Computerized Stock Trading System

An Interactive Qualifying Project Report

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by

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1. Abstract

The purpose of this IQP is to suggest improvements to Limited Investors' investing strategies by analyzing their past trading records and methods. From storage and analysis of its historical data as well as from conversations with the Club members, we identified that Limited Investors' main problem is that they do not have a formal, scientifically based trading system. Their choices are based on Porter Stansberry Newsletter, value investing strategy, or Club members' suggestions on stocks that are growing vigorously. We utilize SPSS statistical software to evaluate the portfolio correlations; correlations of stocks from different strategies, such as Porter Stansberry and Breakfast Club Meeting; and correlations of stocks in a bull and a bear market. Through utilizing the Tradestation trading platform we evaluate the stock performance by using four indicators through the project: Channel Length, Volume, Average True Range, and Simply Moving Average on our selected stocks in Limited Investors' Portfolio. By back-testing selected stocks that the fund has traded, we apply optimized parameters within two strategies on each of the selected stocks to compare and contrast each stock's performance relative to a simple "Buy and Hold" strategy. We also compare how our system could do with a sample of trades Limited Investors has done from 2001 to 2011. In the end, after all these analysis and testing, we come up with a list of suggestions that could be employed by Limited Investors Investment Club to improve their trading performance.

2. Introduction and Statement of the Problem

The Limited Investors Investment Club was started in the late 1950's in Worcester, MA. The original Club was a group of young professionals interested in saving/investing and preparing for their retirement. According to Frederick Hutson, a longtime member of Limited Investors who is a Lab Manager at the Physics Department in WPI, the purpose of the Club is to provide a forum where individuals can learn about investing and teach others about investing. Members of Limited Investors meet regularly on the Worcester Club for breakfast, where investing ideas is the main topic of conversation.

Historically, the Club has followed three investing strategies. For a short time they used Red Line, a Legg Mason product. Also, occasionally, the Club has used Dogs of the Dow. This is a classic investment strategy which proposes that an investor annually select for investment the ten Dow Jones Industrial Average stocks whose dividend is the highest fraction of their price**.** Five years ago, the Club started a subscription with Porter Stansberry's newsletter, Porter Stansberry's Investment Advisory, which deals with "safe value investment poised to give subscribers years of exceptional returns." Porter Stansberry is a well-known value investor who founded Stansberry & Associates Investment Research in 1999. Besides these three strategies, the club runs a monthly breakfast meeting. The breakfasts serve as a forum in which Club members discuss about investing opportunities. If a Club member has an idea for buying a specific stock, the breakfast is the place to bring his opinion to the table and communicate to the other members about his desire to invest in it. If the other members think it is indeed a good idea, then the Club does the trade.

According to Mr. Hutson, there is a one thousand dollar entrance fee followed by twice yearly contributions of three hundred dollars. Members also contribute some money each half-year to cover the cost of breakfast meetings. Even though it is a casual fund, most members of Limited Investors trade with some of their savings, hoping to get a good return that will allow them to have an amount of capital for retirement. Thus, trading is taken very seriously. To do this project, we have met every week with two members of the Club: Fred Hutson and Chris Shustak, along with our advisor, Professor Michael Radzicki. Fred and Chris provided us with ten years worth of brokerage data from Fidelity, each monthly statement containing their trades, deposits, withdrawals, and other details. Our data analysis shows that, even though the Club has not been doing badly at all, there are many opportunities for improvement. For example, a significant issue is that Limited Investors does not have an actual investing system with rules that they can follow in order to have a predictable, proven to work strategy that will bring constant profits. Each decision to invest in a stock is subjective and emotional.

The purpose of this project is to suggest improvements to Limited Investors' investing strategies. We will analyze past trading records and methods, and we will provide real

suggestions to improve their performance. We collected the Club's historical trading records in the past ten years and inputted them into Microsoft Excel to do extensive data analysis. First, we will use statistical tools to calculate the correlation coefficients between each stock of the Club's portfolio in various points in time. For instance, we will be able to determine how correlated the stocks were during the bear market in 2008, or how correlated the foreign holdings of the Club are relative to the domestic ones. This will give us an illustration of how well diversified the portfolio is. Additionally, we have constructed an Equity Curve of the total value of the Club from the year 2001 to 2011 which will allow us to see the growth of Limited Investors against, say, the S&P 500 index. After doing extensive analysis of past performance we will use Tradestation, a powerful trading platform, to create a computerized trading system customized for Limited Investors. This system will consist of using technical indicators, such as Average True Range or Simple Moving Average, to create rules for entering or exiting trade in a profitable way, as opposed to basing this decision on emotions. The new trading system will be back tested against previous trades made by the fund to make sure that its implementation will bring significant profits to the Club. Our objective is to show that the use of the new trading system will substantially make more money for the Club than the use of the present strategies.

3. Background Research & Literature Review

3.1 Fundamental Analysis, Value Investing and Growth Investing

Fundamental analysis is the examination of the underlying forces that affect the well being of the economy, industry groups, and companies. Fundamental analysis can be divided into two categories: value investing and growth investing. Value investing is an investment methodology which attempts to buy stocks whose share price appear underestimated. The value investing ideas first derives from Benjamin Graham, the "father of fundamental investing," who showed the way from speculation to investing as a disciplined, quantitative analysis of a company's fundamentals (such as earnings, dividends, assets, debt, financial structure, and the history of these items over time). According to him, the essence of value investing is buying stocks at less than their intrinsic or real value, which is calculated as discounted value of all future distributions. The difference between the market price and the intrinsic value of a stock is called the margin of safety. Therefore, the bigger the margin of safety is, the more possible investors can make profit out of their stocks. Therefore, in a bear market, when every stock price is low, investors should start investing by buying underestimated stocks. Conversely, in a bull market, since most of the stocks are overvalued, investors should hold their stocks or sell them.

Growth investing emphasizes on investing in companies that exhibit signs of above-average growth. Although these companies may have high share price or high P/E ratio, their potentials to grow in the future make them worth to buy. This strategy is in favor when there is a bull market. Overall, value investing has proven to be a successful investment strategy. Studies have consistently found that value stocks outperform growth stocks and the market as a whole. By evaluating the performance of value investors and growth investors, we can also find that value investing is, on average, successful in the long run.

Value investing and growth investing are two different fundamental analyses and are adopted in different market. However, Limited Investors tend to follow the value investing strategies, such as Porter Stansberry Newsletters, but think like growth investors. Moreover they do not have formal, scientifically based strategies no matter which strategy they are following. This is one of their problems and in this project we will offer them scientifically based strategies.

3.2 Technical Analysis

Technical analysis is a method of evaluating securities by analyzing statistics generated by market activity, such as past prices and volume. Technical analysts do not attempt to measure a security's intrinsic value, but instead use charts and other tools to identify patterns that can suggest future activity. Technical analyst believes that the

fundamental elements of a stock value are already accounted for in a stock's price. That prices move in trend and that historical pattern in the market and in stock prices tend to repeat.

Despite all the fancy and exotic tools it employs, technical analysis really just studies supply and demand in a market in an attempt to determine what direction, or trend, will continue in the future. In other words, technical analysis attempts to understand the emotions in the market by studying the market itself, as opposed to its components. If you understand the benefits and limitations of technical analysis, it can give you a new set of tools or skills that will enable you to be a better trader or investor. Below are the technical indicators that are pertinent to our technical analysis:

3.2.1 Indicator

Indicators are statistics used to measure current conditions as well as to forecast financial or economic trends. An indicator is a mathematical calculation based on a securities price and/or volume. The result is used to predict future prices. For all the code development in this project, we will be using four main indicators: Channel length, Volume, Average True Range, and Simple Moving Average.

3.2.2 Channel Length

We will use Channel length as one of our indicators for our trading system. Channel is the technical range between support and resistance levels that a stock price has traded in for a specific period of time.

3.2.3 Volume

Volume is another indicator we will use in our technical analysis. It is the number of shares or contracts traded in a security or an entire market during a given period of time. If a buyer of a stock purchases 100 shares from a seller, then the volume for that period increases by 100 shares based on that transaction. Volume is an important indicator in our technical analysis as it is used to measure the worth of a market move. If the markets have made strong price move either up or down the perceived strength of that move depends on the volume for that period. The higher the volume during that price move the more significant the move.

3.2.4 Simple Moving Average

We also use the Simple Moving Average (SMA) indicator for our trading system. SMA is the most common method used to calculate the moving average of prices. It simply takes the sum of all of the past closing prices over the time period and divides the result by the number of prices used in the calculation. For example, in a 10-day moving average, the last 10 closing prices are added together and then divided by 10. A trader is able to make the average less responsive to changing prices by increasing the number of periods used in

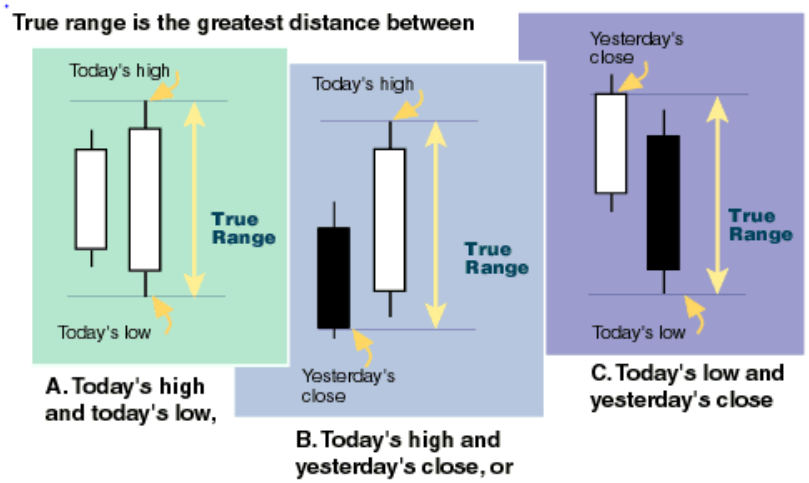
the calculation. Increasing the number of time periods in the calculation is one of the best ways to gauge the strength of the long-term trend and the likelihood that it will reverse. Below is a chart of Dow Jones showing 9-day (turquoise) and 18-day (purple) SMA generated by Tradestation:

Figure 1: Dow Jones Simple Moving Average

3.2.5 Average True Range (ATR)

Another indicator we use in this project is Average True Range. Very simply, the average true range determines a security's volatility over a given period. That is, the tendency of a security to move, in either direction. More specifically, the average true range is the moving average of the true range for a given period. The true range is the greatest of the following: the difference between the current high and the current low, the difference between the current high and the previous close, and the difference between the current low and the previous close. There are three different scenarios you could encounter when calculating true range as it is shown below:

Figure 2: Average True Range chart (Wilder, 1978)



The average true range is then calculated by taking an average of the true ranges over a set number of previous trades. We will be using ATR extensively during our development of our trading system and we will show how it can be used to cut losses and extend profits.

3.3 Charlie Wright

Charlie Wright is an experienced trader and author of "Trading as a Business." His involvement in the field of financial services has allowed him to gain a great deal of practical experience in observing how markets move and the potential benefits of using a systematic approach. "Trading as a Business" captures the essence of strategic trading with the use of Tradestation. He shows in the book how objective trading (i.e, strategy trading) produces far superior results than non-objective forms of trading (i.e., discretionary trading). Automated trading will prevent or decrease the possibility of uncertainties of traders arises from emotions or anxiety. Therefore a trader should be able to develop a complete trading system, automate his or her trading rules, and execute trades without uncertainty. The system should always be tailored to its individuals' needs and personalities. (Wright)

Strategy traders use objective entry and exit criteria that have been validated by historical testing on quantifiable data. Wright believes that analysis and test of historical data along with right trading strategies and business concept enables him to become a successful trader and be able to manage his financial future very well. (Trading as a Business)

One of Limited Investors Investment Club's main problems is that they don't have a scientifically based strategy. One of their "trading systems" is "Receive Porter Stansberry Newsletter, discuss it with group and buy", the other one is "Breakfast club meeting, someone comes out with suggestions, vote, to buy or not to buy". Their decisions to buy could potentially come from emotions. Automated trading will prevent this. Therefore a trader should develop a complete a trading system, automate his or her trading strategies and execute trades without uncertainty. This is one thing we are trying to do in this project, to offer Limited Investors a trading system that could potentially help improve their trading performance.

3.4 Karl Pearson and Pearson Correlation Coefficient

Karl Pearson was an influential English mathematician who has been credited for establishing the discipline of mathematical statistics. He developed the Pearson product-moment correlation coefficient from a similar but slightly different idea introduced by Francis Galton in the 1880s**.** The Pearson Correlation Coefficient is a measure of the correlation between two variables, giving a value between +1 and -1. It measures the strength of linear dependence between two variables.

3.4.1 Test of Significance

In statistics, a result is called statistically significant if it is unlikely to have occurred by chance alone, according to a predetermined threshold probability, the significance level. The phrase “test of significance” was first written by Ronald Fisher: "Critical tests of this kind may be called tests of significance, and when such tests are available we may discover whether a second sample is or is not significantly different from the first."

The significance level or critical p-value is the probability of obtaining a test statistics at least as extreme as the one that was actually observed, assuming that the null hypothesis is true. One often rejects the null hypothesis when the p-value is less than 0.05 or 0.01. When the null hypothesis is rejected, the result is said to be statistically significant.

3.4.2 SPSS

SPSS is a computer program that is widely used for statistical analysis especially in social science. It has functions such as means, t-test, correlation (bivariate, partial, distance), linear regression, and so on. The correlation function in SPSS is used very often throughout this project.

3.5 Van K. Tharp, Expectancy and Expectunity

Van K. Tharp is an American trader coach and bestselling author. In his book, “Trade Your Way to Financial Freedom”, he invented the notions of expectancy and expectunity.

3.5.1 Expectancy

Expectancy is the average profit that you expect to make from a trading. Therefore, expectation is the essence of successful trading (Tharp, 2006). In mathematical terms, it refers to probability of winning and losing. Consequently, expectancy can be expressed mathematically as:

Expectancy = [% of wins * average winning payoff] – [% losses * average losing payoff] (Tharp, 2006)

3.6.1 Strategy (Rule Based) Trading

Any trading system, whether based on fundamental or technical analysis, or manually or automatically must possess the following components: an objective, a particular financial instrument to trade, a particular time frame over which trades will be made, entry rules, exit rules, position sizing/risk management rules, monitoring techniques, and asset allocation rules. The components must be thoroughly tested so that the system has a positive expectancy, which as explained before, means that over many trades, on net, the system will make money.

3.6.2 Entry Strategies

Entry rules essentially determine the frequency of trading (thus they strongly influence the commission costs of a trading system). Entry rules are considered to be the least important component of a trading system, yet they are the thing to which the average trader devotes the most time and energy. In fact, several studies have shown how a trading system can be profitable with random entries, if the other system components had been correctly implemented. Nonetheless, entry rules should be developed and be better than random entries. There are two types of entry rules: set up rules, which identify conditions that signal the time is generally favorable for initiating a position, and trigger rules, which identify conditions that indicate the time is right to initiate a position in the market now.

3.6.3 Exit Strategies

Exit rules significantly influence the expectancy of a system. Psychologically, humans have a tendency to let losses run –hoping that there will be a reversal soon- and cut profits prematurely. Exit rules aim to reverse this phenomenon by designing a system that cuts losses early and let profits run. Essentially, there are two ways one can get out of a trade: by taking a loss or by making a profit. For the former, we can use stop loss rules and for the latter there are many ways to exit while securing and maximizing a profit.

3.7 Tradestation

Tradestation is the premier brokerage trading platform for rule-based trading where you can create trading strategies, test and optimize on historical data and automate your execution of trading strategies. It also provides brokerage services to investors.

3.8 EasyLanguage

EasyLanguage is a proprietary programming language developed by Tradestation Securities, Inc. built into its trading platform. It is used to create custom indicators for financial charts and also to create algorithmic trading strategies for the market.

