

HFG Trust White Paper Series

■ Avoiding the Next Super Bear Market by Learning from the Past

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“History doesn’t always repeat itself, but it does rhyme” - Mark Twain

As investors, we often hear the term Bull and Bear Markets, but what exactly constitutes a Bear Market? A Bear Market’s official definition is a price decline of 20% or more as measured by a broad market of multiple indexes (i.e. Dow Jones Industrial Average or Standards & Poor’s 500 Index.) Throughout this journey of understanding the history of Bear Markets, we have coined a new definition called “Super Bear Markets”. This is unofficially defined as market downturns of 40+%. We believe this is the threat that investors should be conscious of. Over the last 80 plus years there have been 16 official Bear Markets and of the 16, 10 are considered normal and 6 Super Bears. We believe that Normal Bear Markets are nothing to fear, however, Super Bears should be treated differently.

How often does a Bear come out of hibernation?

Table I - All Bear Markets

BEAR MARKET	TIME PERIOD	Time Between Bears
1	September 1929 - June 1932	N/A
2	July 1933 - March 1935	13 months
3	March 1937 - March 1938	24 months
4	November 1938 - April 1942	8 months
5	May 1946 - March 1948	49 months
6	August 1956 - October 1957	101 months
7	December 1961 - June 1962	50 months
8	February 1966 - October 1966	44 months
9	November 1968 - May 1970	23 months
10	January 1973 - October 1974	32 months
11	November 1980 - August 1982	73 months
12	August 1987 - December 1987	60 months
13	July 1990 - October 1990	31 months
14	July 1998 - October 1998	93 months
15	March 2000 - October 2002	18 months
16	October 2007 - March 2009	60 months
	Average	45 months

Since 1929 the average time period between Bear Markets is just under 4 years. If you look at each time period, you will notice that a “Bear Attack” occurred at least once every decade, with the majority experiencing 2 correction events. What this data tells us is that a Bear Market is not a once in a lifetime event, so it would be unrealistic for an investor to avoid every one of them. If an investor was to enter the workforce in 1929 and assuming a mortality age of 70, they could experience 6 to 8 of these events

during the accumulation phase of their lifetime. If they continued to be investors upon retirement, they could in fact experience up to 12 to 14 Bear Markets. In short, these events can happen routinely and history has shown that they do. It should be interesting to note that since the beginning of this decade (2010) the S&P 500 has increased by a dramatic 70%, and 180% since the last Bear Market (March 2009).

How far is down?

As an investor, it makes sense to examine how meek or fierce these events tend to be and if there is a trend between a Normal Bear and a Super Bear, after all, Super Bears tend to be the ones that leave scars. When it comes to the equity markets, we measure the level of catastrophe by price decline measured in percentages. How far does a bear Market typically fall? Please draw your attention to TABLE II.

Table II - Bear Market Decline

(1) BEAR MARKET	(2) TIME PERIOD	(3) % DECLINE
1	September 1929 - June 1932	87%
2	July 1933 - March 1935	34%
3	March 1937 - March 1938	55%
4	November 1938 - April 1942	46%
5	May 1946 - March 1948	28%
6	August 1956 - October 1957	21%
7	December 1961 - June 1962	28%
8	February 1966 - October 1966	22%
9	November 1968 - May 1970	36%
10	January 1973 - October 1974	48%
11	November 1980 - August 1982	27%
12	August 1987 - December 1987	33%
13	July 1990 - October 1990	20%
14	July 1998 - October 1998	21%
15	March 2000 - October 2002	49%
16	October 2007 - March 2009	57%
	Average	38%

Stock market decline is measured by the percentage change from the top of the market to the bottom as shown in column 3 (% Decline). For example, in October of 2007 the S&P Index priced at 1560 and by March of 2009 the index bottomed at 675, producing a loss of 57%. This is called the Index Price Change or (Decline).

Earlier, we touched on the difference between a Normal Bear and a Super Bear. If you examine TABLE III and IV (Column 4), you will notice that there is a significant disparity between the 6 Super Bears compared to the 10 Normal Bears. Here is a closer look at the numbers.

