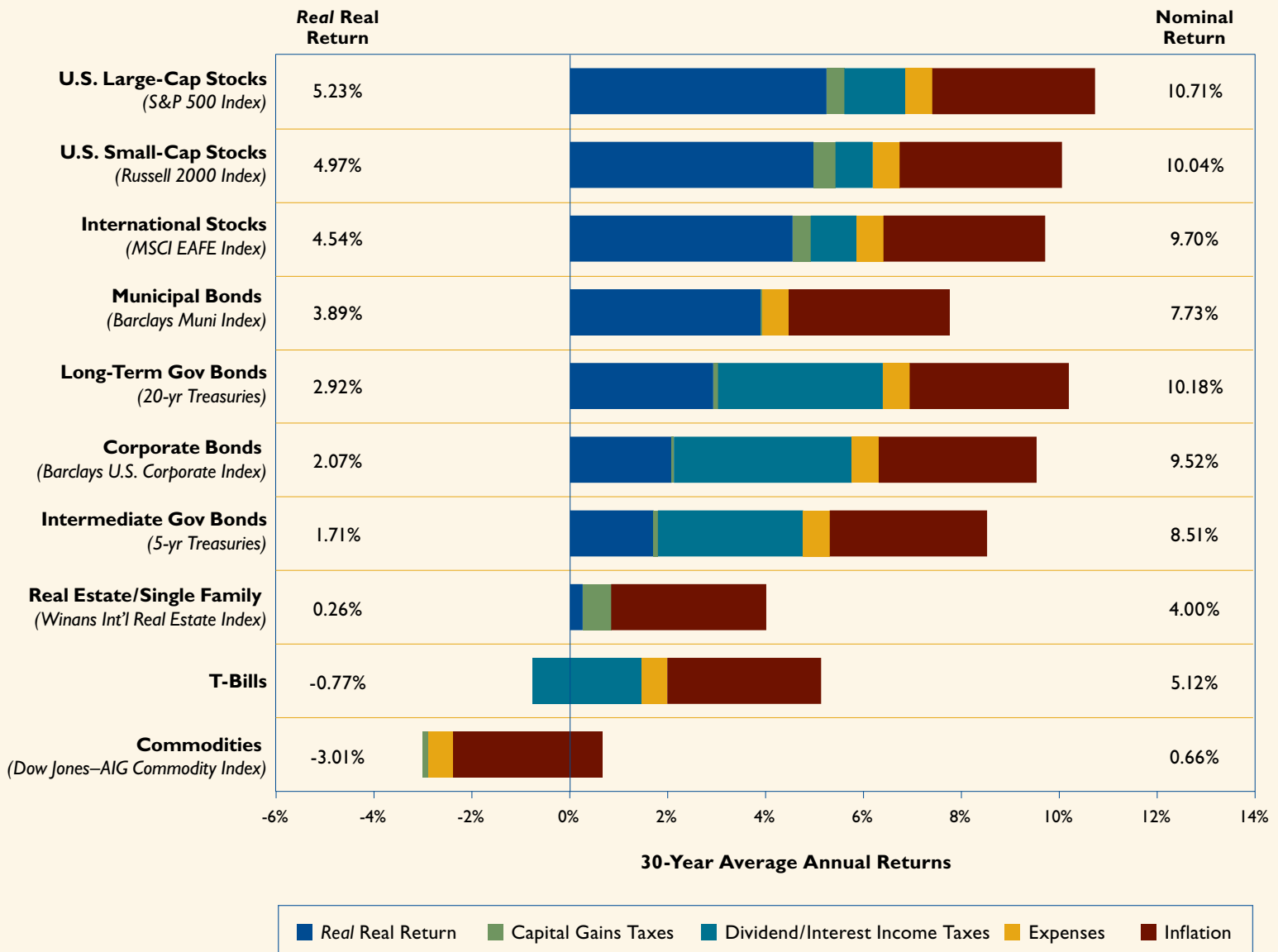
Investors, especially those in high tax brackets, can avoid some of these issues in two ways. First, by examining the relative after-tax returns of taxable bonds vs. municipal bonds, and second, by evaluating whether their taxable or tax-deferred accounts are a better home for their taxable bond holdings.