4 Trading Strategy Analysis for Limited Investors

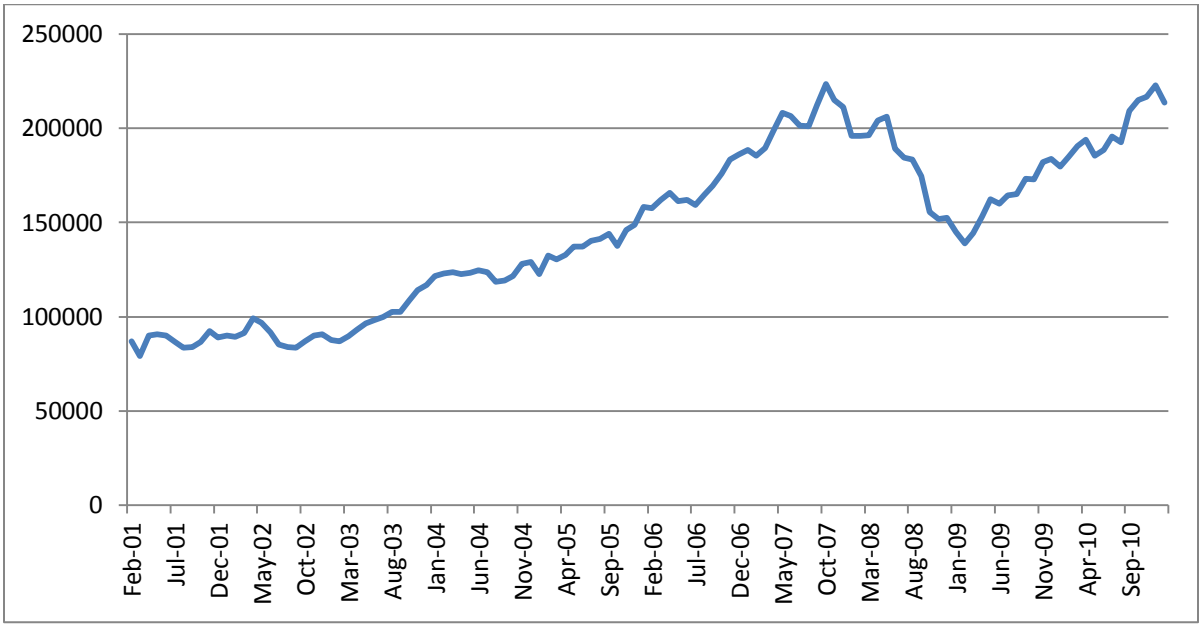
4.1 An overview

With 10 years' worth of brokerage data of every trade Limited Investors has made, we analyzed various aspects of the fund. First, we did correlation analysis, which showed us how the stocks of their current and past portfolios correlate with each other. Additionally, an equity curve provided us with an illustration of how the fund has performed against the S&P 500 index. Finally, we will introduce a trading system tailored for Limited Investors that will increase their expectancy. We will back test our strategy to compare it with previous trades made by the fund.

4.2 Equity Curve

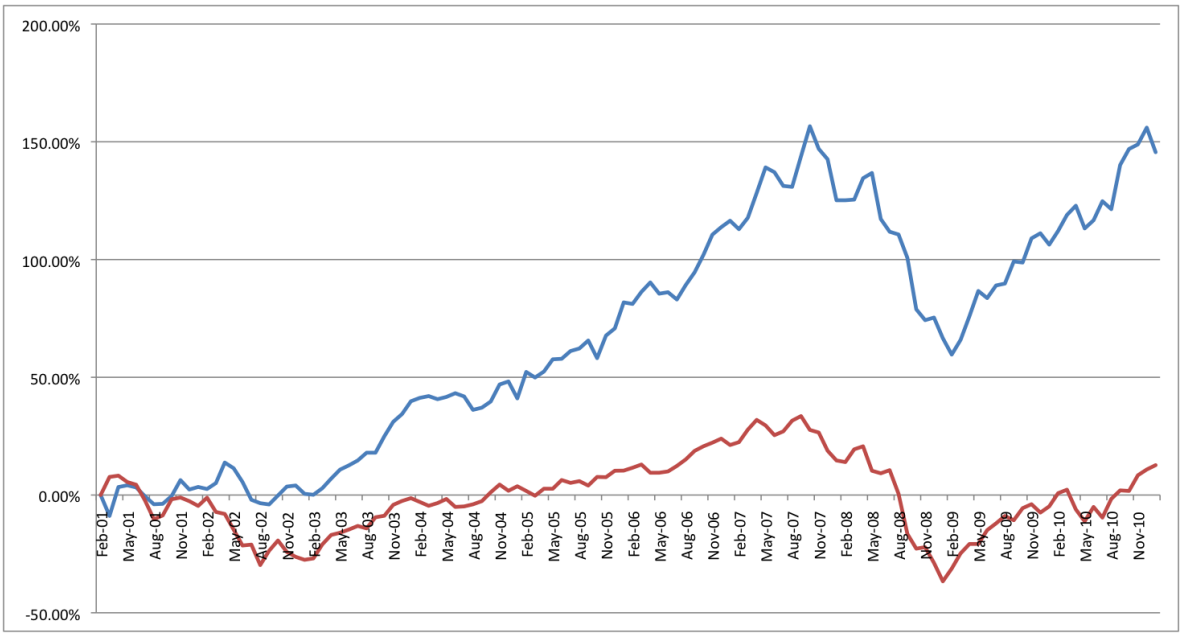
The following is the equity curve for Limited Investors from February 2001 to January 2011. The left axis represents the total value of the fund in US dollars.

Figure 3: Limited Investors' Equity Curve



The following graph compares the Limited Investors fund against the S&P 500 index, also from 2001 to 2011:

Figure 4 : Limited Investors (blue) vs S&P 500 (red)



The left axis represents the value of the S&P 500 while the right that of Limited Investors. From a starting value of $87,031 in February 2001 to $213,733 in January 2011, Limited Investors grew 145.58%, while the S&P 500 only increased 12.67%.

However, it is important to note that a large part of the growth in the Club fund is due to deposits. From the period January 2001 to January 2011, total deposits added to $129,246, while withdrawals amounted to $58,880. Therefore, total net deposits are $70,366. Total commissions during the 10 years accounted for $17,273. Therefore, out of that net increase in value of $126,072, actual capital appreciation is $73,609. This means that during the last 10 years, the Club has made $73,609 worth of profits, or $7,361 per year. If we take the above factors into consideration (which we should) the real growth is 84.5%, still a great result, outperforming the S&P by more than 70%.

4.3 Correlation Analysis

Correlation Analysis is a useful tool to determine if a linear relationship exists between security prices. The correlation coefficient, a number from -1 to 1, is the result of a mathematical comparison of how closely related two variables are. A coefficient of 1 means that variable X and variable Y are exactly correlated with each other, meaning they both have exactly the same behavior. A coefficient of -1 means they are exactly inversely correlated, meaning that they have a flawless opposite behavior. A coefficient of zero means that there is no linear relationship between the two variables. The variables in stock correlation analysis are the securities the specific portfolio contains. For example, variable X could be MCD (McDonalds) stock and variable Y JNJ (Johnson and Johnson).

Through our project we've been utilizing MS Spreadsheet, Macroaxis, and SPSS to get correlation coefficients. The advantage of Macroaxis as a tool to calculate stock price correlation coefficients is that it looks nice and clear and easy to be done. However, it has some obvious disadvantages such like it can only give us a time period from present to the past three years, which is not quite enough for our analysis, and it cannot test if the sample correlation coefficients are statistically different from zero. In this section we decided to use statistics software SPSS to do correlation analysis, which not only tells us the correlation coefficients between stock prices, but also shows if the correlation coefficients are statistically different from zero.

4.3.1 Correlation Coefficients for Current Portfolio

First, we will analyze the correlation coefficient of the holdings of Limited Investors on February 2011. There are a total of forty-four stocks in the current portfolio. To calculate the coefficients, we downloaded monthly historical prices for the past six years (2005-2011) from the Yahoo Finance portal for each of the stock. For each month, we calculated the average of the opening price, high price, low price, and closing price as the price to represent the whole month. Using this average as monthly price, we then used the Microsoft Excel command CORREL to calculate the correlation coefficient between each stock against each other for the past 6 years. The chart below illustrates the coefficients:

Table 1: Limited Investors' Current Portfolio Correlation Coefficients

Correlatio	TBF	ANSS	CCF	DYSL	INTC	MSFT	EWZ	MCHFX	EWY	THD	TUR	CAG	KFT	MCD	MO	NLY	CPNO	HGT	CVX	TOT	XOM	WMB	T
TBF	1.000	-0.347	-0.584	-0.635	0.114	0.588	-0.260	-0.640	-0.458	-0.726	-0.721	0.033	-0.648	-0.760	-0.703	0.071	-0.586	-0.735	-0.315	0.730	0.251	-0.107	-0.354
ANSS		1.000	0.452	0.360	0.239	0.446	0.245	0.199	0.500	0.886	0.886	0.452	0.480	0.043	0.274	-0.019	0.586	0.379	0.184	0.119	-0.036	0.387	0.178
CCF			1.000	-0.030	0.307	0.606	0.159	0.434	0.525	0.614	0.530	0.556	0.688	-0.158	0.610	-0.046	0.737	0.351	0.297	0.082	0.482	0.681	0.798
DYSL				1.000	-0.024	0.187	0.703	0.515	0.467	0.918	0.866	0.070	-0.004	0.854	-0.510	0.594	-0.231	-0.332	0.653	-0.504	0.207	0.147	0.040
INTC					1.000	0.712	0.128	0.352	0.509	0.743	0.818	0.712	0.566	-0.269	0.501	0.177	0.414	0.592	0.121	0.597	0.087	0.567	0.301
MSFT						1.000	0.500	0.693	0.793	0.656	0.750	0.732	0.630	0.046	0.433	0.268	0.481	0.326	0.438	0.208	0.444	0.758	0.647
EWZ							1.000	0.865	0.723	0.797	0.810	0.151	0.076	0.767	-0.420	0.566	-0.172	-0.217	0.864	-0.436	0.626	0.573	0.465
MCHFX								1.000	0.876	0.851	0.844	0.382	0.398	0.561	-0.044	0.467	0.097	-0.084	0.860	-0.300	0.770	0.763	0.755
EWY									1.000	0.935	0.900	0.587	0.574	0.328	0.240	0.278	0.406	0.166	0.707	-0.044	0.596	0.817	0.730
THD										1.000	0.944	0.780	0.709	0.857	0.949	0.789	0.804	0.373	0.667	0.159	0.023	0.532	0.339
TUR											1.000	0.857	0.717	0.823	0.902	0.808	0.737	0.357	0.532	0.138	-0.141	0.475	0.235
CAG												1.000	0.766	-0.188	0.560	0.211	0.643	0.341	0.138	0.239	0.097	0.532	0.455
KFT													1.000	-0.230	0.656	-0.030	0.776	0.515	0.231	0.222	0.296	0.648	0.622
MCD														1.000	-0.750	0.567	-0.511	-0.609	0.722	-0.749	0.374	0.058	0.076
MO															1.000	-0.395	0.840	0.624	-0.324	0.604	-0.042	0.364	0.387
NLY																1.000	-0.383	-0.385	0.457	-0.338	0.227	0.110	0.058
CPNO																	1.000	0.617	-0.072	0.388	0.062	0.516	0.483
HGT																		1.000	-0.154	0.795	-0.091	0.484	0.164
CVX																			1.000	-0.441	0.837	0.678	0.616
TOT																				1.000	-0.290	0.160	-0.093
XOM																					1.000	0.733	0.819
WMB																						1.000	0.832
T																							1.000
TEF																							
VZ																							
TGT																							
WMT																							
JNJ																							
EXC																							
WY																							
PSEC																							
HSY																							
SIVB																							
TIE																							
CPN																							
COP																							
MON																							
ACI																							
EGLE																							
SJT																							
SLV																							
GDX																							

TEF	VZ	TGT	WMT	JNJ	EXC	WY	PSEC	HSY	SIVB	TIE	CPN	COP	MON	ACI	EGLE	SJT	SLV	GDX
0.335	-0.111	-0.495	0.097	0.506	0.771	0.774	0.613	-0.797	-0.143	-0.830	-0.569	-0.456	0.837	-0.374	0.457	-0.757	-0.457	-0.724
-0.193	0.156	0.546	0.044	0.318	0.022	0.173	0.430	0.394	0.615	0.298	0.565	0.209	-0.150	0.360	0.090	0.257	0.287	0.453
0.228	0.706	0.630	-0.233	0.469	0.638	0.628	0.721	0.231	0.466	0.240	0.825	0.497	-0.032	0.168	0.654	0.382	0.758	-0.017
0.197	-0.054	0.156	0.537	0.027	-0.286	-0.627	####	-0.222	0.141	-0.430	0.198	-0.040	-0.029	-0.317	####	-0.427	-0.351	0.355
0.105	0.533	0.765	-0.259	0.649	0.329	0.560	0.381	0.503	0.691	0.591	0.777	0.647	0.037	0.534	0.538	0.559	0.523	0.238
0.469	0.663	0.795	-0.116	0.681	0.500	0.537	0.505	0.118	0.687	0.245	0.653	0.526	0.139	0.248	0.568	0.303	0.556	0.210
0.684	0.256	0.228	0.508	0.229	0.309	-0.250	####	-0.557	0.220	-0.495	0.832	0.185	0.479	-0.175	0.237	-0.267	0.114	0.299
0.703	0.638	0.488	0.193	0.382	0.534	0.078	0.142	-0.350	0.388	-0.267	0.858	0.433	0.381	-0.125	0.519	-0.053	0.439	0.196
0.419	0.685	0.738	-0.048	0.381	0.470	0.248	0.406	0.001	0.580	0.078	0.743	0.485	0.187	0.144	0.522	0.131	0.573	0.358
-0.042	0.444	0.882	0.205	0.409	-0.158	-0.251	0.189	0.814	0.608	0.903	0.521	0.490	-0.254	0.388	0.016	0.161	0.269	0.936
0.114	0.282	0.933	0.233	0.534	-0.183	-0.162	0.176	0.771	0.665	0.865	0.492	0.408	-0.280	0.340	0.001	0.130	0.136	0.885
0.097	0.550	0.852	-0.331	0.655	0.239	0.547	0.554	0.555	0.617	0.374	0.560	0.576	-0.332	0.185	0.427	0.311	0.557	0.193
0.042	0.717	0.761	-0.239	0.736	0.478	0.597	0.735	0.518	0.733	0.390	0.719	0.683	-0.185	0.278	0.600	0.569	0.668	0.065
0.406	-0.127	-0.130	0.659	-0.116	-0.194	-0.718	####	-0.612	-0.129	-0.736	0.038	-0.225	0.159	-0.574	####	-0.636	-0.590	0.148
-0.199	0.562	0.597	-0.767	0.339	0.382	0.826	0.819	0.676	0.435	0.771	0.420	0.455	-0.262	0.510	0.537	0.672	0.796	0.039
0.455	0.083	0.068	0.340	0.240	-0.104	-0.349	####	-0.215	0.021	-0.407	0.340	0.185	0.130	-0.356	####	-0.390	-0.180	0.242
-0.201	0.534	0.691	0.858	0.438	0.393	0.697	0.845	0.609	0.562	0.598	0.858	0.450	-0.266	0.452	0.524	0.625	0.749	0.109
-0.253	0.294	0.465	0.900	0.483	0.427	0.661	0.641	0.568	0.678	0.745	0.900	0.598	0.135	0.891	0.588	0.953	0.735	0.153
0.503	0.476	0.235	0.774	0.257	0.419	-0.176	####	-0.472	0.289	-0.475	0.774	0.350	0.427	-0.207	0.342	-0.140	0.216	0.124
-0.324	0.187	0.327	0.838	0.228	0.194	0.632	0.453	0.587	0.414	0.871	0.838	0.421	0.087	0.888	0.378	0.754	0.735	0.478
0.572	0.703	0.171	0.623	0.274	0.734	0.176	0.254	-0.505	0.186	-0.367	0.623	0.429	0.535	-0.145	0.620	0.013	0.542	-0.113
0.405	0.783	0.639	0.944	0.593	0.810	0.536	0.600	-0.010	0.668	0.149	0.944	0.737	0.434	0.375	0.853	0.501	0.779	0.128
0.540	0.876	0.549	0.818	0.421	0.834	0.525	0.619	-0.125	0.378	-0.015	0.818	0.548	0.252	0.019	0.804	0.249	0.829	-0.075
1.000	0.321	0.102	0.358	0.325	0.520	0.054	####	-0.618	-0.020	-0.435	0.358	0.130	0.480	-0.261	0.413	-0.196	0.247	-0.073
	1.000	0.615	0.709	0.497	0.749	0.613	0.640	0.152	0.478	0.230	0.709	0.725	0.179	0.186	0.780	0.387	0.759	0.023
		1.000	0.619	0.553	0.317	0.564	0.618	0.526	0.753	0.521	0.619	0.519	-0.219	0.348	0.484	0.415	0.558	0.252
			1.000	0.145	-0.058	-0.515	####	-0.548	0.023	-0.618	0.422	-0.072	0.426	-0.217	####	-0.257	-0.449	-0.043
				1.000	0.475	0.494	0.442	0.238	0.692	0.162	0.704	0.681	0.121	0.269	0.592	0.514	0.462	-0.003
					1.000	0.664	0.620	-0.184	0.360	0.098	0.721	0.621	0.579	0.331	0.955	0.517	0.800	-0.151
						1.000	0.860	0.432	0.519	0.645	0.606	0.574	0.091	0.566	0.772	0.715	0.835	-0.056
							1.000	0.444	0.572	0.575	0.761	0.538	-0.021	0.514	0.693	0.674	0.845	0.014
								1.000	0.441	0.786	0.101	0.326	-0.608	0.455	0.043	0.519	0.339	0.207
									1.000	0.457	0.694	0.658	0.084	0.546	0.497	0.631	0.441	0.253
										1.000	0.598	0.325	-0.210	0.781	0.293	0.717	0.679	0.379
											1.000	0.905	0.640	0.934	0.820	0.771	0.783	0.421
												1.000	0.291	0.492	0.845	0.644	0.752	0.241
													1.000	0.303	0.477	0.168	0.221	-0.015
														1.000	0.482	0.829	0.668	0.173
															1.000	0.672	0.844	-0.103
																1.000	0.766	-0.123
																	1.000	-0.001
																		1.000

