

## RISK & RETURN

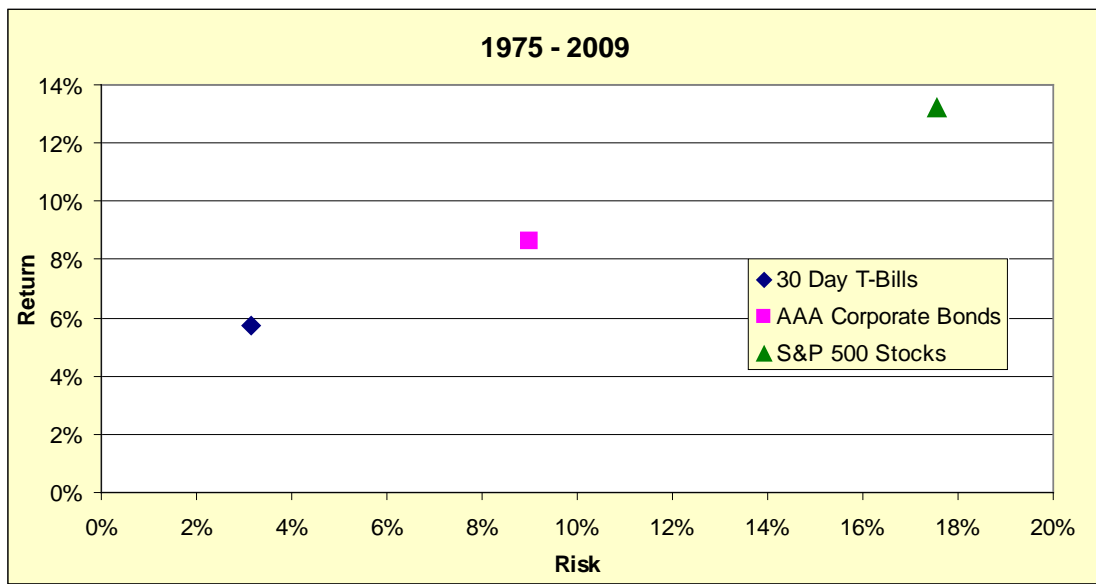
This is one of a series of Research Briefs created by Brinton Eaton to keep our clients informed about key developments — in financial planning, tax strategy, and investment management — that we research and implement as appropriate on your behalf.

\* \* \*

In investing, as in life, there are generally no free lunches. Investments that promise higher than normal returns typically come with higher than normal risk. In fact, the essence of informed investing is intelligently balancing this ever-present trade-off between risk and return.

### The Basics

The chart below shows the relative risk/return profiles of three common asset classes: Treasury bills, corporate bonds, and large-company stocks. Here, return is represented as the simple average annual total return (including reinvestment of income) over 35 years ending 2009; risk is represented as the annual standard deviation\* around that average over the same period. Clearly, less risky investments such as Treasury bills tend to command lower returns over the long term than do more risky alternatives such as common stocks.