Taxable Bonds vs. Municipal Bonds

Municipal bonds usually offer lower nominal coupons than bonds issued by either the federal government or by corporations; however, the interest received is generally exempt from

Taxes are one of the primary obstacles to building real wealth, and investors should apply their own individual tax rate

Erosion of Total Returns Over 30 Years (In a Taxable Account, as of 12/31/2010)



Real Real Returns

	U.S. Large Cap Stocks	U.S. Small Cap Stocks	Int'l Stocks	Municipal Bonds	Long-Term Gov Bonds	Corporate Bonds	Intermediate Gov Bonds	Real Estate*	T-Bills	Commodities	Inflation
30 Years	5.23%	4.97%	4.54%	3.89%	2.92%	2.07%	1.71%	0.26%	-0.77%	-3.01%	3.16%
20 Years	4.82%	6.50%	2.16%	2.95%	2.86%	1.68%	1.51%	-0.36%	-0.85%	-0.90%	2.50%
15 Years	2.85%	3.64%	1.27%	2.19%	1.75%	0.81%	1.09%	-0.06%	-0.95%	-0.35%	2.40%
10 Years	-1.74%	2.59%	0.42%	1.93%	1.79%	1.33%	1.32%	-0.57%	-1.42%	0.15%	2.34%
5 Years	-0.73%	1.15%	-0.25%	1.36%	1.13%	1.13%	1.95%	-5.12%	-1.22%	-3.64%	2.18%
1 Year	10.52%	20.33%	4.83%	0.36%	5.52%	4.28%	3.53%	-5.25%	-1.89%	11.91%	1.50%

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, which includes a one-time 6% commission). 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 return. Sources and descriptions of each index and asset class are provided at the end of this study.

*For the one-year real real return, the 6% real estate commission was not deducted.

taxes. For investors in higher tax brackets, this can result in a higher after-tax yield for municipal bonds. In our study, we assumed that taxes were paid in the year that the income was generated, at the highest applicable income tax rate in effect at the time. This of course isn't the rate paid by all investors and highlights the need for individual investors to evaluate their own circumstances. Taxes are one of the primary obstacles to building real wealth, and investors should apply their own individual tax rate in an effort to determine whether taxable or municipal bonds make more sense for their portfolios.

Taxable vs. Tax-Deferred Accounts

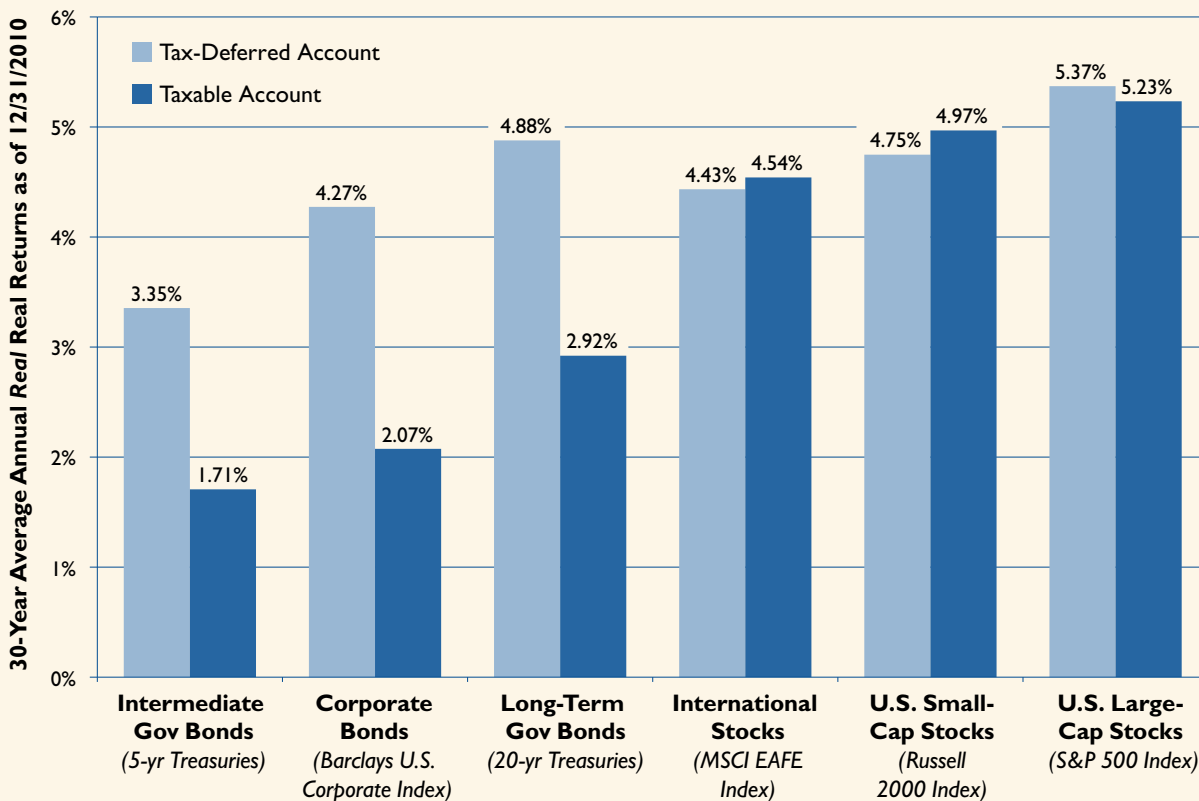
Over the past ten years, taxable bonds, whether issued by the federal government or by corporations, provided returns well in excess of many other traditional asset classes, and they provide important diversification benefits at the investor portfolio level. Those in higher tax brackets should not only evaluate the relative attractiveness of taxable vs. municipal bonds, but they should also evaluate where they house their taxable bond allocation.