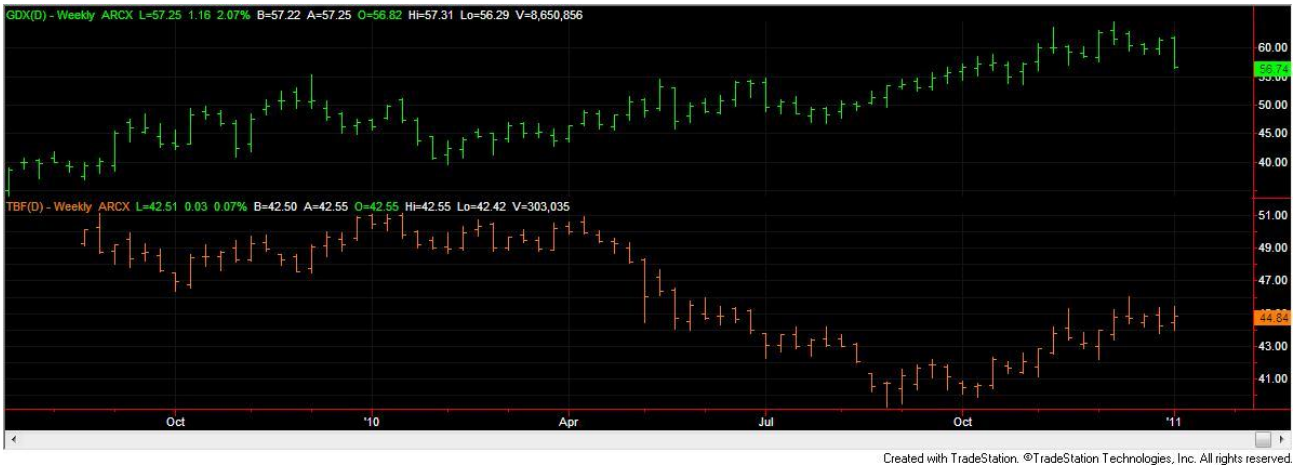
One thing we need to pay attention to when making a conclusion here is that in the sample like this we cannot make general population statements about the correlations without t-test. The sample correlation coefficient is an unbiased estimate of the population correlation coefficients if it is a simple random sample which has three properties: the population consists of N objects, the sample consists of n objects, and all possible samples of n objects are equally likely to occur. The table above has showed us the sample correlation coefficients for different stocks in Limited Investors' current portfolio, however, in order to make further conclusion about the whole population, we will need t-test to evaluate and see if it is a good estimate of the population correlation coefficients.

Below are examples stocks on the current portfolio of Limited Investors that had a strong correlation from 2006-2011. Telefonica (TEF) and Thailand Index Fund (THD) had a strong positive correlation (very close to 1), while Pro Shares Short 20+ Year Treasury (TBF) and Market Vectors Gold Miners ETF (GDX) had a correlation close to -1, meaning a strong negative correlation.

Figure 5: TEF vs THD

In this case, Telefonica SA and the Thailand Index Fund (THD) move very similarly, going up and down at the same time.

Figure 6: TBF vs GDX



Above you can see an evident inverse relationship between ProShares Short 20+ Year Treasury and Market Vectors Gold Miners ETF. As one goes up, the other does exactly the opposite, and vice versa.

4.3.2 Correlations in Bull and Bear Markets

An interesting analysis is to see how stocks behave according to the type of market. For example, a question an investor could ask is if there is a bull market, how will stocks in my portfolio behave? Will they all go up the same way? In a bear market, will all my stocks go down? Or will some securities show a negative correlation respect to others?

In order to compare portfolio in different markets, first we used Tradestation to determine the bull and bear markets from 2001 to 2011.

Technical analysis can be used in order to determine the type of market we are in. By using a combination of two simple moving averages (SMA), each with a different number of days, and using the S&P 500 as the benchmark index representing the market as a whole. We can interpret the crossing point of the two lines as a market transition from a bear to a bull market of vice versa. The most common set of SMA are 50 day and 200 day. When the 50-day moving average crosses and stays above the 200 day moving average we can interpret this as a transition to a bull market. Another necessary condition is that the 200-day moving averages' slope turns positive and stays that way. This intersection is also known as the "Golden Cross." Inversely, when the 50 day moving average crosses and stays below the 200 moving average, while the gradient of the latter turning negative, this is known as the "Death Cross," signaling a transition to a bear market.

We want to analyze how Limited Investors' portfolio behaves in relation to the type of market and therefore we will use SMA to identify bull and bear markets during the period from January 2001 to January 2011. These are the results:

The 50-day moving average crosses the 200-day on October 30th 2000. The 50 day goes below and the 200 moving average's slope turns negative. Therefore, this is a Death Cross and a bear market took place. This image below shows the S&P 500 index from August 1999 to January 2003.

Figure 7: Transition to Bear Market in October 2000

This bear market goes on until May 15th 2003 where a Golden Cross takes place. This image represents the market from August 2002 to January 2007.

Figure 8: Transition to Bull Market in May 2003

Notice in this image that around August 15th 2004 we see a Death Cross. The 50-day moving average crosses downward the 200-day average for a short period of time. However, in the second condition, the 200 moving average has to change its slope (from positive to negative or vice versa depending on what transition it is). In this situation, even though there was a Death Cross the 200 day moving average didn't turn negative and therefore we can't consider it a valid transition to a bull market. The same situation happens again in August 2006; the two lines cross, but since the gradient didn't change we should consider it a significant change.

The bull market continues until a Death Cross happens in December 20th 2007. The 200-day average turns aggressively negative. This is when the financial crisis started.

Figure 9: Transition to Bear Market in December 2007

In this image you can see that the bear market goes on until June 22nd 2009 where a bull market started taking place and which still continues until today.

We used SPSS, a useful statistics software, to find out the correlation coefficients of current portfolio in a bull market from June 2009 to present and in a bear market from December 2007 to June 2009.

4.3.2.1 Current Portfolio Correlation in a Bull Market

By importing each stock's monthly prices from June 2009 to Present to SPSS, we calculated the correlation coefficients and the P-value using SPSS command: Analysis->Correlation->Bi-variate. A part of output from SPSS is shown below; the full output is on appendix.

Table 2: Limited Investors' Current Portfolio in a Bull Market from June 22nd 2009 to Present

		TBF	ANSS	CCF	DYSL	INTC	MSFT	EWZ	MCHFX
TBF	Pearson Correlation	1	-.347	-.584**	-.635**	.114	.588**	-.260	-.640**
	Sig. (2-tailed)		.134	.007	.003	.633	.006	.269	.002
	N	20	20	20	20	20	20	20	20
ANSS	Pearson Correlation	-.347	1	.796**	.839**	.722**	.440*	.768**	.850**
	Sig. (2-tailed)	.134		.000	.000	.000	.041	.000	.000
	N	20	22	22	22	22	22	22	22
CCF	Pearson Correlation	-.584**	.796**	1	.907**	.385	.003	.640**	.872**
	Sig. (2-tailed)	.007	.000		.000	.077	.989	.001	.000
	N	20	22	22	22	22	22	22	22
DYSL	Pearson Correlation	-.635**	.839**	.907**	1	.474*	.204	.829**	.970**
	Sig. (2-tailed)	.003	.000	.000		.026	.361	.000	.000
	N	20	22	22	22	22	22	22	22
INTC	Pearson Correlation	.114	.722**	.385	.474*	1	.644**	.574**	.545**
	Sig. (2-tailed)	.633	.000	.077	.026		.001	.005	.009
	N	20	22	22	22	22	22	22	22
MSFT	Pearson Correlation	.588**	.440*	.003	.204	.644**	1	.604**	.276
	Sig. (2-tailed)	.006	.041	.989	.361	.001		.003	.213
	N	20	22	22	22	22	22	22	22
EWZ	Pearson Correlation	-.260	.768**	.640**	.829**	.574**	.604**	1	.868**
	Sig. (2-tailed)	.269	.000	.001	.000	.005	.003		.000
	N	20	22	22	22	22	22	22	22
MCHFX	Pearson Correlation	-.640**	.850**	.872**	.970**	.545**	.276	.868**	1
	Sig. (2-tailed)	.002	.000	.000	.000	.009	.213	.000	
	N	20	22	22	22	22	22	22	22
EWY	Pearson Correlation	-.458*	.943**	.890**	.917**	.651**	.333	.810**	.932**
	Sig. (2-tailed)	.043	.000	.000	.000	.001	.130	.000	.000
	N	20	22	22	22	22	22	22	22
THD	Pearson Correlation	-.726**	.825**	.942**	.964**	.444*	.061	.756**	.964**
	Sig. (2-tailed)	.000	.000	.000	.000	.038	.787	.000	.000
	N	20	22	22	22	22	22	22	22
CAG	Pearson Correlation	.033	.610**	.165	.330	.795**	.642**	.532*	.445*
	Sig. (2-tailed)	.889	.003	.464	.133	.000	.001	.011	.038
	N	20	22	22	22	22	22	22	22
KFT	Pearson Correlation	-.648**	.793**	.879**	.871**	.576**	.108	.666**	.916**
	Sig. (2-tailed)	.002	.000	.000	.000	.005	.633	.001	.000
	N	20	22	22	22	22	22	22	22

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The N means the sample size, the number of data pairs, which is 20, meaning that we have 20 monthly prices pairs. The Pearson Correlation coefficients are a number between -1 and 1 and it expresses the degree that, on an average, two variables change correspondingly. The Sig. means the level of significance, or P-value. It is the probability that you would have found the current results if the correlation coefficient were in fact zero. If the probability is lower than 0.01 (P<0.01) or, in some cases, 0.05 (P<0.05) the correlation coefficient is called statistically significant.

To get useful information from these correlation coefficients, let's take a look at an example of the correlation between DYSL (Dynasil Corporation of America) and CCF (Chase Coporation).

Pearson correlation of DYSL and CCF=0.907**; P-Value=0.000

In conclusion, the strength of association between these two stocks is very high (r=0.907), and that the correlation coefficient is very highly significantly different from zero (P<0.001).

As you can tell from the correlation matrix, the correlation coefficients between the stock prices in a bull market range from highly negatively correlated to highly positively correlated. But overall most of the correlation coefficients are positive. We define different degree of correlations and diversification as the following:

Table 3: Correlation and Diversification

0.7<r<1	Highly Positively Correlated	Poor Diversification
0.3<r<0.7	Moderately Positively Correlated	Poor Diversification
0<r<0.3	Slightly Positively Correlated	Moderate Diversification
r=0	Uncorrelated	Moderate Diversification
-0.3<r<0	Slightly Negatively Correlated	Moderate Diversification
-0.7<r<-0.3	Moderately Negatively Correlated	Good Diversification
-0.7<r<-1	Highly Negatively Correlated	Good Diversification

When the correlation coefficient between the stock prices is close or equal to 1, they are said to be perfectly positively correlated. But in this case, the risks of the individual stocks cannot be eliminated by diversification, forming a portfolio of stocks with highly positively correlated stock prices provides bad diversification and additional risk.

When the correlation coefficient between the stock prices is close or equal to -1, they are said to be perfectly negatively correlated, or perfectly inversely correlated. When this is the case, all risk can be eliminated by investing a positive amount in the two stocks and the portfolio is said to have a very good diversification.

When the correlation coefficient between the stock prices is close or equal to 0, they are said to be uncorrelated. In this case, the portfolio is said to have a moderate diversification, meaning that some risk can be eliminated via diversification.

However, in the real world, the correlation coefficient between most stock prices ranges between 0.5-0.7. When this is the case, the stock prices can be said to be uncorrelated. Thus, risk can be reduced via diversification.

4.3.2.2. Current Portfolio Correlation in a Bear Market (Output from SPSS)

By importing each stock's monthly prices from December 2007 to June 2009 to SPSS, we calculated the correlation coefficients and the P-value using SPSS command: Analysis->Correlation->Bi-variate. A part of output from SPSS is shown below; the full output is on appendix.

Table 4: Current Portfolio Correlation in a Bear Market (partial)

		ANSS	CCF	DYSL	INTC	MSFT	EWZ	MCHFX	EWY
ANSS	Pearson Correlation	1	.760**	.902**	.903**	.799**	.916**	.854**	.827**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20	20	20
CCF	Pearson Correlation	.760**	1	.869**	.875**	.941**	.853**	.950**	.926**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20	20	20
DYSL	Pearson Correlation	.902**	.869**	1	.883**	.813**	.908**	.880**	.865**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000
	N	20	20	20	20	20	20	20	20
INTC	Pearson Correlation	.903**	.875**	.883**	1	.947**	.925**	.973**	.954**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	20	20	20	20	20	20	20	20
MSFT	Pearson Correlation	.799**	.941**	.813**	.947**	1	.862**	.978**	.950**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	N	20	20	20	20	20	20	20	20
EWZ	Pearson Correlation	.916**	.853**	.908**	.925**	.862**	1	.931**	.953**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	N	20	20	20	20	20	20	20	20
MCHFX	Pearson Correlation	.854**	.950**	.880**	.973**	.978**	.931**	1	.983**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000
	N	20	20	20	20	20	20	20	20
EWY	Pearson Correlation	.827**	.926**	.865**	.954**	.950**	.953**	.983**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	20	20	20	20	20	20	20	20
THD	Pearson Correlation	.863**	.900**	.832**	.932**	.933**	.970**	.964**	.990**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000
	N	16	16	16	16	16	16	16	16
CAG	Pearson Correlation	.826**	.875**	.846**	.954**	.931**	.936**	.959**	.976**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20	20	20
KFT	Pearson Correlation	.822**	.807**	.820**	.840**	.847**	.742**	.836**	.767**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20	20	20
MCD	Pearson Correlation	.476*	.099	.290	.323	.207	.184	.200	.127
	Sig. (2-tailed)	.034	.677	.216	.165	.382	.438	.398	.594
	N	20	20	20	20	20	20	20	20
ACI	Pearson Correlation	.945**	.799**	.954**	.852**	.760**	.938**	.845**	.838**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20	20	20
COP	Pearson Correlation	.933**	.892**	.965**	.906**	.865**	.918**	.915**	.884**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20	20	20

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Take a close look at the overall current portfolio correlation in a bear market; it is obvious that the stocks are more highly positively correlated than they are in a bull market, meaning that most of the stocks moved in the same direction, either going down together or going up together, in a bear market, this could explain the losses from different stocks at a certain period of time when the market is a bear market. Compared with the correlation coefficients for stocks in a bull market, the correlation coefficients for the same stocks in a bear market tend to be more highly positively correlated and there are few stocks that are moderately positively correlated or negatively correlated. These stocks wouldn't make a good portfolio in a bear market in terms of diversification.

