The Magic of Compounding

The magic of compound interest is simply a combination of time and rate of return. Let us begin by taking a truly long-term look at the financial markets. Complete data tracing the returns of financial assets are available beginning in 1872. I use primarily the Standard & Poor's 500 Composite Stock Price Index (and a predecessor index prior to 1926) as the measure of common stock returns, the long-term (20-year) U.S. government bond as the measure of bond returns, and the 90-day U.S. Treasury bill as the measure of the returns on cash reserves.

During the 1872-1992 period, the annual return on U.S. common stocks averaged +8.8%, the annual return on long-term bonds averaged +4.6%, and the annual return on cash reserves averaged +4.2%. The differences in returns - which may appear small - result in a staggering dispersion in the final value of $1 invested in each asset class on December 31, 1871. The summary figures are in Table 1-1. A mere 0.4 percentage point increase in return, from +4.2% in bills to +4.6% in bonds, increases the final value of the $1 initial investment by more than 70%. A further 4.2 percentage point increase, to 8.8% in stocks, causes the final value increase an additional 115 times. This is the magic of compounding writ large. Figure 1-1 presents the cumulative returns since December 31, 1981, for each of the three basic asset classes.

TABLE 1-1
The Financial Markets (December 31, 1871, to December 31, 1992)

	Annual rate of return	Final value of $1 initial investment
Common stocks	+8.8%	$27,710
Long-term bonds	+4.6	240
Cash reserves	+4.2	140

FIGURE 1-1
Cumulative Returns on U.S. Financial Assets (December 31, 1871, to December 31, 1992)