In a traditional, taxable bond account, the interest income received by the investor is taxed at ordinary income rates in the year it was received. In an IRA or employer-sponsored retirement account, these taxes are deferred until the individual takes distributions, at which point those distributions are taxed as ordinary income. This deferral can provide an important compounding feature and may, for some investors, make placement of taxable bonds in a tax-advantaged account relatively more attractive for higher income investors.

As an example, in our study, when looking at the *real* real return of long-term government bonds in a traditional (i.e. not tax-advantaged) account, interest income is taxed at the highest prevailing income tax rate and taxes are assumed to be paid in the year that the interest is received, reducing the amount available for reinvestment. The result is a *real* real return of 2.92% over 30 years.

We then assumed that these same bonds were placed in a tax-advantaged account and that taxes on interest income were deferred (see chart below). After 30 years, the investment was withdrawn from the account and the entire value was taxed at

Tax-Deferred Account vs. Taxable Account: Real Real Returns



Methodology: The chart above shows how the real real return of investments can be altered when held in a tax-deferred account. In the tax-deferred account, taxes are deferred until the end of the 30-year period. Sources and descriptions of each index and asset class are provided at the end of this study.

the highest ordinary income tax rate currently in effect. Even after inflation and payment of those taxes, the *real* real return came to 4.88%, well above the 2.92% when those same bonds were placed in a taxable account.

This highlights the need for investors to take a holistic approach to investing – not just examining the returns of various asset classes, but the source of returns and how their individual tax circumstances can impact their ability to generate real wealth. Investors should not only examine nominal returns and *real* real returns, but also how they allocate their assets between taxable and tax-deferred accounts to maximize tax efficiency.

What Investors Can Do

1. Examine the source of investment returns and individual tax circumstances.

Individual tax rates vary. We ran our analysis based on the highest prevailing income, dividend, and capital gains tax rates in effect at the time. Investors should familiarize themselves with how the returns of investments are generated, and the impact that their own individual circumstances will have on the ability of these assets to generate real wealth over the long term.

2. Evaluate the relative advantages of vehicles available and divide assets accordingly.

Pay attention to asset location, or where various assets are being housed. Investors often save via multiple investment vehicles: for example, after-tax accounts or Individual Retirement Accounts (IRAs) as well as tax-advantaged retirement accounts offered by their employers. Too often, many of these investors develop a single asset allocation that they mimic for both types of vehicles, frequently to their detriment. A more holistic view would encourage investors to examine where they place stocks, taxable bonds, and municipal bonds to maximize the advantage of each.

