



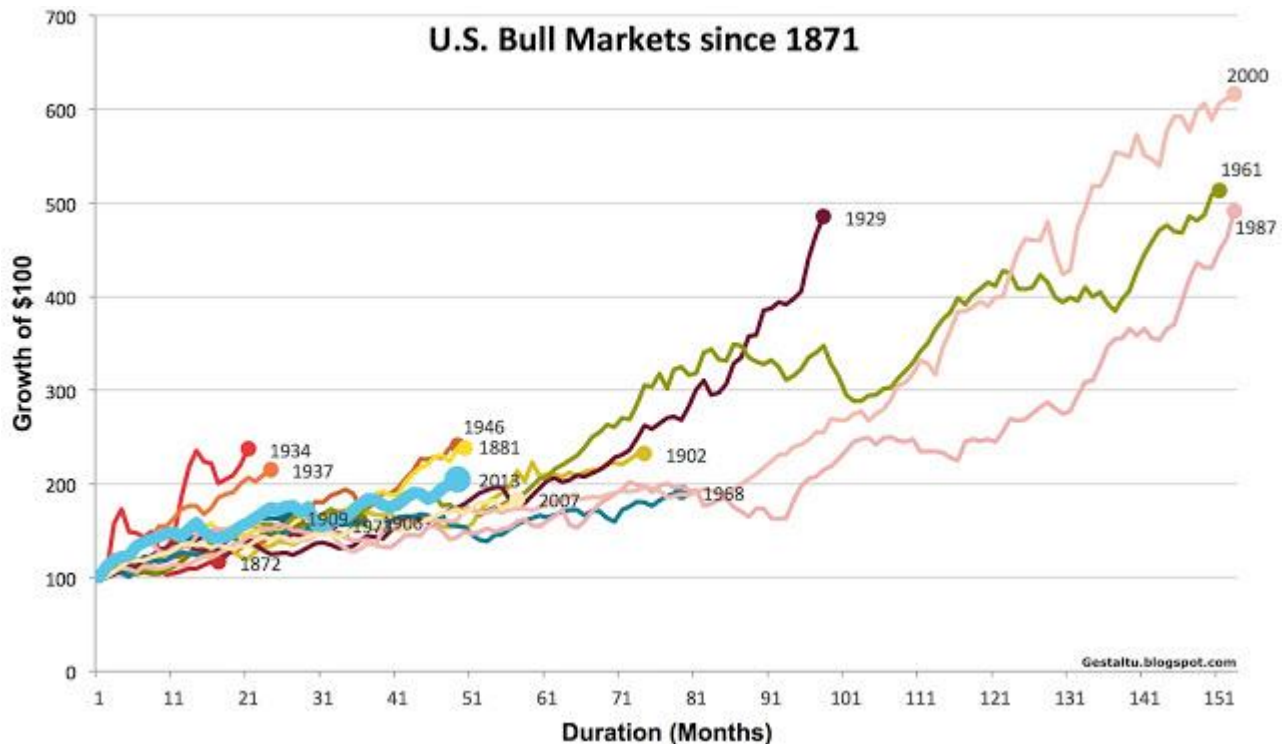
June 2013

Bull & Bear Markets Since 1871

For the purpose of the study below, we examined the S&P 500 price series from [Shiller's publicly available database](#) to understand the duration and magnitude of all bull and bear market periods in U.S. stocks since 1871. We defined a bear market as a drop in prices of at least 20% from any peak, and which lasted at least 3 months. Bull markets were then defined as a rise of at least 50% from the bottom of a bear market, over a period lasting at least 6 months.

Chart 1 and Table 1 describe every bull market since 1871 in the S&P, including duration and magnitude information. The lesson from this analysis is uninspiring for equity bulls, as we will see. The core hurdle is that the current bull market has (through end of February) already delivered 105% of gains, against the median 124% bull market run through history (using monthly data). Of course, this means that, should this bull market deliver an average surge, investors can hope for less than 20% more growth from this cycle. Further, given that the median bull market has historically lasted 50 months, and we are currently in our 49th bull month, we are about due for a wipeout.

Chart 1. Bull Markets since 1871



Source: Shiller (2013)



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Table 1. Bull Markets since 1871 - Statistics

| Start Date | End Date | Duration (Months) | Magnitude |
|-----------------|----------|-------------------|-----------|
| 1871.02 | 1872.05 | 17 | 16.67% |
| 1877.07 | 1881.06 | 49 | 141.03% |
| 1896.09 | 1902.09 | 74 | 132.28% |
| 1903.11 | 1906.09 | 36 | 60.22% |
| 1907.12 | 1909.12 | 26 | 64.8% |
| 1921.09 | 1929.09 | 98 | 385.27% |
| 1932.07 | 1934.02 | 21 | 137.32% |
| 1935.04 | 1937.02 | 24 | 115.34% |
| 1942.05 | 1946.05 | 50 | 138.52% |
| 1949.07 | 1961.12 | 151 | 413.53% |
| 1962.07 | 1968.12 | 79 | 91.44% |
| 1970.07 | 1973.01 | 32 | 56.63% |
| 1975.01 | 1987.08 | 153 | 391.13% |
| 1988.01 | 2000.08 | 153 | 516.37% |
| 2003.03 | 2007.10 | 57 | 83.94% |
| 2009.04 | ? | 49 | 104.94% |
| Average | | 67 | 178.09% |
| Median | | 50 | 123.81% |
| 5th Percentile | | 20 | 46.64% |
| 95th Percentile | | 153 | 439.24% |

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Source: Shiller (2013)

Chart 2. Bear Markets since 1871



Source: Shiller (2013)



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Table 2. Bear Markets since 1871 - Statistics

| Start Date | End Date | Duration (Months) | Magnitude |
|-----------------|----------|-------------------|-----------|
| 1872.06 | 1877.06 | 62 | -47.3% |
| 1881.07 | 1896.08 | 183 | -42.1% |
| 1902.10 | 1903.10 | 14 | -29.27% |
| 1906.10 | 1907.11 | 15 | -37.69% |
| 1910.01 | 1921.08 | 141 | -37.38% |
| 1929.10 | 1932.06 | 34 | -84.76% |
| 1934.03 | 1935.03 | 14 | -25.71% |
| 1937.03 | 1942.04 | 63 | -56.71% |
| 1946.06 | 1949.06 | 38 | -25.29% |
| 1962.01 | 1962.06 | 7 | -22.46% |
| 1969.01 | 1970.06 | 19 | -29.02% |
| 1973.02 | 1974.12 | 24 | -43.35% |
| 1987.09 | 1987.12 | 5 | -26.84% |
| 2000.09 | 2003.02 | 31 | -43.65% |
| 2007.11 | 2009.03 | 18 | -50.82% |
| Average | | 45 | -40.16% |
| Median | | 24 | -37.69% |
| 5th Percentile | | 6 | -24.44% |
| 95th Percentile | | 154 | -65.12% |

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Source: Shiller (2013)

Portfolio growth is governed by the mathematics of compounding, which means that, for example, a 100% gain is erased by a 50% loss, and a 50% loss requires a 100% gain to get back to even. Applying the same principles to where we are in the current bull/bear cycle is illuminating.