Table III - Normal Bear Market Decline

(1) BEAR MARKET	(2) TIME PERIOD	(3) DURATION	(4) % DECLINE
2	July 1933 - March 1935	20 months	33.90%
5	May 1946 - March 1948	22 months	28.10%
6	August 1956 - October 1957	14 months	21.60%
7	December 1961 - June 1962	6 months	28.00%
8	February 1966 - October 1966	8 months	22.20%
9	November 1968 - May 1970	18 months	36.10%
11	November 1980 - August 1982	21 months	27.10%
12	August 1987 - December 1987	3 months	33.50%
13	July 1990 - October 1990	3 months	19.90%
14	July 1998 - October 1998	3 months	21.20%
Average			27.16%

Table IV - Super Bear Market Decline

(1) BEAR MARKET	(2) TIME PERIOD	(3) DURATION	(4) % DECLINE
1	September 1929 - June 1932	33 months	86.70%
3	March 1937 - March 1938	12 months	54.50%
4	November 1938 - April 1942	41 months	45.80%
10	January 1973 - October 1974	21 months	48.20%
15	March 2000 - October 2002	31 months	49.10%
16	October 2007 - March 2009	17 months	56.80%
Average			56.85%

The average market decline of a Bear Market is 27%, while the average decline for a Super Bear Market is 56%. How does this relate to your portfolio? The answer is quite simple. If you were to experience a normal market decline of 27% it would take approximately 37% return to break even. This is a significant loss and return requirement, especially if you are nearing retirement. It is however, very plausible to recover from that level of loss over a period of time, as we have over the last 2 years. An investment loss of 56% would require 127% return to recover, which has prompted many to refer to as catastrophic loss. The reason this is considered catastrophic is because it is extremely difficult to recoup that level of loss, and for those nearing retirement the likelihood of never recovering is elevated. To provide context just how difficult it is to recover from a decline of this magnitude, we have seen multiple cyclical bull market cycles that do not produce that amount of return. So what does all this mean? We define risk as catastrophic loss that leads to impairment of capital. Requiring a 127% return to recuperate a position would fall in that category. In summary, we believe that investors should not fear Normal Bear Markets as they occur habitually, but it is critical to plan for Super Bears because of the substantial time period and return requirement to recover.

"Everybody has a plan 'till they get punched in the mouth." - Mike Tyson

How do you smell a Bear?

Now that we have established that there are two types of animals in the forest let's examine when each tends to present itself. TABLE V illustrates the beginning and ending Price to Earnings ratio of each of the 10 Normal Bears. A Price to Earnings ratio is a valuation metric of a company's current share price or stock index price compared to its per-share earnings. The P/E ratio is sometimes referred to as the "multiple", because it shows how much investors are willing to pay per dollar of earnings a company generates. For example, if McDonalds were currently trading at a market price of \$95 and the current earnings per share was \$5, the P/E multiple would be considered 19. Another way to look at it is that an investor is willing to pay \$19 for \$1 of current earnings. High P/E ratios can indicate over-priced or over-valued stocks and stock indices. So, the answer to the heading is that on average, Normal Bears appear when multiples reach P/E levels of 20 (Column 4) and have support at 15 (Column 5). (SEE TABLE V)

**The Price to Earnings ratio mentioned throughout this paper refers to the Shiller P/E. See disclosures for more information*

Table V - Normal Bear Market P/E Ratios

(1) BEAR MARKET	(2) TIME PERIOD	(3) % DECLINE	(4) Beg P/E Ratio	(5) Ending P/E Ratio***
13	July 1990 - October 1990	19.90%	17.75	14.82
14	July 1998 - October 1998	21.20%	38.26	33.77
6	August 1956 - October 1957	21.60%	18.67	14.15
8	February 1966 - October 1966	22.20%	23.70	18.83
11	November 1980 - August 1982	27.10%	9.65	6.64
7	December 1961 - June 1962	28.00%	22.04	16.83
5	May 1946 - March 1948	28.10%	16.01	10.19
12	August 1987 - December 1987	33.50%	18.33	13.39
2	July 1933 - March 1935	33.90%	13.75	10.40
9	November 1968 - May 1970	36.10%	22.20	13.98
		Average	20.04	15.30

From an investor stand point, a 20% market decline is not outrageous. In fact, most investors anticipate having some exposure to market volatility because that is the nature of the business. If you play football, you step on the field acknowledging that at some point you will get hit. If you are not willing to get hit then you should be advised to not play football. However, just because we expect to get hit does not mean we throw away our helmets and pads. There is still a purpose to protection and what we want to guard ourselves from and avoid is a concussion or serious injury ala... a Super Bear Market. So let's examine what P/E ratios tell us about the 6 Super Bear Markets.