4.3.2.3 Porter Stansberry Stocks Correlation in a Bull Market

We sorted out the Porter Stansberry Stocks from current portfolio and calculated their correlation coefficients. We hope to see the relationships between stocks recommended by Porter Stansberry in a Bull Market. Only a few is shown below and the full matrix is attached on the appendix.

Table 5: Porter Stansberry Stocks Correlation in a Bull Market

		WMT	JNJ	EXC	NLY	INTC	WY	PSEC	HSY	SIVB
WMT	Pearson Correlation	1	.792**	-.304	.509*	.625**	-.083	.654**	.239	.667**
	Sig. (2-tailed)		.000	.168	.015	.002	.714	.001	.284	.001
	N	22	22	22	22	22	22	22	22	22
JNJ	Pearson Correlation	.792**	1	-.050	.523*	.648**	.339	.675**	-.067	.449*
	Sig. (2-tailed)	.000		.826	.013	.001	.123	.001	.767	.036
	N	22	22	22	22	22	22	22	22	22
EXC	Pearson Correlation	-.304	-.050	1	-.219	-.553**	.345	-.027	-.832**	-.595**
	Sig. (2-tailed)	.168	.826		.327	.008	.116	.907	.000	.004
	N	22	22	22	22	22	22	22	22	22
NLY	Pearson Correlation	.509*	.523*	-.219	1	.530*	-.229	.405	.309	.617**
	Sig. (2-tailed)	.015	.013	.327		.011	.306	.061	.162	.002
	N	22	22	22	22	22	22	22	22	22
INTC	Pearson Correlation	.625**	.648**	-.553**	.530*	1	.184	.663**	.512*	.856**
	Sig. (2-tailed)	.002	.001	.008	.011		.412	.001	.015	.000
	N	22	22	22	22	22	22	22	22	22
WY	Pearson Correlation	-.083	.339	.345	-.229	.184	1	.443*	-.582**	-.158
	Sig. (2-tailed)	.714	.123	.116	.306	.412		.039	.004	.484
	N	22	22	22	22	22	22	22	22	22
PSEC	Pearson Correlation	.654**	.675**	-.027	.405	.663**	.443*	1	.021	.663**
	Sig. (2-tailed)	.001	.001	.907	.061	.001	.039		.928	.001
	N	22	22	22	22	22	22	22	22	22
HSY	Pearson Correlation	.239	-.067	-.832**	.309	.512*	-.582**	.021	1	.670**
	Sig. (2-tailed)	.284	.767	.000	.162	.015	.004	.928		.001
	N	22	22	22	22	22	22	22	22	22
SIVB	Pearson Correlation	.667**	.449*	-.595**	.617**	.856**	-.158	.663**	.670**	1
	Sig. (2-tailed)	.001	.036	.004	.002	.000	.484	.001	.001	
	N	22	22	22	22	22	22	22	22	22
TIE	Pearson Correlation	.375	.025	-.872**	.328	.452*	-.600**	.014	.896**	.590**
	Sig. (2-tailed)	.085	.911	.000	.136	.035	.003	.951	.000	.004
	N	22	22	22	22	22	22	22	22	22
CPN	Pearson Correlation	.076	-.333	-.591**	.006	.331	-.469*	.084	.838**	.573**
	Sig. (2-tailed)	.736	.130	.004	.980	.133	.028	.709	.000	.005
	N	22	22	22	22	22	22	22	22	22
COP	Pearson Correlation	.554**	.114	-.585**	.414	.521*	-.525*	.403	.777**	.836**
	Sig. (2-tailed)	.007	.612	.004	.055	.013	.012	.063	.000	.000
	N	22	22	22	22	22	22	22	22	22

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

As it is shown in the correlation matrix, the correlations between Porter Stansberry's stocks range from moderately negatively correlated to moderately positively

correlated. There are several highly positively correlated and highly negatively correlated stocks, but they are not dominating the whole portfolio. Basically Porter Stansberry Stocks have a moderate diversification, and some of the risks can be eliminated via diversification.

Following the same observation method we had before. Below is the correlation matrix for Porter Stansberry Stocks in a Bear Market. Only a few is shown below and the full matrix is attached on appendix.

Table 6: Porter Stansberry Stocks Correlation in a Bear Market (SPSS Output)

		WMT	JNJ	EXC	NLY	INTC	WY	PSEC	HSY
WMT	Pearson Correlation	1	.577**	.358	-.260	.237	.197	.386	.256
	Sig. (2-tailed)		.010	.132	.283	.328	.419	.103	.291
	N	19	19	19	19	19	19	19	19
JNJ	Pearson Correlation	.577**	1	.861**	.449	.851**	.853**	.865**	.759**
	Sig. (2-tailed)	.010		.000	.054	.000	.000	.000	.000
	N	19	19	19	19	19	19	19	19
EXC	Pearson Correlation	.358	.861**	1	.682**	.916**	.895**	.908**	.541*
	Sig. (2-tailed)	.132	.000		.001	.000	.000	.000	.017
	N	19	19	19	19	19	19	19	19
NLY	Pearson Correlation	-.260	.449	.682**	1	.657**	.753**	.718**	.376
	Sig. (2-tailed)	.283	.054	.001		.002	.000	.001	.112
	N	19	19	19	19	19	19	19	19
INTC	Pearson Correlation	.237	.851**	.916**	.657**	1	.939**	.790**	.698**
	Sig. (2-tailed)	.328	.000	.000	.002		.000	.000	.001
	N	19	19	19	19	19	19	19	19
WY	Pearson Correlation	.197	.853**	.895**	.753**	.939**	1	.891**	.750**
	Sig. (2-tailed)	.419	.000	.000	.000	.000		.000	.000
	N	19	19	19	19	19	19	19	19
PSEC	Pearson Correlation	.386	.865**	.908**	.718**	.790**	.891**	1	.617**
	Sig. (2-tailed)	.103	.000	.000	.001	.000	.000		.005
	N	19	19	19	19	19	19	19	19
HSY	Pearson Correlation	.256	.759**	.541*	.376	.698**	.750**	.617**	1
	Sig. (2-tailed)	.291	.000	.017	.112	.001	.000	.005	
	N	19	19	19	19	19	19	19	19
SIVB	Pearson Correlation	.595**	.946**	.774**	.369	.788**	.823**	.801**	.704**
	Sig. (2-tailed)	.007	.000	.000	.120	.000	.000	.000	.001
	N	19	19	19	19	19	19	19	19
TIE	Pearson Correlation	-.143	.673**	.788**	.874**	.867**	.917**	.765**	.642**
	Sig. (2-tailed)	.559	.002	.000	.000	.000	.000	.000	.003
	N	19	19	19	19	19	19	19	19
CPN	Pearson Correlation	.465	.819**	.952**	.608**	.949**	.884**	.842**	.508*
	Sig. (2-tailed)	.052	.000	.000	.007	.000	.000	.000	.031
	N	18	18	18	18	18	18	18	18
COP	Pearson Correlation	.422	.910**	.986**	.653**	.926**	.913**	.914**	.593**
	Sig. (2-tailed)	.072	.000	.000	.002	.000	.000	.000	.007
	N	19	19	19	19	19	19	19	19
MON	Pearson Correlation	.418	.816**	.953**	.599**	.899**	.853**	.825**	.478*
	Sig. (2-tailed)	.075	.000	.000	.007	.000	.000	.000	.039
	N	19	19	19	19	19	19	19	19
ACI	Pearson Correlation	.484*	.821**	.959**	.562*	.862**	.803**	.833**	.427
	Sig. (2-tailed)	.036	.000	.000	.012	.000	.000	.000	.068

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Compared with Porter Stansberry correlation coefficients in a Bull market, its correlation coefficients in a Bear Market tend to be higher which means Porter Stansberry

Stocks in a bear market are more highly positively correlated, meaning that it has very bad diversification. Both the current portfolio correlation coefficients and the porter stansberry correlation coefficients have a better performance in a bear market based on our correlation analysis so far.

4.3.2.4 Breakfast Club Meeting Stocks Correlation in Bull Market

Breakfast Club Meeting Stocks seem to follow the same kind of correlation the overall portfolio has followed. The correlation coefficients range from moderately negatively correlated to highly positively correlated. But overall the correlation coefficients are mostly positive.

Table 7: Breakfast Club Meeting Stocks Correlation in a Bull Market

		TBF	ANSS	CCF	DYSL	INTC	MSFT	EWZ	MCHFX	EWY
TBF	Pearson Correlation	1	-.347	-.584**	-.635**	.114	.588**	-.260	-.640**	-.458*
	Sig. (2-tailed)		.134	.007	.003	.633	.006	.269	.002	.043
	N	20	20	20	20	20	20	20	20	20
ANSS	Pearson Correlation	-.347	1	.796**	.839**	.722**	.440*	.768**	.850**	.943**
	Sig. (2-tailed)	.134		.000	.000	.000	.041	.000	.000	.000
	N	20	22	22	22	22	22	22	22	22
CCF	Pearson Correlation	-.584**	.796**	1	.907**	.385	.003	.640**	.872**	.890**
	Sig. (2-tailed)	.007	.000		.000	.077	.989	.001	.000	.000
	N	20	22	22	22	22	22	22	22	22
DYSL	Pearson Correlation	-.635**	.839**	.907**	1	.474*	.204	.829**	.970**	.917**
	Sig. (2-tailed)	.003	.000	.000		.026	.361	.000	.000	.000
	N	20	22	22	22	22	22	22	22	22
INTC	Pearson Correlation	.114	.722**	.385	.474*	1	.644**	.574**	.545**	.651**
	Sig. (2-tailed)	.633	.000	.077	.026		.001	.005	.009	.001
	N	20	22	22	22	22	22	22	22	22
MSFT	Pearson Correlation	.588**	.440*	.003	.204	.644**	1	.604**	.276	.333
	Sig. (2-tailed)	.006	.041	.989	.361	.001		.003	.213	.130
	N	20	22	22	22	22	22	22	22	22
EWZ	Pearson Correlation	-.260	.768**	.640**	.829**	.574**	.604**	1	.868**	.810**
	Sig. (2-tailed)	.269	.000	.001	.000	.005	.003		.000	.000
	N	20	22	22	22	22	22	22	22	22
MCHFX	Pearson Correlation	-.640**	.850**	.872**	.970**	.545**	.276	.868**	1	.932**
	Sig. (2-tailed)	.002	.000	.000	.000	.009	.213	.000		.000
	N	20	22	22	22	22	22	22	22	22
EWY	Pearson Correlation	-.458*	.943**	.890**	.917**	.651**	.333	.810**	.932**	1
	Sig. (2-tailed)	.043	.000	.000	.000	.001	.130	.000	.000	
	N	20	22	22	22	22	22	22	22	22
THD	Pearson Correlation	-.726**	.825**	.942**	.964**	.444*	.061	.756**	.964**	.923**
	Sig. (2-tailed)	.000	.000	.000	.000	.038	.787	.000	.000	.000
	N	20	22	22	22	22	22	22	22	22
CAG	Pearson Correlation	.033	.610**	.165	.330	.795**	.642**	.532*	.445*	.455*
	Sig. (2-tailed)	.889	.003	.464	.133	.000	.001	.011	.038	.033
	N	20	22	22	22	22	22	22	22	22
KFT	Pearson Correlation	-.648**	.793**	.879**	.871**	.576**	.108	.666**	.916**	.890**
	Sig. (2-tailed)	.002	.000	.000	.000	.005	.633	.001	.000	.000
	N	20	22	22	22	22	22	22	22	22
TUR	Pearson Correlation	-.721**	.731**	.801**	.906**	.542**	.199	.802**	.946**	.844**
	Sig. (2-tailed)	.000	.000	.000	.000	.009	.374	.000	.000	.000
	N	20	22	22	22	22	22	22	22	22

4.3.2.5 Breakfast Club Meeting Stocks Correlation in a Bear Market (Output from SPSS)

Compared with the Breakfast Club Meeting Stocks Correlation Coefficients in a bear market, their correlation coefficients in a bull market are much more highly positively correlated. Most of them have correlation coefficients equal or larger than +0.8 and there are no insignificantly negative correlations.

Table 8: Breakfast Club Meeting Stocks Correlation Coefficients in a Bear Market

		ANSS	CCF	DYSL	INTC	MSFT	EWZ	MCHFX	EWY
ANSS	Pearson Correlation	1	.753**	.901**	.940**	.819**	.913**	.874**	.835**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18	18	18
CCF	Pearson Correlation	.753**	1	.867**	.873**	.952**	.853**	.952**	.925**
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18	18	18
DYSL	Pearson Correlation	.901**	.867**	1	.924**	.842**	.910**	.906**	.884**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000
	N	18	18	18	18	18	18	18	18
INTC	Pearson Correlation	.940**	.873**	.924**	1	.934**	.954**	.968**	.948**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000
	N	18	18	18	18	18	18	18	18
MSFT	Pearson Correlation	.819**	.952**	.842**	.934**	1	.880**	.975**	.942**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000
	N	18	18	18	18	18	18	18	18
EWZ	Pearson Correlation	.913**	.853**	.910**	.954**	.880**	1	.954**	.968**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000
	N	18	18	18	18	18	18	18	18
MCHFX	Pearson Correlation	.874**	.952**	.906**	.968**	.975**	.954**	1	.981**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000		.000
	N	18	18	18	18	18	18	18	18
EWY	Pearson Correlation	.835**	.925**	.884**	.948**	.942**	.968**	.981**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	
	N	18	18	18	18	18	18	18	18
THD	Pearson Correlation	.869**	.918**	.850**	.932**	.933**	.972**	.967**	.990**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000
	N	15	15	15	15	15	15	15	15
CAG	Pearson Correlation	.836**	.870**	.867**	.948**	.920**	.949**	.954**	.972**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18	18	18
KFT	Pearson Correlation	.822**	.780**	.820**	.819**	.827**	.730**	.809**	.730**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001	.000	.001
	N	18	18	18	18	18	18	18	18
TUR	Pearson Correlation	.946**	.912**	.890**	.982**	.951**	.935**	.961**	.937**
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000
	N	15	15	15	15	15	15	15	15

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

4.3.3 Foreign and Domestic Stocks Correlation

In Limited Investors' current portfolio, there are a few foreign stocks, which are:

EWZ: iShares MSCI Brazil Index (ETF)

MCHFX: Matthews China Fund

THD: iShares MSCI Thailand Index Fund

TUR: iShares MSCI Turkey Index Fund

TEF: Telefonica S.A

Below are two correlation matrixes for these foreign stocks in a bull market and a bear market. In a bull market, the correlation coefficients range from moderately negatively correlated to highly positively correlated, the same kind of trend as the overall current portfolio correlation coefficients, the porter stansberry correlation coefficients, and the breakfast club correlation coefficients in a bull market. In a bear market, all the correlation coefficients between foreign stocks are highly positively correlated which gives a very poor diversification.