3. Build well-diversified portfolios of assets with a history of positive *real* real returns.

The past 10, 20, and 30 years demonstrate the need for well-diversified portfolios. Large-cap, small-cap, and

international equities have provided the highest *real* real returns over the past 30 years. However, equities, particularly large-cap domestic equities, have struggled over the past decade, delivering negative *real* real returns. Investors should identify asset classes that can generate real wealth after accounting for inflation, taxes, and expenses, and build diversified portfolios of those.

4. Monitor explicit and implicit choices of our government for their impact on the ability to generate *real* real returns.

Investors need to monitor both the explicit and implicit choices made by our government. Various proposals being debated include changes to the dividend, capital gains, and ordinary income tax rates. Revisions to the highest marginal tax rates are currently receiving the most press. However, any of these changes could impact the relative

attractiveness of individual asset classes on a *real* real basis, as well as how one allocates their assets between taxable and tax-deferred accounts.

Implicit choices made by the government should also be evaluated. As the costs of government services have escalated, the national debt has grown to unprecedented levels. The “silent tax” of inflation can be levied when the government pays its bills with newly printed dollars that are worth less than those they borrowed.

Whether the government’s policies to stimulate growth result in higher inflation in the future remains to be seen. However, taxes and inflation have been the biggest variables

when converting nominal returns to *real* real ones and investors should monitor the choices the government makes in reducing the deficit.

Analyze Every Investment for Its *Real* Real Return

Taxes and inflation remain the investor’s two primary obstacles to building long-term wealth. And these variables are likely to have an even greater negative affect on portfolio returns in the future. Over the past 30 years, taxes have averaged around 40% for investors, while inflation has averaged over 3%. It is increasingly possible that investors will face higher taxes on dividends and capital gains (and higher taxes on interest income for very high-net-worth investors), possibly

Investors should not only examine nominal returns and *real* real returns, but also how they allocate their assets between taxable and tax-deferred accounts to maximize tax efficiency.

combined with higher inflation due to excessive deficit spending. None of these events are likely to be short-lived.