Table VI - Super Bear Market P/E Ratio

(1) BEAR MARKET	(2) TIME PERIOD	(3) % DECLINE	(4) Beg P/E Ratio	(5) Ending P/E Ratio***
4	November 1938 - April 1942	45.80%	16.15	8.54
10	January 1973 - October 1974	48.20%	18.71	8.74
15	March 2000 - October 2002	49.10%	43.22	21.95
3	March 1937 - March 1938	54.50%	22.04	12.38
16	October 2007 - March 2009	56.80%	27.31	13.32
1	September 1929 - June 1932	86.70%	32.56	5.57
		Average	26.67	11.75

When we observe the 6 Super Bear Markets, the average beginning P/E was 26 with four attacks starting 22 or higher. The cause of these Super Bear Markets is HIGH PRICES as measured by P/E. Knowing this fact does not give us a precise time of when an event of this magnitude will occur. What this does tell us is that as we approach 25-26 P/E ratios the environment becomes threatening.

Table VII (Column 3) illustrates how a \$100,000 portfolio invested entirely in the US Stock Market would have performed during each of the 16 Bear Market samples with the 6 Super Bears. It does not take a financier or statistic guru to see that enduring just one of these events significantly impacts an investor's portfolio and financial security.

Table VII - Value of \$100,000 Post Bear Market

(1) BEAR MARKET	(2) TIME PERIOD	(3) Value of \$100,000
1	September 1929 - June 1932	13,300
2	July 1933 - March 1935	66,100
3	March 1937 - March 1938	45,500
4	November 1938 - April 1942	54,200
5	May 1946 - March 1948	71,900
6	August 1956 - October 1957	78,400
7	December 1961 - June 1962	72,000
8	February 1966 - October 1966	77,800
9	November 1968 - May 1970	63,900
10	January 1973 - October 1974	51,800
11	November 1980 - August 1982	72,900
12	August 1987 - December 1987	66,500
13	July 1990 - October 1990	80,100
14	July 1998 - October 1998	78,800
15	March 2000 - October 2002	50,900
16	October 2007 - March 2009	43,200

How long does it take to recover from a Bear Attack?

The historical recovery time for Bear Markets is shown in Table VIII and TABLE IX under the column "Time Break Even". You can see that the 1929 Bear Market took 302 months or over 25 years to break even. (Note: This excludes the receipt of dividends which would have reduced the break even time period)

By separating the two samples, we were able to examine just how different the two events were and how much more vicious a Super Bear was in comparison to a normal. The 10 Normal Bear Markets took an average of 24 months or 2 years to break even. A Super Bear on average took 122 months or 10 years to recover. One could point out that the results are skewed heavily by The Great Depression of 1929 and that singular event (outlier) should not determine how we invest. When we exclude the 1929 crash, the average time to break-even for Super Bears was 86 months or 7 years, still a significant time period. We believe the avoidance of Super Bears can have significant impact for those in retirement or nearing retirement.

Table VIII - Normal Bear Market Recovery

(1) BEAR MARKET	(2) TIME PERIOD	(3) TIME BREAK EVEN*
14	July 1998 - October 1998	3 months
13	July 1990 - October 1990	7 months
8	February 1966 - October 1966	16 months
7	December 1961 - June 1962	22 months
12	August 1987 - December 1987	23 months
6	August 1956 - October 1957	25 months
11	November 1980 - August 1982	25 months
2	July 1933 - March 1935	28 months
9	November 1968 - May 1970	39 months
5	May 1946 - March 1948	49 months
	Average	24 months

TABLE IX – Super Bear Market Recovery

(1) BEAR MARKET	(2) TIME PERIOD	(3) TIME BREAK EVEN*
16	October 2007 - March 2009	65 months
4	November 1938 - April 1942	77 months
15	March 2000 - October 2002	87 months
10	January 1973 - October 1974	91 months
3	March 1937 - March 1938	107 months
1	September 1929 - June 1932	302 months
	Average	122 months
	Average excluding 1929	86 months

Where are we today?