Table 9: Correlations between foreign stocks in current portfolio in a bull market

Correlations

		EWZ	MCHFX	EWY	THD	TEF	TUR
EWZ	Pearson Correlation	1	.868**	.810**	.756**	-.083	.802**
	Sig. (2-tailed)		.000	.000	.000	.713	.000
	N	22	22	22	22	22	22
MCHFX	Pearson Correlation	.868**	1	.932**	.964**	-.369	.946**
	Sig. (2-tailed)	.000		.000	.000	.091	.000
	N	22	22	22	22	22	22
EWY	Pearson Correlation	.810**	.932**	1	.923**	-.557**	.844**
	Sig. (2-tailed)	.000	.000		.000	.007	.000
	N	22	22	22	22	22	22
THD	Pearson Correlation	.756**	.964**	.923**	1	-.482*	.917**
	Sig. (2-tailed)	.000	.000	.000		.023	.000
	N	22	22	22	22	22	22
TEF	Pearson Correlation	-.083	-.369	-.557**	-.482*	1	-.223
	Sig. (2-tailed)	.713	.091	.007	.023		.318
	N	22	22	22	22	22	22
TUR	Pearson Correlation	.802**	.946**	.844**	.917**	-.223	1
	Sig. (2-tailed)	.000	.000	.000	.000	.318	
	N	22	22	22	22	22	22

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 10: Correlations between foreign stocks in current portfolio in bear market

		EWZ	MCHFX	EWY	THD	TEF
EWZ	Pearson Correlation	1	.931**	.953**	.970**	.900**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	20	20	20	16	20
MCHFX	Pearson Correlation	.931**	1	.983**	.964**	.978**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	20	20	20	16	20
EWY	Pearson Correlation	.953**	.983**	1	.990**	.977**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	20	20	20	16	20
THD	Pearson Correlation	.970**	.964**	.990**	1	.975**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	16	16	16	16	16
TEF	Pearson Correlation	.900**	.978**	.977**	.975**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	20	20	20	16	20

**. Correlation is significant at the 0.01 level (2-tailed).

However we are more interested in finding out how these foreign stocks correlate with the domestic stocks. In the Current Portfolio Correlation Coefficients, I highlighted the correlation coefficients between foreign stocks and domestic stocks. (Appendix: Current Portfolio in a Bear Market; Current Portfolio in a Bull Market) Simply through observation, the foreign stocks are more highly positively correlated with domestic stocks in a bull market than in a bear market.

4.3.4 Conclusion

From the correlation analysis we've done so far, we found that the Limited Investors' portfolios stocks have different correlations in different market. In a bull market, the correlation coefficients show that the portfolio has good or moderate diversification and the stocks make a pretty good portfolio. But in a bear market, over 90% correlation coefficients range from +0.8 to +0.99, meaning that they are very highly positively correlated. If you are lucky all the stocks can go up together and produce a large amount of profit because they are so highly positively correlated, however, in another situation, the stocks could all go down together followed by huge loss. Based on the correlation analysis, we come up with several recommendations at the end of the paper to reduce their portfolio risk and create a better portfolio.

4.4 Expectancy of Limited Investors

Taking into consideration every trade Limited Investors has made since January 2001 until January 2011, we have calculated that the trades were profitable 41 % of the time and the average profit made per winning trade was $762, while losing an average of $580 59% of the time.

Their expectancy is (0.41 * $762) – (0.59 * $580) = $312 - $342 = ($30) loss. Dividing the result by the average loss = -30/580 gives us a ratio of -0.05.

According to the Expectancy theory developed by Van Tharp, hypothetically over the long run the fund will be losing money. Please refer to the Appendix for more details.

4.5 Creating a Trading System with Tradestation

Our understanding is that the club has a combination of value investing and trend following. One of their systems is "Get PS newsletter, discuss it with group, then buy". Other is "Breakfast club, meet, vote, buy or not". Our objective is to come up with a trading system that the Club can use to improve their expectancy and total returns.

We will base our system in Tradestation with weekly bars, instead of daily, for mainly two reasons. First, so that the club doesn't have to be checking the market every day, and second to keep commissions low. For all the code development throughout the paper, we will be using four main indicators: Channel Length, Volume, Average True Range, and Simple Moving Average. For these indicators, the default inputs are the following:

```
ChanLen    (20),
Vollenth (1)
FrATR      (1.0),
MALen      (20);
```

With Tradestation's optimizing tool, we will use the platform to calculate the optimal parameters for each of these indicators that will generate the most profitable trading system. Therefore, these inputs will change according to the optimization results.

First, we will test entry and exit strategies and find out which combination of rules gives us the highest expectancy. Then, we will test this selected system against a sample of stocks that Limited Investors has traded to see if our system performs better during the same time period of each individual trade than what the Club actually did.

4.5.1 Entry Strategy

Using weekly bars, our first step is to introduce an entry strategy. Since the entry is the least important of the components, we will implement a relatively simple one that also is appropriate to the club's trade timeframe. The purpose of adding a formal entry rule is to create a discipline where the Club gets in a trade using a set of specific rules that have been tested to work, instead of using emotions, or subjective analysis.

For stocks that appear on the Porter Stansberry newsletter, the first set-up rule would be: "Stock appears on Stansberry's List." Once that happens, we can add a second set-up rule. An appropriate one uses channel length in order to identify the highest price over a period of time and only buy if the current price is higher than that high.

The EasyLanguage code for the above entry strategy (the second set-up) is:

Buy next bar at Highest (H, ChanLen)

The code is doing the following instructions: Tradestation will analyze the previous 20 bars (in our case, a bar represents a week) and will identify the highest price that the stock had within that 20-week period. If the current price is equal to that high plus 1-point stop (a dollar), then we will buy the next bar.

To execute the trade, it is necessary to add a trigger. In this case, our trigger will be an increase of 1-point stop. This means that if the set-up is confirmed, then if the price goes up by one point (a dollar, for instance) after reaching the highest high, then we will buy on the next bar. The code looks like this:

Buy next bar at Highest (H, ChanLen) + 1 point stop;

A way that we could improve this entry strategy even more is by adding a third set-up rule into the strategy. A price going up while having decreasing volume is usually very risky and has potential to drop quickly. Therefore, we want to make sure that the entry rule is strengthened by an increasing volume. The code for our previous strategy plus a rising volume is:

if volume>volume[vollength] then Buy next bar at Highest(H, ChanLen) + 1 point stop;

where if the volume of the current bar is greater than the volume of previous bars (in this case 1 bar before), then we will buy the next bar IF the current price is equal to the highest high of the last 20 bars plus 1-point stop.

4.5.2 Exit Strategy

After selecting our entry strategy, we have several candidates for an exit strategy. First of all, there are two types of exit strategies that one could use to cut losses and maximize profits. First, an initial stop loss determines the risk and will provide peace of mind while protecting the investment. If the trade goes wrong, the stop loss will be activated and losses will be cut. Second, if the trade goes in the desired direction, a trader should have a strategy to protect and, when possible, maximize those profits.

4.5.2.1 Cutting Losses with Initial Stop Loss

An effective way to place an initial stop loss to protect capital is by using the Average True Range (ATR). The strategy consists of placing a stop at a multiple of ATR below entry price. The code is:

Sell next bar at EntryPrice - FrATR * ATR stop;

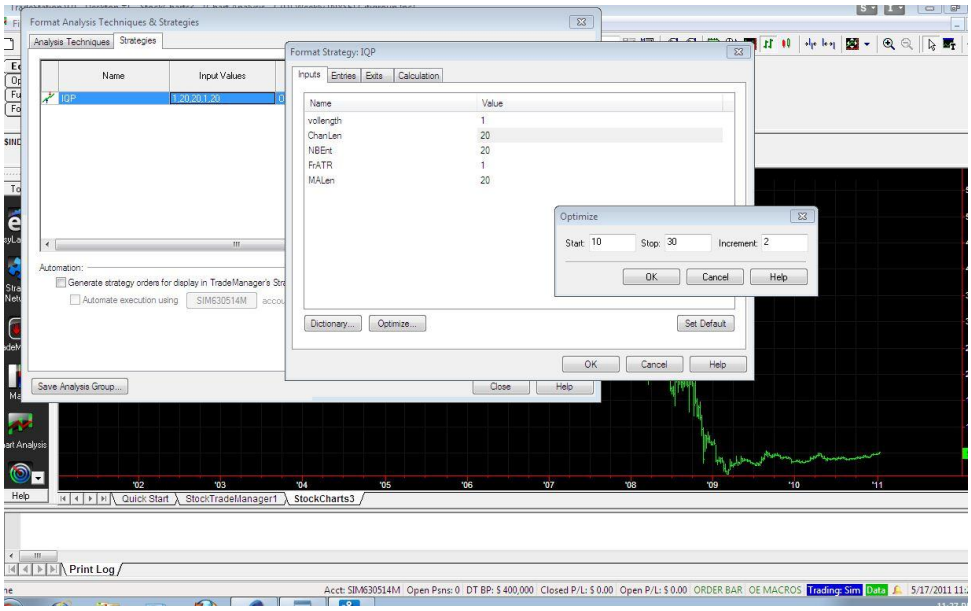
With a default input of FrATR of 1, the code is instructing than when current price equals the entry price minus 1 times the average true range, we will sell on the next bar. The following screenshot illustrates an exit using an initial stop loss with ATR that avoided a catastrophic loss with Citigroup stock (C) during the financial crisis in 2008.

Figure 10: Citigroup Initial Stop Loss

By using the initial stop loss, the system identified a sharp decrease in the price and sold at around $35, before the price crashing down to $4.

This screenshot is an example of how Tradestation is used to back test a strategy in a period of time. The graph is showing what would have happened if we used this rule to trade Citigroup between 2001 and 2011. Since we back tested the initial stop loss with a default input (1, in this case), we are not sure that this input will be the optimal one which will give us the most profit. To calculate which input yields the best results, Tradestation has a very powerful Optimization tool that will calculate all the different values, within a user specified range, for the inputs used in a strategy that will give the best results. To optimize, we right click the chart select "Format Strategies." We double click the input values and select the input values we want to optimize. With the input value selected, we click "Optimize", select a range of values we want the optimization to consider, and click ok. The screenshot below shows this process. We have chosen a range from 0 to 3 for FrATR, by increments of 1. This means Tradestation will calculate which number for FrATR out of 0,1,2,3 is the most optimal. Actually, the result was 1, which was the same as our default value.

Figure 11: Optimization Process



4.5.2.2 Profit Maximizing Rule – ATR

Once the trade starts making profits, a profit maximizing strategy is essential. Rule number one is to never let a large profit turn into a small profit. We previously used ATR to avoid big losses. Now, we will show how ATR can also be used to keep profits to a maximum. The code for such a strategy is:

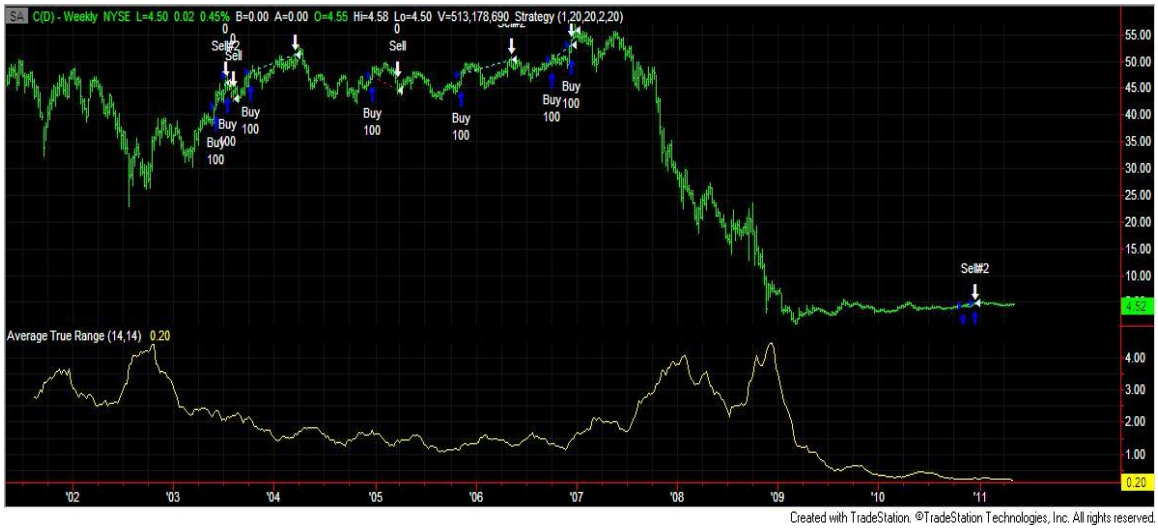
Sell next bar at EntryPrice + FrATR * ATR limit;

According to the code, when the price hits a multiple of ATR more than entry price, we will sell at the next bar. Our default input for FrATR is 1, so in this case the stop would be 1 ATR + Entry Price.

It is important to note that a Profit Maximization rule and an Initial Stop Loss Rule are not mutually exclusive. We don't have to choose one over the other. In fact, in most cases using both at the same time turns out to be a great strategy since combined they cover the downside and the upside. Therefore, we will use this profit maximization strategy while keeping our previous initial stop loss strategy.

The screenshot illustrates this strategy, which uses Average True Range.

Figure 12: Citigroup Profit Maximizing with ATR



As you can see, the screenshot above illustrates a strategy that uses ATR both as an initial stop loss and profit maximization rule. The former is derived by *subtracting* a multiple of ATR to the Entry Price, while the latter constitutes of *adding* a multiple of ATR to the Entry Price (plus an additional 1 point).

Optimization calculated that the best number for ChanLen, which is the entry strategy, is 20. This means that Tradestation calculated that calculating 20 previous bars (instead of any other number of bars) yields the highest profit. In addition, the optimal value of FrATr is 2. This means that the stop loss will be placed 2 ATR below the Entry Price, and the profit stop will be placed 2 ATR above the Entry Price.

The following is the performance report for the strategy using 100 shares:

Table 11: Citigroup Profit Maximizing with ATR Report

	All Trades
Total Net Profit	$906.00
Gross Profit	$1,642.00
Gross Loss	($736.00)
Profit Factor	2.23
Select Total Net Profit	$906.00
Select Gross Profit	$1,642.00
Select Gross Loss	($736.00)
Select Profit Factor	2.23
Total Number of Trades	8
Percent Profitable	75.00%
Winning Trades	6
Losing Trades	2
Even Trades	0
Return on Initial Capital	0.91%
Annual Rate of Return	0.10%
Buy & Hold Return	(89.15%)
Return on Account	198.68%

The profit factor is 2.23 and our return of capital was +0.91% compared to a -88.22% with Buy & Hold.

This is the Strategy Performance Report. This is tool of Tradestation that shows a trader how profitable or unprofitable could have been in the past. The most important results on the report are:

Total Net Profit	How much a strategy made or lost
Profit Factor –	The number of dollars (profit) made for every dollar lost
Total Number of Trades -	The total number of trades that were generated by the strategy
Percentage Profitable -	The percentage of trades that was profitable
Avg. Trade Net Profit -	The amount of money won or lost in the average trade.
Account Size Required -	This field calculates the amount of money you must have in your account to trade the strategy.
Return on Initial Capital -	Return on Initial Capital displays the percentage return of the Total Net Profit to the initial starting capital, (including commissions and slippage if specified), during the specified period. Return on Initial Capital = Total Net Profit divided by Initial Capital.
Annual Rate of Return -	Displays the percentage return of the strategy for the testing period of the strategy.
Buy & Hold Return -	Displays the percentage return of holding the security in a long position for the entire testing period of the strategy, as a comparison to the strategy return. Displays for All Trade only.
Return on Account -	This field represents the amount of money you would make versus the amount of money required to trade the strategy, taking into consideration margin and margin calls. This value is calculated by dividing the net profit by the account size required.

4.5.2.3 Profit Maximizing Rule – SMA

Another exit strategy consists of using moving average crossover. The code for this rule would be:

If MarketPosition = 1 and C < Average(C, MALen) then

Sell next bar at market;

The code says that when the closing price crosses downward the 20 day moving average, then a selling order will be placed at the next bar. The following chart and Performance Report show how this exit strategy performed.

Figure 13: Citigroup Profit Maximizing with SMA

Table 12: Citigroup Profit Maximizing with SMA Report

	All Trades
Total Net Profit	$356.00
Gross Profit	$773.00
Gross Loss	($417.00)
Profit Factor	1.85
Select Total Net Profit	$356.00
Select Gross Profit	$773.00
Select Gross Loss	($417.00)
Select Profit Factor	1.85

Total Number of Trades	5
Percent Profitable	40.00%
Winning Trades	2
Losing Trades	3
Even Trades	0
Return on Initial Capital	0.36%
Annual Rate of Return	0.04%
Buy & Hold Return	(89.15%)
Return on Account	85.37%

In this case, the optimization gave us an input of 22 for ChanLength, of 2 for FrATR and 20 for MALen. It is important to note that for this system, as for the previous one, we included the ATR initial stop loss for loss minimization while adding a simple moving average crossover for profit maximization. This system also makes a profit as opposed to a loss if it the stock was bought and hold during the same time. The Profit Factor of 1.85, even though less than the previous strategy's Profit Factor of 2.23, is still a great result. During the same time period, it made a total profit of $356, compared to the $906 profit of the first strategy.