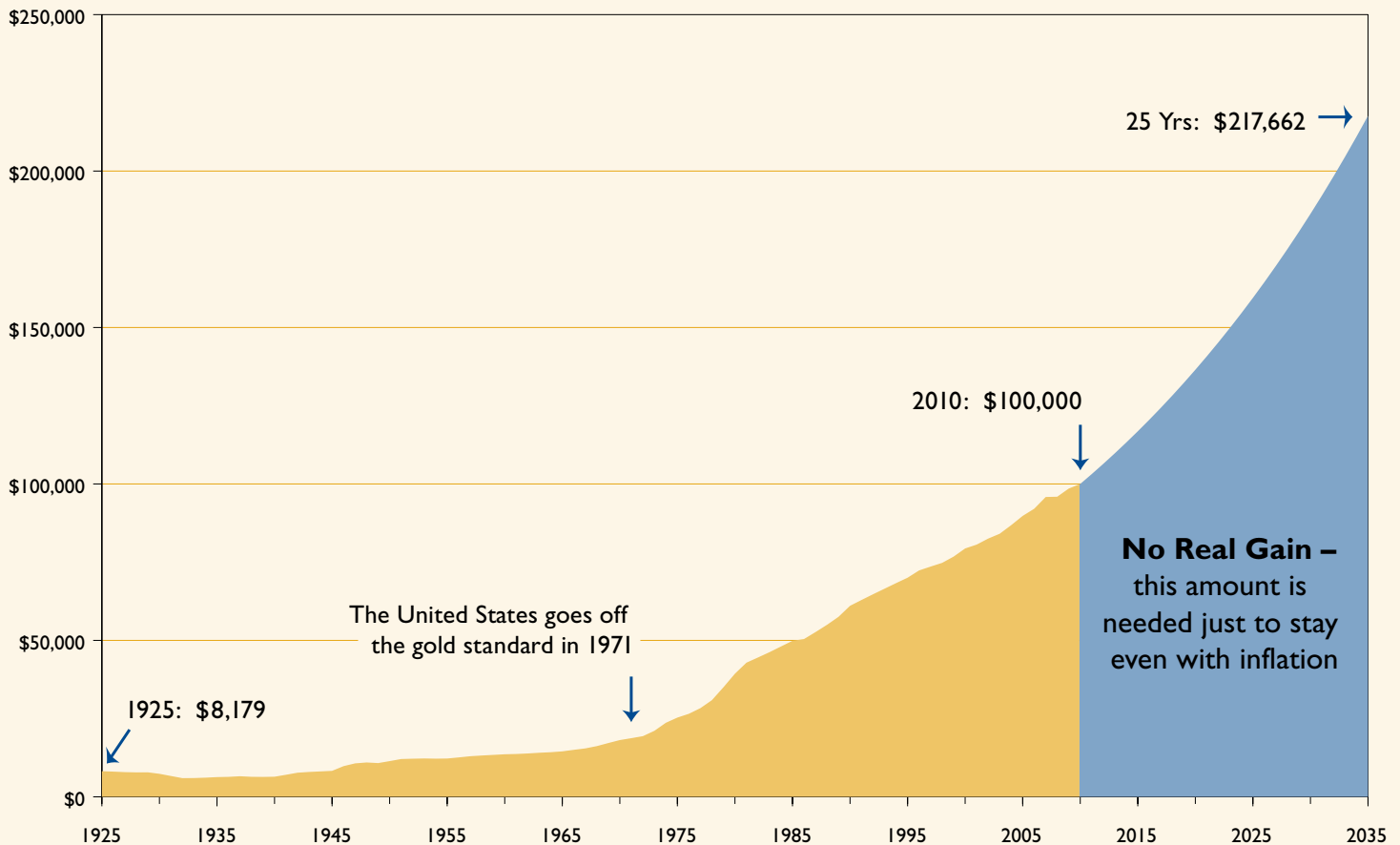
Investment expenses have also eroded investor returns over time. Even though expenses have steadily decreased over the years, we believe it's reasonable to expect that they will stay about the same in the coming years. In fact, they may even rise a bit.

This year's *real* real return study is consistent with previous results: investors should realistically expect *real* real investment returns for common stocks over long periods of time to be no more than 4-5% and for bonds to be no more than 3-4%. If there is increasing inflation in the near future, both commodities and real estate may benefit, but over longer periods of time they have not generated any significantly positive *real* real returns.

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.

A Picture of Inflation



The gold area in the graph shows the equivalent of \$100,000 in 2010 dollars, based on CPI for each year. So, \$8,179 in 1925 had the same purchasing power as \$100,000 in 2010. The blue area shows nominal amounts representing no real gain on \$100,000 starting in 2011 if inflation averages 3.16%, the 30-yr average inflation rate.

Source: Calculated by Thornburg Investment Management using data presented in the Ibbotson SBBI® 2010 Yearbook, ©2011. All rights reserved. Used with permission.

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.

Build America Bonds are taxable bonds issued by state and local governments. The U.S. Treasury then provides these entities with a direct federal subsidy for a portion of the borrowing costs.

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. CPI is also known as the cost-of-living index.

Sources

1 Carmen M. Reinhart and Kenneth S. Rogoff, [This Time Is Different: Eight Centuries of Financial Folly](#), Princeton University Press, 2009.

2 Dr. Bryan Taylor, "Paying Off Government Debt: Two Centuries of Global Experience", Global Financial Data.

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 Classic Yearbook](#), © 2011. All rights reserved. Used with permission.

Commodity and real estate data were obtained from Global Financial Data.

Corporate and municipal bond data were 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 taxable account scenario 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. The tax deferred account scenario applied the highest marginal tax rate at the end of the 30-year period.

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 Barclays Municipal Bond Index as a general representation of the municipal bond market.

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 MSCI EAFE (Europe, Australasia, Far East) Index is an unmanaged index. It 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 net 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.

*For the one-year real real return, the real estate commission was not deducted. For longer periods, a 6% commission was applied to approximate the economic reality of a typical real estate investment transaction.



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