

Stock Returns Versus Bond Returns: Actual Historical Data 1926-2008

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It is widely known that investing in stocks is more risky than investing in fixed income securities. On the other hand, it is also known that investing in stocks generally results in higher returns over time than does investing in fixed income securities [Seigel, 2008]. The purpose of this article is to show the historical likelihood and magnitude of obtaining better (or worse) returns by investing in large company stocks (LCS) than in corporate bonds (CB). Such information may be of

use to investors, with varying investment horizons, relative to the timing of asset allocation decisions. The information would seem to be especially interesting in light of the significant drop and partial recovery of stock prices over the past two years. The time period studied is from January 1926 through December 2008. Data for the study come from Ibbotson's *Stocks, Bonds, Bills, and Inflation: 2009 Classic Yearbook* (SBBI) [Ibbotson, 2009].

from the S&P 500 with dividends reinvested (1957-2008) and from the S&P 90 prior to 1957. The CB data are from the Citigroup Long-term High Grade Corporate Bond Index.

As can be seen in Table 1, maximum and average returns were higher with LCS; however, for most investment periods (15 years or less), LCS experienced lower minimum returns, in some cases much lower returns. This is the general relationship that investors have come to expect.

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Return Data by Investment Class

Monthly return data is reported in SBBI for a number of classes of investments including, but not limited to, small company stock, large company stock, long-term government bonds, intermediate-term government bonds, and corporate bonds. Table 1 presents the maximum, minimum, and average rates of return for large company stock (LCS) and corporate bonds (CB) for each of the investment periods. The LCS data are

Comparisons by Investment Period

This study examined the monthly data for large company stocks and corporate bonds for comparisons of different length rolling investment periods, ranging from 1 to 30 years. For example, the calculated differences in the returns on LCS and CB (LCS returns minus CB returns) for the 1-year period from January 1926 through December

Table 1
Rates of Return for Different Investment Periods

Number of Portfolios	<u>1-</u> <u>YR</u>	<u>2-</u> <u>YR</u>	<u>3-</u> <u>YR</u>	<u>4-</u> <u>YR</u>	<u>5-</u> <u>YR</u>	<u>10-</u> <u>YR</u>	<u>15-</u> <u>YR</u>	<u>20-YR</u>	<u>25-YR</u>	<u>30-YR</u>
	985	973	961	949	937	877	817	757	697	637
Large Company Stock (%)										
Maximum	162.9	57.1	43.3	42.3	36.1	21.4	19.7	18.3	17.2	14.7
Average	12.6	11.3	10.8	10.5	10.3	11.0	11.2	11.4	11.4	11.3
Minimum	-67.6	-54.3	-42.4	-27.5	-17.4	-4.9	-0.4	1.9	5.6	7.8
Corporate Bonds (%)										
Maximum	46.7	33.6	23.8	25.0	23.9	16.9	14.2	12.7	11.7	10.1
Average	6.2	6.0	6.0	6.0	6.0	5.9	5.8	5.7	5.5	5.3
Minimum	-18.2	-11.0	-6.9	-4.9	-2.1	0.6	1.2	1.5	1.6	1.9

1926 are shown, then repeated the calculations for the period from February 1926 through January 1927 and for 983 subsequent 1-year periods ending January 2008 through December 2008. Thus, comparative return data for 985 1-year investment periods is generated. Next, the returns for 2-year rolling periods beginning with January 1926 through December 1927 and ending with January 2007 through December 2008 is calculated. This resulted in 973 2-year periods. The process was repeated for 3-year, 4-year, 5-year, 10-year, 15-year, 20-year, 25-year and 30-year investment periods. Table 2 presents the results of the comparison of the returns on LCS and CB, showing

that LCS average and maximum returns, but not minimum returns, are better than CB returns for all investment periods; however, note the nature of the minimum returns over varying investment periods. With longer investment periods, the disadvantage for LCS decreases and disappears for all 30-year investment periods.