4.5.3 Comparison between the Two Trading Systems

We will test both of these systems with other stocks that the Club has traded, so that we make sure that both of them would work well with a broad range of stocks. We want to test them to see which of the two delivers the most profit and ultimately choose the best one. Strategy 1 is the first we experimented, while Strategy 2 is the last one, consisting of the simple moving average. Both of them have the entry rule and the initial stop loss in common; the profit maximization rule, one of the most important components of any trading system, is what differences them.

The first stock that we are going to use is Walmart (WMT).

STRATEGY #1

Easy Language Code:

If volume>volume[vollength] then Buy next bar at Highest(H, ChanLen) + 1 point stop; [*Entry Rule]*

Sell next bar at EntryPrice - FrATR * ATR stop; [*Exit Rule #1: Initial Stop Loss]*

Sell next bar at EntryPrice + FrATR * ATR limit; [*Exit Rule #2: Profit Maximization]*

Figure 14: WMT Strategy #1

Table 13: WMT Strategy #1 Performance Report

	All Trades
Total Net Profit	$21.00
Gross Profit	$1,301.00
Gross Loss	($1,280.00)
Profit Factor	1.02
Total Number of Trades	39
Percent Profitable	41.03%
Winning Trades	16
Losing Trades	18

Even Trades	5
Return on Initial Capital	0.02%
Annual Rate of Return	0.00%
Buy & Hold Return	(1.70%)
Return on Account	5.36%

Strategy #1 for Walmart from January 2001 to January 2011 had a Profit Factor of 1.02. It gave a Return on Initital Capital of 0.02%.

STRATEGY #2

Easy Language Code:

If volume>volume[vollength] then Buy next bar at Highest(H, ChanLen) + 1 point stop; [*Entry Rule]*

Sell next bar at EntryPrice - FrATR * ATR stop; [*Exit Rule #1: Initial Stop Loss]*

If MarketPosition = 1 and C < Average(C, MALen) then Sell next bar at market;
[*Exit Rule #2: Profit Maximization]*

Figure 15: WMT Strategy #2

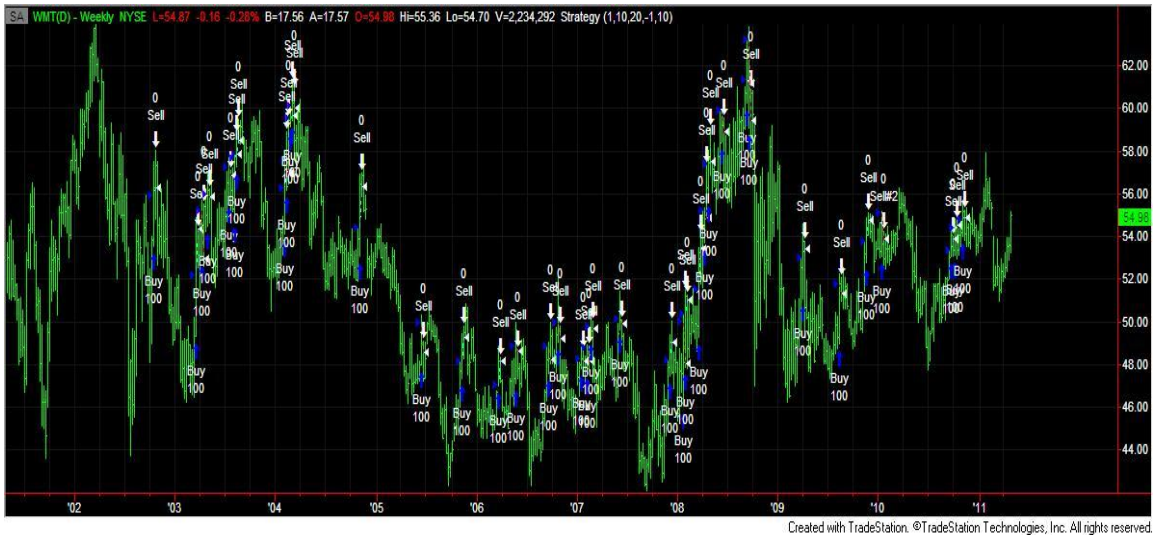


Table 14: WMT Strategy #2 Performance Report

	All Trades
Total Net Profit	($258.00)
Gross Profit	$1,412.00
Gross Loss	($1,670.00)
Profit Factor	0.85
Total Number of Trades	38
Percent Profitable	47.37%
Winning Trades	18
Losing Trades	20
Even Trades	0
Return on Initial Capital	(0.26%)
Annual Rate of Return	(0.03%)
Buy & Hold Return	(1.70%)
Return on Account	(37.83%)

Strategy #2, for the same stock and same time period, had a Profit Factor of 0.85 and delivered a Return on Initial Capital of -0.26%.

It appears that the trading system #1, the one involving our entry with channel length, initial stop loss with ATR and profit maximization with ATR gives us the highest profit factor, and thus, the highest expectancy. Therefore, we will choose Strategy #1 for the Club.

4.5.4 Our Trading System vs. Previous Club Trades

We will now compare how this system compares to a sample of trades Limited Investors has done from 2001 to 2011. We want to make sure that our system proves to work well under varying conditions, and therefore improve the Club's performance no matter the situation. To do this, we will select 10 trades from a long list of 398 made by the

Club that have different characteristics. For example, we will select winning trades and losing trades. Our objective is that, for the winning trades, our system will make a bigger profit, and for the losing trades, either a smaller loss or a profit. Also, we will back test against trades in different types of market, so we will choose trades made in a bear market, for example. We will show the procedure of how we analyze the performance of our trading system against a trade made by the Club for the first trade. We will include the complete results for the other trades in the Appendix.

Limited Investors bought 100 shares of Pfizer (PFE) on 2/14/2006 at $26.43. It sold the 100 shares on 12/19/2006 at $25.617 for a loss of -$81.30. We will run our strategy on Tradestation during the same time period with 100 shares of PFE. We want to see if in fact our system entered the trade and exit in the same dates as the Club did, or if it identified a better time to do so. We optimized the inputs and got the following results. This is the screenshot of PFE from July 2005- January 2007:

Figure 16: PFE

During the same time period when the Club bought and sold 100 shares of PFE, our system actually bought and sold four times on different dates. It first identified an opportunity of getting in on around February 2006, so actually this one did match the entry of the Club (recall it was 2/14/2006). However, it only held it four 4 weeks and sold it for a profit. Then, it identified another buying opportunity on July 2006 and, again, sold it briefly after 2 weeks for a small profit. A third winning trade took place between August and September. Finally, the fourth trade did make a loss, buying 100 shares in September 2006 at around $27 and selling them for $26.50. The strategy report for this trade is below:

Table 15: PFE Strategy Report

	All Trades
Total Net Profit	$277.00
Gross Profit	$384.00
Gross Loss	($107.00)
Profit Factor	3.59
Total Number of Trades	4
Percent Profitable	75.00%
Winning Trades	3
Losing Trades	1
Even Trades	0

So while the Club entered the trade on February 2006 and sold on December 2006, our system did four brief trades during the same amount of time. As you can see on the report, the four trades in aggregate delivered a total profit of $277. Compared to the $81.30 loss by the Club, this is a much better result.

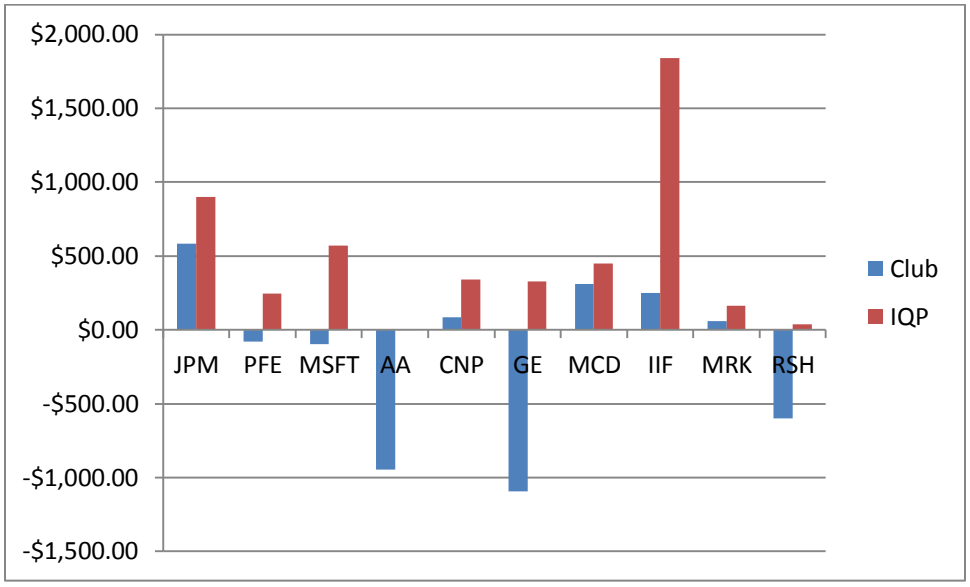
We repeated this analysis with the other nine trades in our sample. Following table summarizes our results:

Table 16: Summary of Performance of Club Trades vs. New Trading System

PROFIT/ LOSS DURING THE SAME TIME PERIOD				
STOCK	**PERIOD**	**LIMITED INVESTORS**	**IQP SYSTEM**	**IMPROVEMENT**
JPM	1/03-2/04	$583.00	$900.00	+ $317.00
PFE	2/06-12/06	-$81.30	$277.00	+ $358.30
MSFT	4/04-5/06	-$98.25	$570.00	+ $668.25
AA	10/08-	-$945.56	+$4.00	+ $949.56

	04/09			
CNP	8/05-8/06	$85.50	$343.00	257.5
GE	3/08-5/10	-$1,094.40	$327.00	1421,4
MCD	1/04-4/05	$312.00	$448.00	136
IIF	8/05-5/06	$249.50	$1,839.00	1589,5
MRK	2/05-3/06	$61.00	$163.00	102
RSH	8/05-4/06	-$597.60	$39.00	636,6
TOTAL		**-1526.11**	**4877**	**6436.11**

Figure 17: Trade Profits by Club vs. IQP



The table above illustrates a comparison of the performance of the trading made by Limited Investors against the performance of our proposed trading system. As we said before, this sample represents different conditions. For instance, JPM was already a winning trade but our strategy improved it even more. The Club bought 100 shares of JPM in January 2003 and sold them for a profit of $583 on February 2004. However, during the same

period our trading system delivered a profit of $900, representing an improvement of $317. The MSFT trade from 4/04 to 5/06 lost -$98.25, while our strategy during the same time period gave a profit of $570, representing a gain of $668.25. The AA trade was in 2008, during the financial crisis and while the Club lost -$945.56, our system delivered a profit of $4.00, representing a difference of +$949.56. If only the Club would have used our system in these 10 trades only, they would have made $6,436.11 more. If used on all 398, the amount of additional profits would be significant.

Clearly, the results show that the new trading system greatly outperforms the previous trades and therefore would bring significant benefits to the investment club. Due to time constraints, we cannot compare each of the 398 trades made by Limited Investors from January 2001 to January 2011, but we will that these samples of trades is a strong representation of them since they represent different time periods, and both winning and losing trades. Therefore we are confident that our strategy will work with most stocks/trades that the fund has done, ultimately improving their expectancy and equity curve.

5. Conclusions

The objective of this Interactive Qualifying Project was to improve the performance of Limited Investors' investment fund by, first, doing an extensive correlation analysis and then developing an automated trading system customized for the Club.

From the correlation analysis, we see that most of the stocks in current portfolio are highly positively correlated with each other, a few are moderately positively correlated, and few stocks have shown a negative correlation, especially in a bear market. Both Porter Stansberry Stocks and Breakfast Club Meeting Stocks are more highly positively correlated in a bear market than in a bull market. And foreign and domestic stocks in current portfolio are highly positively correlated with each other. In conclusion, Limited Investors currently portfolio is significantly undiversified.

A good diversified portfolio aims to minimize risk. Therefore we recommend Limited Investors adjusting their portfolio by implementing the following diversification strategies.

- Identify the correlations between stocks prices
  We recommend the Club to get the stock monthly from Yahoo Finance portal, which we personally think is faster than getting monthly prices from TradeStation for our correlation method. Then the Club can use statistic software such as SPSS to get the correlation coefficients and the significance level by importing monthly average prices from Excel to SPSS. After identifying the correlations between different stocks the Club can evaluate the diversification of this particular group of stocks. We suggest that the Club always look for well diversified portfolio which reduces their investing risks. You can do this by getting rid of the stock that has a highly positively correlation coefficients with another stock. However, higher risk doesn't necessarily mean higher losses. For example stock A has better performance in a bull market than in a bear market based on the historical data analysis, then when you are in a bull market, a portfolio that has many stocks positively correlated with stock A may give you a better profits than a well-diversified portfolio. However, it is hard to predict the market. Higher risk is also more likely to lead you to loss. That is why we suggest the Club to have well-diversified portfolio and to reduce investing risk.
- Diversify across industries and sectors
  This is the most common way to diversify your portfolio. Don't put all of your investments in one sector or industry. By employing this strategy, you are controlling the level of risk that your money is exposed to since your funds are spread across different sectors and industries. If you are interested in following a particular sector or industry but do not want to put all your money into one company's stock, you can buy sector funds that specialize in a specific industry or stock group, such as financial stocks, internet stocks, semi-conductor stocks and so on.

- Add index funds or fixed-income funds to the mix
  Investing in stocks that track various indexes make a wonderful long-term diversification investment for your portfolio. By adding some fixed-income solutions, you are further hedging your portfolio against market volatility and uncertainty.
- Add to your investments on a regular basis
  By buying stocks on a regular basis, you will end up picking up stocks at a variety of prices as they fluctuate. Here we employ a technique called Dollar-Cost Averaging, meaning you buy a fixed dollar amount of a particular investment on a regular schedule, regardless of the share price. More shares are purchased when prices are low, and fewer shares are bought when prices are high. This approach is used to smooth out the peaks and valleys created by market volatility: you invest money on a regular basis into a specified portfolio of stocks.
- Know when to get out
  Instead of buying and holding strategy, we recommend Limited Investors a computerized trading strategy which will tell you when to get out scientifically. For people who trust buying and holding and dollar-cost averaging, stay current with your investment and remain in tune with overall market conditions and know what is happening to the companies you invest in.

We have showed that a simple trading system built on Tradestation is capable of bringing great results. With a sample of only ten past trades out of the 398 that the Club has made from January 2001 to January 2011, the strategies in our trading system delivered a total profit of $4,877, compared to a total loss of $1,526 from the original trades made by the Club. This represents an improvement of $6,436 due to the trading strategies, in ten trades only. Our entry strategy involved finding the highest high of a certain number of past bars (this number is obtained through optimization) while having an increasing volume. Our exit strategy had two components. The first is an initial stop loss placed at a multiple of average true ranges from the entry price which gives the trader the peace of mind of not having to lose a large amount of money from a big lose in prices. The second is a profit maximizing strategy, also based on average true range, that aims to keep profits running and exit the highest possible. These strategies are not sophisticated and based on weekly bars, so that the Club can manage it without too much time consumption. By implementing a scientific method based on technical rules as opposed to a “gut feeling,” we have proved that great results can be achieved.

