January 26, 2016

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S&P Across the Void

The recent stock market volatilities give us pause to consider whether we are about to enter into another recession. It has been a long time since the last major market correction and historically the stock market has a correction every 7 years, well 6 to 9 years or so, and it has been almost 9 years since the last one, so we are due. I'm not saying this is it, but just that we are due. The current low and declining US unemployment rates suggest the recession is still many months away. However we should go into this recession eyes wide open. When the crash come it's best to be invested in lower risk areas, cash, or …. …

An interesting question comes to mind – **what portfolio of stocks was optimal during the last market crash?** To be reasonable and somewhat standard it would be interesting to see what components of the S&P 500 faired the best.

For the purposes of this analysis I chose a time frame from before the crash to the market bottom – this perhaps mimics where we are today. The time frame chosen is May 1, 2007 thru June 1, 2009. Over this 2 year period the S&P 500 index dropped 37% overall.

Also for the analysis I wanted components of the S&P that were around then as well as around today. Since 2007 there have been 637 stocks (individual companies) that have been part of the S&P 500 and for this analysis all 637 were considered.

The criteria used for the selection is a chosen portfolio that falls on or near the Markowitz Efficient Frontier – something close to the optimum Sharpe ratio. Monthly return data selected from Yahoo Finance was used. For the processing I used custom analytical routines in "R" and MS Excel. MS Word and Notepad are also used to edit the "R" code.

The 25 months of 637 stocks were initially whittled down into just 92 stocks that had a positive return over the period. This is our first interesting observation – almost 20% of the S&P was actually positive across the recession. And if 20% were positive and the average was a negative 37%, some fell far more in order to achieve this average.

The 92 positive returning stocks were then whittled down into the 23 stocks that contribute to a portfolio that falls near the efficient frontier. The 23 are listed below. At this point a percent of portfolio allocation description is irrele-

Investments

vant, based on current information about today's economy as compared to the economy of 9 years ago. However the list and the highlighted industries are extremely educational. Also note, while the S&P in its whole dropped 37%, a reasonable portfolio of the stocks below returned between 11% and 40% per year during the recession.

First, we know oil prices are challenged, so a future investment in risky oil producers seems unwise. This removes four members of the list.

1. **EOG Resources, Inc. (EOG) (independent oil and gas)**
2. **Diamond Offshore Drilling, Inc. (DO)**
3. **Southwestern Energy Company (SWN) (independent oil and gas)**
4. **Range Resources Corporation (RRC) (independent oil and gas)**

The remaining can be categorized roughly as follows.

Fast food, comfort foods:

5. **McDonald's Corp. (MCD)**
6. **The Coca-Cola Company (KO)**

Cheap stuff and necessities:

7. **Dollar Tree, Inc. (DLTR)**
8. **The TJX Companies, Inc. (TJX) (department store)**
9. **Colgate-Palmolive Co. (CL)**
10. **Stericycle, Inc. (SRCL) (waste management)**

In support of repairing Automobiles:

11. **AutoZone, Inc. (AZO)**
12. **O'Reilly Automotive Inc. (ORLY)**

Education:

13. **DeVry Education Group Inc. (DV)**
14. **Apollo Education Group, Inc. (APOL)**

Pharma and medical:

15. **Vertex Pharmaceuticals Incorporated (VRTX)**
16. **Quest Diagnostics Inc. (DGX) (medical labs)**
17. **Allergan plc (AGN) (drugs)**
18. **Alexion Pharmaceuticals, Inc. (ALXN)**

Efficiency:

19. **CF Industries Holdings, Inc. (CF) (ag chemicals)**
20. **The Priceline Group Inc. (PCLN)**
21. **First Solar, Inc. (FSLR)**

Coffee:

22. **Keurig Green Mountain, Inc. (GMCR)**

Cheap entertainment:

23. **Netflix (NFLX)**

A couple of conclusions or observations come to mind. Limited market segments are profitable in a recession, while broader market investments much less so. For monies that can be segregated concentrating on areas of necessities, efficiencies and inexpensive required services seems the best choice. When people are unemployed education is always in demand and basic efficient medical services carries on as usual. Also oil exploration was part of the 2007 list and financials were absent. This will probably be reversed in the next recession, given the current state of oil prices and a reconstructed financial industry. In hindsight this is just logical, but it's nice to reach this result through analysis of historical data.

(As an investor the only one of the above I own outright today is O'Reilly Automotive. However I do own several S&P funds so I indirectly own a little of everything too.)

As always investing carries risk. Monies at risk can be lost in a descending market. The risks should be understood and balanced with timelines in order to make reasonable decisions on investing.

John Kuest is an independent financial analyst who periodically produces articles / discussions on investing, modern portfolio theory and the efficient frontier.

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better **Decisions**

Post Article Notes:

A couple of you asked – "What was a reasonable portfolio using these equities and how did it do during the last recession ?"

Company	% of Portfolio
McDonald's Corp. (MCD)	7.0%
The Coca-Cola Company (KO)	2.0%
Dollar Tree, Inc. (DLTR)	7.0%
The TJX Companies, Inc. (TJX) (department store)	7.0%
Colgate-Palmolive Co. (CL)	1.0%
Stericycle, Inc. (SRCL) (waste management)	2.0%
AutoZone, Inc. (AZO)	2.0%
O'Reilly Automotive Inc. (ORLY)	1.0%
DeVry Education Group Inc. (DV)	8.0%
Apollo Education Group, Inc. (APOL)	9.0%
Vertex Pharmaceuticals Incorporated (VRTX)	7.0%
Quest Diagnostics Inc. (DGX) (medical labs)	1.0%
Allergan plc (AGN) (drugs)	5.0%
Alexion Pharmaceuticals, Inc. (ALXN)	7.0%
CF Industries Holdings, Inc. (CF) (ag chemicals)	7.0%
The Priceline Group Inc. (PCLN)	7.0%
First Solar, Inc. (FSLR)	7.0%
Keurig Green Mountain, Inc. (GMCR)	8.0%
Netflix (NFLX)	5.0%

Again ignoring the oil stocks, this portfolio returned in excess of 20% during the last recession.