Table 2 shows the advantage (disadvantage) of LCS over CB over the last 83 years. Note that for approximately 64 percent of 1-year periods, LCS outperformed CB; however, as the length of the investment period reaches 15 years, LCS provides higher returns than CB in more than 92 percent of the investment periods, with LCS averaging 5.4

percentage points more than CB. For longer investment periods, the superiority of LCS over CB is even more pronounced. For investment periods of 30 years, investing in LCS was superior to investing in CB for all 637 periods.

The general nature of the relationships shown in the two tables is not surprising. In fact, it has been shown that for short-term investing, stocks are quite risky and that, for longer-term investing, the "extra" return that comes with investing in equities is quite likely to overcome the risk. The precise nature of the relationship as shown in Table 2 is not intuitively obvious, however.

Table 2
Large Company Stock Returns Less Corporate Bonds Returns (%)

Years	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>
Average	6.2	5.3	4.8	4.5	4.3	5.1	5.4	5.7	5.9	5.9
Maximum	143.7	46.6	35.8	30.0	25.9	20.3	17.1	14.7	13.2	11.5
Minimum	-59.7	-55.1	-45.3	-31.9	-25.5	-11.6	-6.1	-3.1	-0.1	1.3
Percentage when LCS > CB	63.9	68.0	68.9	71.9	72.4	85.4	92.5	95.5	99.9	100.0

Table 3
Dollar Advantage to Investing in LCS over CB
(Per \$1.00 Invested)

Years	<u>10</u>	<u>15</u>	<u>20</u>	<u>25</u>	<u>30</u>
Maximum	\$5.82	\$12.16	\$21.74	\$43.34	\$58.60
Minimum	-\$1.32	-\$1.37	-\$1.19	-\$0.29	\$6.24
Average	\$1.25	\$3.12	\$6.53	\$12.02	\$20.05

**How Much Better?
How Much Worse?**

In addition to the likelihood of superior performance, investors should also be concerned about how much more or less might be earned in LCS or CB. Table 3 shows the difference in *dollar accumulations* per dollar invested for LCS and CB for the varying investment periods from 10 to 30 years.

As previously noted, investing in LCS results in greater accumulations on average. For example, consider the 10-year investment period. On average, investing \$1.00 in the LCS would have resulted in \$1.25 more in accumulated funds at the

end of 10 years than investing the \$1.00 in the CB; however, if the investment had been made at the beginning of June 1949, the investor would have accumulated \$5.82 more in LCS than in CB. For that period, the amount accumulated in LCS would have been \$6.93, while the amount accumulated in CB would have been only \$1.11. On the other hand, had the two investments been made in July 1929 and held until the end of June 1939, the investment in LCS would have shrunk to only \$.67 at the end of the 10 years, while the funds would have grown to \$1.99 in CB, a difference of \$1.32 less for LCS. For longer investment

periods longer than 15 years, the advantage to LCS increases significantly.

Conclusion

Over the past 82 years, investing in LCS has generated higher average returns than investing in CB; however, LCS has had higher returns only 64 percent of the 985 1-year investment periods of the study. For the other 36 percent of the periods, investing in CB was superior to LCS, sometimes much more so. As the length of the investment period increased, investing in LCS was both more likely to be better than investing in CB and not as bad when less desirable. For example,

when the investment period was lengthened to 25 years, LCS was superior 99.9 percent of the time and had a return only one-tenth of one percentage point less in the .1 percent of the periods in which CB was better than LCS, costing only \$.29 per dollar invested over the 25-year period.

While there is no guarantee that the future will be like the past,

it may be the best place to start in forming expectations of the future. Because investors make their decisions based on both return and the level of perceived risk, knowing the historical likelihood of achieving superior results and the cost of poor decisions should help investors to make better investment decisions.

References

- Ibbotson Associates. (2009) *Stocks, bonds, bills, and inflation: 2009 classic yearbook*, Ibbotson Associates.
- Siegel, J. (2008). *Stocks for the long run*, 4th Edition. McGraw-Hill.

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