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7. Appendi

Microsoft (MSFT)

Entry Date 4/13/2004 Entry Price 25.57 Exit Date 5/3/2006 Exit Price 24.26

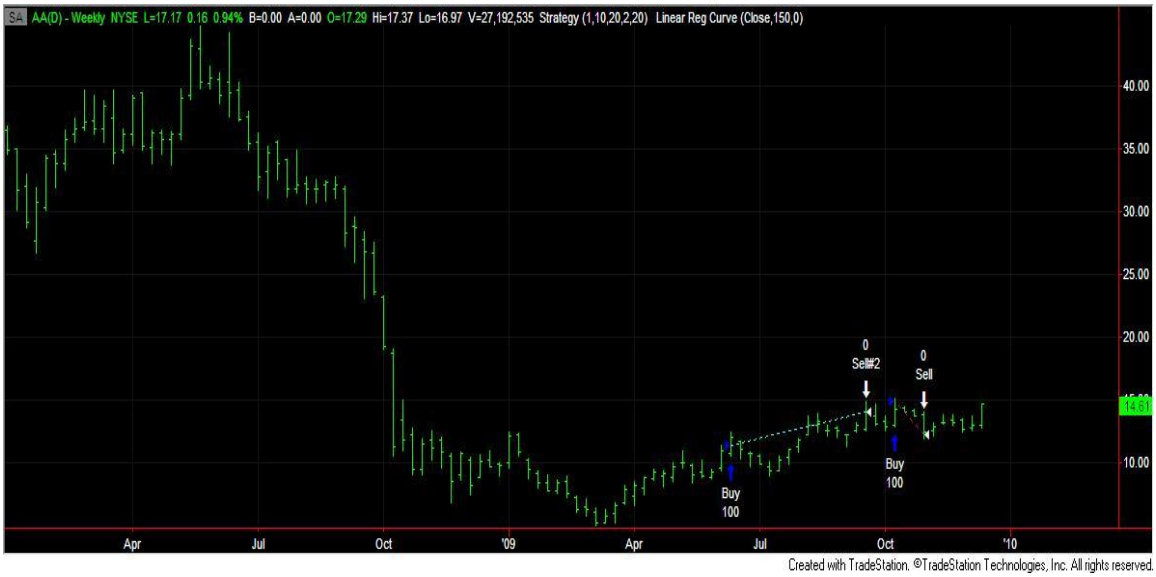
75 shares loss -$98.25

	All Trades
Total Net Profit	$570.00
Gross Profit	$747.00
Gross Loss	($177.00)
Profit Factor	4.22
Total Number of Trades	5
Percent Profitable	80.00%
Winning Trades	4
Losing Trades	1
Even Trades	0
Return on Initial Capital	0.57%
Annual Rate of Return	0.29%
Buy & Hold Return	12.87%
Return on Account	322.03%

ALCOA INC (AA)

Entry Date 10/14/2008 Entry Price 15.1878 Exit Date 5/6/2009 Exit Price 10.46

100 shares loss -$945.56



TradeStation TradeManager Performance Report IQP, AA, Weekly, 1/4/2008 4:00:00 PM - 12/11/2009 4:00:00 PM

	All Trades
Total Net Profit	$4.00
Gross Profit	$268.00
Gross Loss	($264.00)
Profit Factor	1.02
Total Number of Trades	2
Percent Profitable	50.00%
Winning Trades	1
Losing Trades	1
Even Trades	0
Return on Initial Capital	0.00%

Annual Rate of Return	0.00%
Buy & Hold Return	28.84%
Return on Account	1.52%

JP Morgan Chase (JPM)

Entry Date 1/13/2003 Entry Price 27.26 Exit Date 2/10/2004 Exit Price 38.92

100 shares Profit $583.00

TradeStation TradeManager Performance Report

IQP, JPM, Weekly, 1/4/2002 4:00:00 PM - 12/31/2004 4:00:00 PM

	All Trades
Total Net Profit	$900.00
Gross Profit	$1,362.00
Gross Loss	($462.00)
Profit Factor	2.95

Total Number of Trades	4
Percent Profitable	75.00%
Winning Trades	3
Losing Trades	1
Even Trades	0
Return on Initial Capital	0.90%
Annual Rate of Return	0.44%
Buy & Hold Return	37.84%
Return on Account	194.81%
Avg. Monthly Return	$69.23

RADIOSHACK CORP

Entry: 8/6/2005 25.29

Exit: 4/21/2006 17.82

Shares: 100

Loss: -$597.60

	All Trades
Total Net Profit	$39.00
Gross Profit	$39.00
Gross Loss	$0.00
Profit Factor	n/a
Total Number of Trades	1
Percent Profitable	100.00%
Winning Trades	1
Losing Trades	0
Even Trades	0

Return on Initial Capital	0.04%
Annual Rate of Return	0.02%
Buy & Hold Return	(12.12%)

MORGAN STANLEY INDIA

Entry: 8/13/2005 38.21

Exit: 5/30/2006 43.2

Shares: 100

Profit: $249.50

	All Trades
Total Net Profit	$1,839.00
Gross Profit	$2,819.00
Gross Loss	($980.00)
Profit Factor	2.88

Total Number of Trades	8
Percent Profitable	75.00%
Winning Trades	6
Losing Trades	2
Even Trades	0
Return on Initial Capital	1.84%
Annual Rate of Return	1.17%
Buy & Hold Return	48.80%
Return on Account	323.20%

MCDONALDS CORP
Entry: 1/30/2004 25.52
Exit: 4/21/2005 29.42
Shares: 100
Profit: $312.00

GENERAL ELECTRIC
Entry: 3/19/2008 34.49
Exit: 05/24/2010 16.25
100 shares
Loss: -$1,094.40

	All Trades
Total Net Profit	$327.00
Gross Profit	$410.00
Gross Loss	($83.00)
Profit Factor	4.94
Total Number of Trades	5
Percent Profitable	80.00%
Winning Trades	4

Losing Trades	1
Even Trades	0
Return on Initial Capital	0.33%
Annual Rate of Return	0.14%
Buy & Hold Return	13.36%
Return on Account	393.98%

CENTERPOINT ENERGY

Entry: 8/19/2005 13.18
Exit: 8/11/2006 13.75
100 shares
Profit: $85.50

	All Trades
Total Net Profit	$343.00
Gross Profit	$343.00
Gross Loss	$0.00
Profit Factor	n/a
Total Number of Trades	4
Percent Profitable	100.00%
Winning Trades	4

Losing Trades	0
Even Trades	0
Return on Initial Capital	0.34%
Annual Rate of Return	0.36%
Buy & Hold Return	28.92%
Return on Account	n/a

MERCK & CO INC

Entry: 2/3/2005 27.8

Exit: 2/13/2006 33.9

100 shares

Profit: $61.00

	All Trades
Total Net Profit	$163.00
Gross Profit	$465.00
Gross Loss	($302.00)
Profit Factor	1.54
Total Number of Trades	5
Percent Profitable	60.00%
Winning Trades	3
Losing Trades	2
Even Trades	0

Return on Initial Capital	0.16%
Annual Rate of Return	0.12%
Buy & Hold Return	5.32%
Return on Account	105.16%

Current Portfolio Stocks Correlation Coefficients in a Bull Market

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Correlations

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	Elapsed Time	

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Correlations

		TBF	ANSS	CCF	DYSL	INTC	MSFT
TBF	**Pearson Correlation**	1	-.347	-.584	-.635	.114	.588
	Sig. (2-tailed)		.134	.007	.003	.633	.006
	N	20	20	20	20	20	20
ANSS	**Pearson Correlation**	-.347	1	.796	.839	.722	.440
	Sig. (2-tailed)	.134		.000	.000	.000	.041
	N	20	22	22	22	22	22
CCF	**Pearson Correlation**	-.584	.796	1	.907	.385	.003
	Sig. (2-tailed)	.007	.000		.000	.077	.989
	N	20	22	22	22	22	22
DYSL	**Pearson Correlation**	-.635	.839	.907	1	.474	.204
	Sig. (2-tailed)	.003	.000	.000		.026	.361
	N	20	22	22	22	22	22
INTC	**Pearson Correlation**	.114	.722	.385	.474	1	.644
	Sig. (2-tailed)	.633	.000	.077	.026		.001
	N	20	22	22	22	22	22
MSFT	**Pearson Correlation**	.588	.440	.003	.204	.644	1
	Sig. (2-tailed)	.006	.041	.989	.361	.001	
	N	20	22	22	22	22	22
EWZ	**Pearson Correlation**	-.260	.768	.640	.829	.574	.604
	Sig. (2-tailed)	.269	.000	.001	.000	.005	.003
	N	20	22	22	22	22	22
MCHFX	**Pearson Correlation**	-.640	.850	.872	.970	.545	.276
	Sig. (2-tailed)	.002	.000	.000	.000	.009	.213
	N	20	22	22	22	22	22
EWY	**Pearson Correlation**	-.458	.943	.890	.917	.651	.333
	Sig. (2-tailed)	.043	.000	.000	.000	.001	.130
	N	20	22	22	22	22	22
THO	**Pearson Correlation**	-.726	.825	.942	.964	.444	.061
	Sig. (2-tailed)	.000	.000	.000	.000	.038	.787
	N	20	22	22	22	22	22
CAG	**Pearson Correlation**	.033	.610	.165	.330	.795	.642
	Sig. (2-tailed)	.889	.003	.464	.133	.000	.001
	N	20	22	22	22	22	22
KFT	**Pearson Correlation**	-.648	.793	.879	.871	.576	.108
	Sig. (2-tailed)	.002	.000	.000	.000	.005	.633
	N	20	22	22	22	22	22
MCD	**Pearson Correlation**	-.760	.816	.881	.929	.474	.115
	Sig. (2-tailed)	.000	.000	.000	.000	.026	.610
	N	20	22	22	22	22	22