"If you are not confused, you don't understand things very well." - Charlie Munger

We are sensitive to the amount of data and information presented in this piece. For those who are not regular readers of our work, time might be necessary to familiarize yourself with our method of madness. Simply put, it is our opinion that high P/E ratios are an indicator of an overvalued market. Historically, the Shiller P/E ratio for the Market (S&P 500) has averaged 16-17 and at 20 gets closer to a Bear Market and at 26 welcomes a visit from a Super Bear. Today, the Shiller P/E stands at or near 26. To give investors a reference point, the peak P/E ratio in 1929 was 32. In 2000, it peaked over 40 and in 2007 it hit 27. Each of the peaks was the start of a Super Bear Market. At a Shiller P/E of 26 today, we believe we are in fact in the midst of an overvalued market with considerable downside risk and minimal upside potential. It is important to understand that high P/E ratios don't tell us when the next Super Bear will wake up from hibernation. From 1997-1999 the market P/E was over 30 for about 3 years before the 50% decline in 2000-02. The "when" is unknown. The more relevant question is "How much decline am I likely to feel?" And, "Are we in a climate that fosters Super Bear Markets?" We believe the answer to both of these questions is reasonably quantifiable if history is our guide. The "how much" is in the 50% decline range. As to are we in a climate that fosters Super Bear Markets, again, if history is our guide and if P/E ratios are our valuation indicator, we are in a concerning climate today. At HFG we believe that investors should be aware of the investment climate as it relates to P/E ratios. When P/E ratios are above 20-25, investors should reduce stock market exposure. Likewise, when P/E ratios fall below 15 we believe that investors should be willing to add to their exposure. To illustrate the validity of this approach we direct you to Table X.

Table X - P/E Ratios and Decade Returns

Investment Climate (1950 - 2014)						
Investment Climate P/E Ratios	P/E Category	Avg 10 yr Return	# of 10 yr periods	% of time in specific climate	# of periods with returns higher than 10%	% of periods at 10% returns or greater
Low P/E	(Under 10)	15.96%	91	14%	91 out of 91	100%
Moderately Low P/E	(10-15)	14.78%	157	24%	151 out of 157	96%
Average P/E	(15-20)	10.58%	188	29%	88 out of 188	47%
High P/E	(20-25)	6.55%	131	20%	23 out of 131	18%
Extreme P/E	(Over 25)	3.69%	87	13%	0 of 87	0%
AVERAGES/TOTALS		10.31%	654			

Table X is a summary of every decade holding period for stocks from 1950 to June of 2014. The first decade is January of 1950 to January of 1960, the next decade is February 1950 to February of 1960, we keep moving it forward every 30 days. By doing this we have a total of 654 10-year samples from 1950 to 2014. The 654 time periods are then categorized or separated by the P/E ratio at the beginning of each decade. We arbitrarily selected 5 different P/E ratio categories. The first category is called Low P/E and this is when the P/E ratio is under 10. At the other end is the Extreme P/E category and this is when P/E ratios are over 25. You can probably detect a trend. While the Low P/E had 15.96% average decade return the Extreme P/E climate averaged only 3.69% decade returns.

Most advisors today do not recommend a change in your allocation regardless of the P/E ratio. As stated earlier, at HFG we view Table X as strong evidence that we should change our allocation to stocks based upon the investment climate as defined by P/E ratios. (Note: The Shiller P/E ratio isn't the only valid valuation metric. We also use the Price to Sales ratio and the Market Capitalization of the Stock Market to GDP as well. The results are the same. We are in an overvalued market as of October 2014 for all of these metrics.)

Where do we go from here?

Our message is not meant to be a scare tactic. We are believers of owning a piece of the Great American Enterprise. However, one needs to be informed in regards to valuations and the difference between a Normal Bear and a Super Bear. It is safe to say almost all investors will experience a Bear Market; some however, are still recovering from the last Super Bear. In the end, the price you pay for an investment is the primary determinant of your future return. At today's prices and valuations, we believe there is historical evidence that returns from this point out 7-10 years will be disappointing for the stock market in general. We also believe that there is significant risk that we will face another major decline like we did in the 2000 and 2008. We are not suggesting that investors liquidate their entire stock portfolio and run for the hills. What we are recommending is that taking some gains and reducing your exposure is likely to be a prudent asset allocation plan considering the climate we are in. Preparation is the aim of the game.

In closing, we have developed a "Stress Test" program that is very informative. I encourage you to visit our website to see how your portfolio would have held up during the four worst Super Bear Markets. Our website is www.hfginvest.com. Look for the icon "Stress Test" under "Learning Center" and follow the directions. Hopefully this White Paper provides you insight into the current investment climate and the history of Bear Markets. Feel free to contact our office (509-735-7507) if you would like a personal appointment.

Disclosure:

* Shiller P/E ratio: Yale professor Robert Shiller, the author of Irrational Exuberance, averages the last 10 years of earnings and then adjusts them for inflation to get the Shiller P/E. Shiller refers to this ratio as the Cyclically Adjusted Price Earnings Ratio, abbreviated as CAPE. Source Dr. Shiller's website 06/30/2014

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