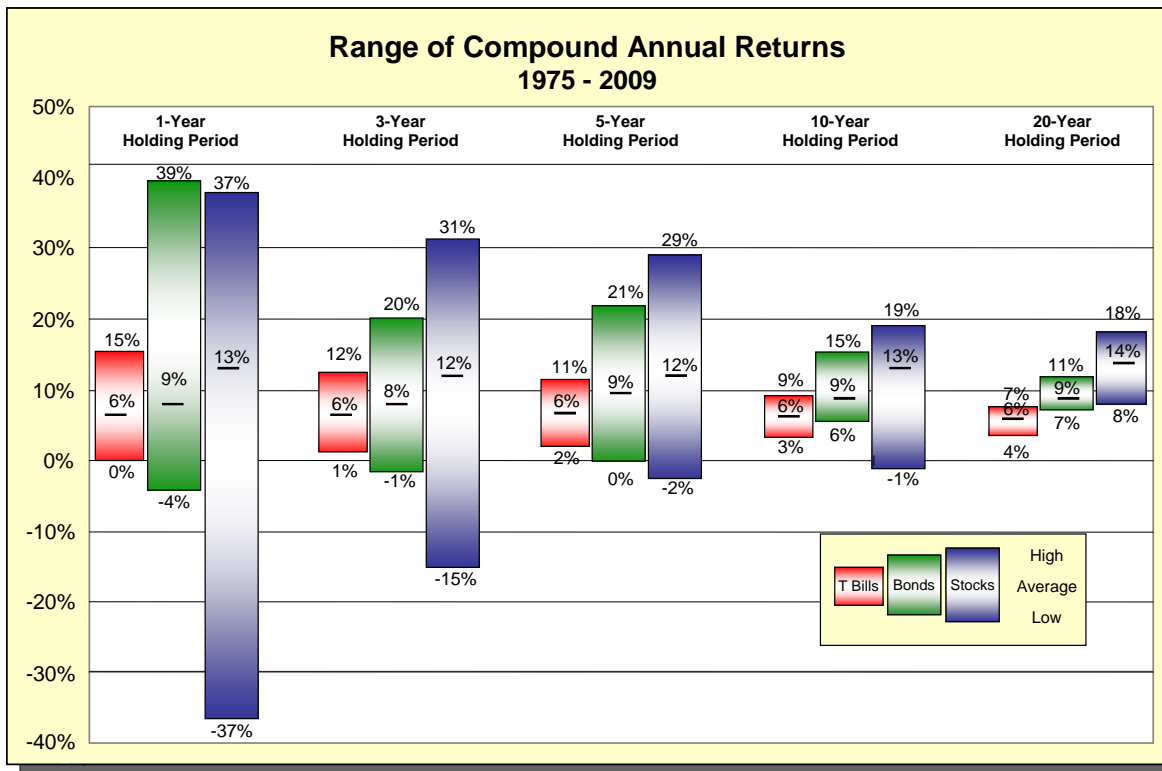


The risk/return trade-off evident in this chart (which implicitly assumes an investment holding period of a single year) is reasonably well known to most investors. However, very few investors are familiar with what happens when these same investments are viewed over longer, more realistic, holding periods. Some surprising, counter-intuitive phenomena occur — we will examine two of these in this *Research Brief*.

\* Standard deviation, a measure of the distance that a quantity tends to deviate from its average value, is a common measure of risk in an investment context.

## Patience Pays

Let's focus on the above three asset classes. In the following chart, we show the historical range of annual returns for these three asset classes over the 35 years ending 2009, assuming different holding periods.



As expected, for short holding periods, such as one year, the range of returns for stocks (i.e., a rough measure of their risk) is greater than for bonds, which in turn is greater than for T-bills. Over longer holding periods, this discrepancy narrows considerably until, for holding periods of 20 years (or longer), the range of returns for stocks is actually much preferred to that for bonds and T-bills! Another way to look at this remarkable result is to note that there has never been a 20-year period since 1975 during which the worst returns for stocks weren't better than the best returns for T-bills. In essence, given enough time, the good years and the bad years tend to offset each other — this has been called “risk pooling across time”. Note that this is not just a peculiarity of this 35-year period; other studies have shown similar results looking back over 80 years or more.

The lesson here is that investment risk cannot be fully discussed without reference to the investment horizon. What may be risky to some investors may not be risky at all to investors that have the luxury to be patient.

## Risk Is A Drag

If you are an investor with a 10-year investment horizon, which asset would you rather hold: Asset A with an average annual return of 8% or Asset B with an average annual return of 9%? Asset B seems like the clear winner. But suppose that Asset B has a standard deviation of 18% and Asset A has a standard deviation of zero. Should you care? The table below indicates that indeed you should. Depending on its volatility, a higher-returning asset may not result in greater wealth.

	Asset A		Asset B	
	Annual Return	Account Balance	Annual Return	Account Balance
		\$100		\$100
Year 1	8%	\$108	23%	\$123
Year 2	8%	\$117	-14%	\$106
Year 3	8%	\$126	-7%	\$98
Year 4	8%	\$136	20%	\$118
Year 5	8%	\$147	16%	\$137
Year 6	8%	\$159	14%	\$156
Year 7	8%	\$171	-18%	\$127
Year 8	8%	\$185	27%	\$162
Year 9	8%	\$200	-2%	\$158
Year 10	8%	\$216	32%	\$208
Average Return	8.0%		9.0%	
Standard Deviation	0.0%		18.0%	
<b>Ending Balance</b>		<b>\$216</b>		<b>\$208</b>

In fact, any asset with volatility greater than zero will see its multi-year return eroded. The more volatility, the more erosion. This phenomenon is called “risk drag”. Risk drag, by the way, is one reason we caution our clients against being over-concentrated in a single asset, such as their employer’s stock, no matter how attractive that asset’s return might appear. A single asset will almost certainly have more volatility than a collection of assets — over the long run, it is unlikely to outperform a properly diversified portfolio.

### There’s More...

The fundamental dynamics underlying the effects discussed here represent real opportunities that we attempt to continually exploit for the benefit of your portfolio.

As interesting as these results regarding the risk and return of single assets may be, things get considerably more interesting when these assets are combined together in various ways. Several more rich layers of intuition-defying results present themselves in that case. We will explore some of these in subsequent *Research Briefs*.

\* \* \*