****.Correlation is significant at the 0.01 level (2-tailed).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		EWZ	MCHFX	EWY	THO	CAG	KFT
TBF	**Pearson Correlation**	-.260	-.640	-.458	-.726	.033	-.648
	Sig. (2-tailed)	.269	.002	.043	.000	.889	.002
	N	20	20	20	20	20	20
ANSS	**Pearson Correlation**	.768	.850	.943	.825	.610	.793
	Sig. (2-tailed)	.000	.000	.000	.000	.003	.000
	N	22	22	22	22	22	22
CCF	**Pearson Correlation**	.640	.872	.890	.942	.165	.879
	Sig. (2-tailed)	.001	.000	.000	.000	.464	.000
	N	22	22	22	22	22	22
OYSL	**Pearson Correlation**	.829	.970	.917	.964	.330	.871
	Sig. (2-tailed)	.000	.000	.000	.000	.133	.000
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	.574	.545	.651	.444	.795	.576
	Sig. (2-tailed)	.005	.009	.001	.038	.000	.005
	N	22	22	22	22	22	22
MSFT	**Pearson Correlation**	.604	.276	.333	.061	.642	.108
	Sig. (2-tailed)	.003	.213	.130	.787	.001	.633
	N	22	22	22	22	22	22
EWZ	**Pearson Correlation**	1	.868	.810	.756	.532	.666
	Sig. (2-tailed)		.000	.000	.000	.011	.001
	N	22	22	22	22	22	22
MCHFX	**Pearson Correlation**	.868	1	.932	.964	.445	.916
	Sig. (2-tailed)	.000		.000	.000	.038	.000
	N	22	22	22	22	22	22
EWY	**Pearson Correlation**	.810	.932	1	.923	.455	.890
	Sig. (2-tailed)	.000	.000		.000	.033	.000
	N	22	22	22	22	22	22
THO	**Pearson Correlation**	.756	.964	.923	1	.314	.929
	Sig. (2-tailed)	.000	.000	.000		.155	.000
	N	22	22	22	22	22	22
CAG	**Pearson Correlation**	.532	.445	.455	.314	1	.424
	Sig. (2-tailed)	.011	.038	.033	.155		.049
	N	22	22	22	22	22	22
KFT	**Pearson Correlation**	.666	.916	.890	.929	.424	1
	Sig. (2-tailed)	.001	.000	.000	.000	.049	
	N	22	22	22	22	22	22
MCO	**Pearson Correlation**	.729	.952	.868	.960	.430	.922
	Sig. (2-tailed)	.000	.000	.000	.000	.046	.000
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		MCD	ACI	COP	CPN	EGLE	EXC
TBF	**Pearson Correlation**	-.760	-.374	-.456	-.569	.457	.771
	Sig. (2-tailed)	.000	.104	.043	.009	.043	.000
	N	20	20	20	20	20	20
ANSS	**Pearson Correlation**	.816	.956	.925	.627	-.697	-.669
	Sig. (2-tailed)	.000	.000	.000	.002	.000	.001
	N	22	22	22	22	22	22
CCF	**Pearson Correlation**	.881	.885	.886	.673	-.535	-.555
	Sig. (2-tailed)	.000	.000	.000	.001	.010	.007
	N	22	22	22	22	22	22
DYSL	**Pearson Correlation**	.929	.864	.836	.487	-.532	-.640
	Sig. (2-tailed)	.000	.000	.000	.022	.011	.001
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	.474	.595	.521	.331	-.431	-.553
	Sig. (2-tailed)	.026	.004	.013	.133	.045	.008
	N	22	22	22	22	22	22
MSFT	**Pearson Correlation**	.115	.323	.204	-.260	.015	- 060
	Sig. (2-tailed)	.610	.142	.363	.243	.946	.792
	N	22	22	22	22	22	22
EWZ	**Pearson Correlation**	.729	.747	.669	.157	-.341	-.440
	Sig. (2-tailed)	.000	.000	.001	.485	.120	.040
	N	22	22	22	22	22	22
MCHFX	**Pearson Correlation**	.952	.857	.821	.491	-.529	-.668
	Sig. (2-tailed)	.000	.000	.000	.020	.011	.001
	N	22	22	22	22	22	22
EWY	**Pearson Correlation**	.868	.966	.923	.618	-.651	-.590
	Sig. (2-tailed)	.000	.000	.000	.002	.001	.004
	N	22	22	22	22	22	22
THO	**Pearson Correlation**	.960	.873	.861	.623	-.579	-.681
	Sig. (2-tailed)	.000	.000	.000	.002	.005	.000
	N	22	22	22	22	22	22
CAG	**Pearson Correlation**	.430	.401	.346	.177	-.389	-.631
	Sig. (2-tailed)	.046	.065	.115	.432	.074	.002
	N	22	22	22	22	22	22
KFT	**Pearson Correlation**	.922	.815	.807	.650	-.550	-.706
	Sig. (2-tailed)	.000	.000	.000	.001	.008	.000
	N	22	22	22	22	22	22
MCD	**Pearson Correlation**	1	.824	.822	.615	-.516	-.802
	Sig. (2-tailed)		.000	.000	.002	.014	.000
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		GDX	HSY	MON	SIVB	SJT	SLV
TBF	**Pearson Correlation**	-.724	-.797	.837	-.143	-.757	-.457
	Sig. (2-tailed)	.000	.000	.000	.547	.000	.043
	N	20	20	20	20	20	20
ANSS	**Pearson Correlation**	.846	.720	-.303	.944	.817	.883
	Sig. (2-tailed)	.000	.000	.171	.000	.000	.000
	N	22	22	22	22	22	22
CCF	**Pearson Correlation**	.871	.792	-.358	.686	.725	.915
	Sig. (2-tailed)	.000	.000	.101	.000	.000	.000
	N	22	22	22	22	22	22
DYSL	**Pearson Correlation**	.948	.738	-.468	.713	.788	.854
	Sig. (2-tailed)	.000	.000	.028	.000	.000	.000
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	.466	.512	-.225	.856	.582	.443
	Sig. (2-tailed)	.029	.015	.314	.000	.004	.039
	N	22	22	22	22	22	22
MSFT	**Pearson Correlation**	.130	-.146	.227	.514	.132	.111
	Sig. (2-tailed)	.565	.517	.311	.014	.557	.623
	N	22	22	22	22	22	22
EWZ	**Pearson Correlation**	.779	.451	-.289	.708	.632	.641
	Sig. (2-tailed)	.000	.035	.193	.000	.002	.001
	N	22	22	22	22	22	22
MCHFX	**Pearson Correlation**	.934	.758	-.504	.739	.822	.812
	Sig. (2-tailed)	.000	.000	.017	.000	.000	.000
	N	22	22	22	22	22	22
EWY	**Pearson Correlation**	.892	.757	-.313	.893	.774	.903
	Sig. (2-tailed)	.000	.000	.155	.000	.000	.000
	N	22	22	22	22	22	22
THO	**Pearson Correlation**	.956	.841	-.533	.706	.829	.879
	Sig. (2-tailed)	.000	.000	.011	.000	.000	.000
	N	22	22	22	22	22	22
CAG	**Pearson Correlation**	.350	.414	-.425	.670	.664	.223
	Sig. (2-tailed)	.111	.055	.049	.001	.001	.318
	N	22	22	22	22	22	22
KFT	**Pearson Correlation**	.837	.869	-.523	.741	.815	.787
	Sig. (2-tailed)	.000	.000	.013	.000	.000	.000
	N	22	22	22	22	22	22
MCD	**Pearson Correlation**	.941	.847	-.639	.671	.901	.806
	Sig. (2-tailed)	.000	.000	.001	.001	.000	.000
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TIE	*WY*	MO	NLY	PSEC	CPNO
TBF	**Pearson Correlation**	-.830	.774	-.703	.071	.613	-.586
	Sig. (2-tailed)	.000	.000	.001	.767	.004	.007
	N	20	20	20	20	20	20
ANSS	**Pearson Correlation**	.716	-.359	.864	.582	.557	.937
	Sig. (2-tailed)	.000	.101	.000	.004	.007	.000
	N	22	22	22	22	22	22
CCF	**Pearson Correlation**	.724	-.747	.922	.375	.129	.859
	Sig. (2-tailed)	.000	.000	.000	.086	.568	.000
	N	22	22	22	22	22	22
DYSL	**Pearson Correlation**	.766	-.687	.947	.600	.166	.862
	Sig. (2-tailed)	.000	.000	.000	.003	.461	.000
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	.452	.184	.498	.530	.663	.589
	Sig. (2-tailed)	.035	.412	.018	.011	.001	.004
	N	22	22	22	22	22	22
MSFT	**Pearson Correlation**	- 018	.467	.127	.446	.815	.199
	Sig. (2-tailed)	.935	.028	.572	.037	.000	.374
	N	22	22	22	22	22	22
EWZ	**Pearson Correlation**	.564	-.336	.757	.744	.452	.674
	Sig. (2-tailed)	.006	.126	.000	.000	.035	.001
	N	22	22	22	22	22	22
MCHFX	**Pearson Correlation**	.824	-.641	.964	.620	.228	.893
	Sig. (2-tailed)	.000	.001	.000	.002	.307	.000
	N	22	22	22	22	22	22
EWY	**Pearson Correlation**	.735	-.535	.929	.633	.421	.925
	Sig. (2-tailed)	.000	.010	.000	.002	.051	.000
	N	22	22	22	22	22	22
THO	**Pearson Correlation**	.842	-.754	.983	.528	.107	.900
	Sig. (2-tailed)	.000	.000	.000	.012	.637	.000
	N	22	22	22	22	22	22
CAG	**Pearson Correlation**	.538	.265	.404	.459	.625	.522
	Sig. (2-tailed)	.010	.233	.062	.032	.002	.013
	N	22	22	22	22	22	22
KFT	**Pearson Correlation**	.841	-.612	.949	.470	.203	.883
	Sig. (2-tailed)	.000	.002	.000	.027	.365	.000
	N	22	22	22	22	22	22
MCD	**Pearson Correlation**	.914	-.677	.970	.410	.099	.916
	Sig. (2-tailed)	.000	.001	.000	.058	.661	.000
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		HGT	CVX	TOT	XOM	WMB	T
TBF	**Pearson Correlation**	-.735	-.315	730	.251	-.107	-.354
	Sig. (2-tailed)	.000	.176	.000	.287	.653	.126
	N	20	20	20	20	20	20
ANSS	**Pearson Correlation**	.897	.891	.009	.429	.933	.654
	Sig. (2-tailed)	.000	.000	.970	.047	.000	.001
	N	22	22	22	22	22	22
CCF	**Pearson Correlation**	.837	.839	-.141	.415	.729	.799
	Sig. (2-tailed)	.000	.000	.531	.055	.000	.000
	N	22	22	22	22	22	22
DYSL	**Pearson Correlation**	.874	.782	-.157	.265	.689	.817
	Sig. (2-tailed)	.000	.000	.485	.234	.000	.000
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	.557	.493	-.027	.145	.681	.254
	Sig. (2-tailed)	.007	.020	.907	.520	.000	.254
	N	22	22	22	22	22	22
MSFT	**Pearson Correlation**	.108	.273	.519	.228	.472	.180
	Sig. (2-tailed)	.632	.218	.013	.307	.026	.423
	N	22	22	22	22	22	22
EW2	**Pearson Correlation**	.686	.675	.166	.225	.650	.766
	Sig. (2-tailed)	.000	.001	.459	.314	.001	.000
	N	22	22	22	22	22	22
MCHFX	**Pearson Correlation**	.868	.763	-.189	.178	.701	.803
	Sig. (2-tailed)	.000	.000	.398	.429	.000	.000
	N	22	22	22	22	22	22
EWY	**Pearson Correlation**	.888	.892	- 020	.413	.855	.816
	Sig. (2-tailed)	.000	.000	.930	.056	.000	.000
	N	22	22	22	22	22	22
THO	**Pearson Correlation**	.906	.793	-.268	.220	.687	.817
	Sig. (2-tailed)	.000	.000	.228	.325	.000	.000
	N	22	22	22	22	22	22
CAG	**Pearson Correlation**	.522	.294	-.123	-.187	.537	.008
	Sig. (2-tailed)	.013	.184	.586	.404	.010	.972
	N	22	22	22	22	22	22
KFT	**Pearson Correlation**	.834	.739	-.319	.153	.702	.692
	Sig. (2-tailed)	.000	.000	.148	.496	.000	.000
	N	22	22	22	22	22	22
MCD	**Pearson Correlation**	.897	.730	-.379	.093	.674	.682
	Sig. (2-tailed)	.000	.000	.082	.681	.001	.000
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TEF	VZ	TGT	WMT
TBF	**Pearson Correlation**	.335	-.111	-.495	.097
	Sig. (2-tailed)	.149	.642	.026	.683
	N	20	20	20	20
ANSS	**Pearson Correlation**	-.646	.627	.829	.693
	Sig. (2-tailed)	.001	.002	.000	.000
	N	22	22	22	22
CCF	**Pearson Correlation**	-.579	.728	.649	.510
	Sig. (2-tailed)	.005	.000	.001	.015
	N	22	22	22	22
DYSL	**Pearson Correlation**	-.390	.621	.792	.645
	Sig. (2-tailed)	.073	.002	.000	.001
	N	22	22	22	22
INTC	**Pearson Correlation**	-.321	.196	.793	.625
	Sig. (2-tailed)	.145	.382	.000	.002
	N	22	22	22	22
MSFT	**Pearson Correlation**	.126	.140	.462	.757
	Sig. (2-tailed)	.578	.536	.031	.000
	N	22	22	22	22
EWZ	**Pearson Correlation**	- 083	.494	.768	.789
	Sig. (2-tailed)	.713	.019	.000	.000
	N	22	22	22	22
MCHFX	**Pearson Correlation**	-.369	.582	.846	.705
	Sig. (2-tailed)	.091	.004	.000	.000
	N	22	22	22	22
EWY	**Pearson Correlation**	-.557	.722	.833	.706
	Sig. (2-tailed)	.007	.000	.000	.000
	N	22	22	22	22
THO	**Pearson Correlation**	-.482	.626	.778	.557
	Sig. (2-tailed)	.023	.002	.000	.007
	N	22	22	22	22
CAG	**Pearson Correlation**	-.223	-.111	.700	.543
	Sig. (2-tailed)	.318	.624	.000	.009
	N	22	22	22	22
KFT	**Pearson Correlation**	-.527	.553	.805	.614
	Sig. (2-tailed)	.012	.008	.000	.002
	N	22	22	22	22
MCD	**Pearson Correlation**	-.482	.488	.820	.590
	Sig. (2-tailed)	.023	.021	.000	.004
	N	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TBF	ANSS	CCF	DYSL	INTC	MSFT
ACI	**Pearson Correlation**	-.374	.956	.885	.864	.595	.323
	Sig. (2-tailed)	.104	.000	.000	.000	.004	.142
	N	20	22	22	22	22	22
COP	**Pearson Correlation**	-.456	.925	.886	.836	.521	.204
	Sig. (2-tailed)	.043	.000	.000	.000	.013	.363
	N	20	22	22	22	22	22
CPN	**Pearson Correlation**	-.569	.627	.673	.487	.331	-.260
	Sig. (2-tailed)	.009	.002	.001	.022	.133	.243
	N	20	22	22	22	22	22
EGLE	**Pearson Correlation**	.457	-.697	-.535	-.532	-.431	.015
	Sig. (2-tailed)	.043	.000	.010	.011	.045	.946
	N	20	22	22	22	22	22
EXC	**Pearson Correlation**	.771	-.669	-.555	-.640	-.553	- 060
	Sig. (2-tailed)	.000	.001	.007	.001	.008	.792
	N	20	22	22	22	22	22
GDX	**Pearson Correlation**	-.724	.846	.871	.948	.466	.130
	Sig. (2-tailed)	.000	.000	.000	.000	.029	.565
	N	20	22	22	22	22	22
HSY	**Pearson Correlation**	-.797	.720	.792	.738	.512	-.146
	Sig. (2-tailed)	.000	.000	.000	.000	.015	.517
	N	20	22	22	22	22	22
MON	**Pearson Correlation**	.837	-.303	-.358	-.468	-.225	.227
	Sig. (2-tailed)	.000	.171	.101	.028	.314	.311
	N	20	22	22	22	22	22
SIVB	**Pearson Correlation**	-.143	.944	.686	.713	.856	.514
	Sig. (2-tailed)	.547	.000	.000	.000	.000	.014
	N	20	22	22	22	22	22
SJT	**Pearson Correlation**	-.757	.817	.725	.788	.582	.132
	Sig. (2-tailed)	.000	.000	.000	.000	.004	.557
	N	20	22	22	22	22	22
SLV	**Pearson Correlation**	-.457	.883	.915	.854	.443	.111
	Sig. (2-tailed)	.043	.000	.000	.000	.039	.623
	N	20	22	22	22	22	22
TIE	**Pearson Correlation**	-.830	.716	.724	.766	.452	- 018
	Sig. (2-tailed)	.000	.000	.000	.000	.035	.935
	N	20	22	22	22	22	22
WY	**Pearson Correlation**	.774	-.359	-.747	-.687	.184	.467
	Sig. (2-tailed)	.000	.101	.000	.000	.412	.028
	N	20	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		EWZ	MCHFX	EWY	THO	CAG	KFT
ACI	**Pearson Correlation**	.747	.857	.966	.873	.401	.815
	Sig. (2-tailed)	.000	.000	.000	.000	.065	.000
	N	22	22	22	22	22	22
COP	**Pearson Correlation**	.669	.821	.923	.861	.346	.807
	Sig. (2-tailed)	.001	.000	.000	.000	.115	.000
	N	22	22	22	22	22	22
CPN	**Pearson Correlation**	.157	.491	.618	.623	.177	.650
	Sig. (2-tailed)	.485	.020	.002	.002	.432	.001
	N	22	22	22	22	22	22
EGLE	**Pearson Correlation**	-.341	-.529	-.651	-.579	-.389	-.550
	Sig. (2-tailed)	.120	.011	.001	.005	.074	.008
	N	22	22	22	22	22	22
EXC	**Pearson Correlation**	-.440	-.668	-.590	-.681	-.631	-.706
	Sig. (2-tailed)	.040	.001	.004	.000	.002	.000
	N	22	22	22	22	22	22
GDX	**Pearson Correlation**	.779	.934	.892	.956	.350	.837
	Sig. (2-tailed)	.000	.000	.000	.000	.111	.000
	N	22	22	22	22	22	22
HSY	**Pearson Correlation**	.451	.758	.757	.841	.414	.869
	Sig. (2-tailed)	.035	.000	.000	.000	.055	.000
	N	22	22	22	22	22	22
MON	**Pearson Correlation**	-.289	-.504	-.313	-.533	-.425	-.523
	Sig. (2-tailed)	.193	.017	.155	.011	.049	.013
	N	22	22	22	22	22	22
SIVB	**Pearson Correlation**	.708	.739	.893	.706	.670	.741
	Sig. (2-tailed)	.000	.000	.000	.000	.001	.000
	N	22	22	22	22	22	22
SJT	**Pearson Correlation**	.632	.822	.774	.829	.664	.815
	Sig. (2-tailed)	.002	.000	.000	.000	.001	.000
	N	22	22	22	22	22	22
SLV	**Pearson Correlation**	.641	.812	.903	.879	.223	.787
	Sig. (2-tailed)	.001	.000	.000	.000	.318	.000
	N	22	22	22	22	22	22
TIE	**Pearson Correlation**	.564	.824	.735	.842	.538	.841
	Sig. (2-tailed)	.006	.000	.000	.000	.010	.000
	N	22	22	22	22	22	22
WY	**Pearson Correlation**	-.336	-.641	-.535	-.754	.265	-.612
	Sig. (2-tailed)	.126	.001	.010	.000	.233	.002
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		MCD	ACI	COP	CPN	EGLE	EXC
ACI	**Pearson Correlation**	.824	1	.966	.669	-.630	-.563
	Sig. (2-tailed)	.000		.000	.001	.002	.006
	N	22	22	22	22	22	22
COP	**Pearson Correlation**	.822	.966	1	.788	-.696	-.585
	Sig. (2-tailed)	.000	.000		.000	.000	.004
	N	22	22	22	22	22	22
CPN	**Pearson Correlation**	.615	.669	.788	1	-.701	-.591
	Sig. (2-tailed)	.002	.001	.000		.000	.004
	N	22	22	22	22	22	22
EGLE	**Pearson Correlation**	-.516	-.630	-.696	-.701	1	.529
	Sig. (2-tailed)	.014	.002	.000	.000		.011
	N	22	22	22	22	22	22
EXC	**Pearson Correlation**	-.802	-.563	-.585	-.591	.529	1
	Sig. (2-tailed)	.000	.006	.004	.004	.011	
	N	22	22	22	22	22	22
GDX	**Pearson Correlation**	.941	.869	.875	.626	-.581	-.723
	Sig. (2-tailed)	.000	.000	.000	.002	.005	.000
	N	22	22	22	22	22	22
HSY	**Pearson Correlation**	.847	.712	.777	.838	-.722	-.832
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	22	22	22	22	22	22
MON	**Pearson Correlation**	-.639	-.222	-.258	-.365	.377	.837
	Sig. (2-tailed)	.001	.321	.245	.095	.084	.000
	N	22	22	22	22	22	22
SIVB	**Pearson Correlation**	.671	.892	.836	.573	-.671	-.595
	Sig. (2-tailed)	.001	.000	.000	.005	.001	.004
	N	22	22	22	22	22	22
SJT	**Pearson Correlation**	.901	.734	.750	.648	-.647	-.922
	Sig. (2-tailed)	.000	.000	.000	.001	.001	.000
	N	22	22	22	22	22	22
SLV	**Pearson Correlation**	.806	.948	.974	.749	-.662	-.527
	Sig. (2-tailed)	.000	.000	.000	.000	.001	.012
	N	22	22	22	22	22	22
TIE	**Pearson Correlation**	.914	.664	.698	.674	-.605	-.872
	Sig. (2-tailed)	.000	.001	.000	.001	.003	.000
	N	22	22	22	22	22	22
WY	**Pearson Correlation**	-.677	-.493	-.525	-.469	.386	.345
	Sig. (2-tailed)	.001	.020	.012	.028	.076	.116
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		GDX	HSY	MON	SIVB	SJT	SLV
ACI	**Pearson Correlation**	.869	.712	-.222	.892	.734	.948
	Sig. (2-tailed)	.000	.000	.321	.000	.000	.000
	N	22	22	22	22	22	22
COP	**Pearson Correlation**	.875	.777	-.258	.836	.750	.974
	Sig. (2-tailed)	.000	.000	.245	.000	.000	.000
	N	22	22	22	22	22	22
CPN	**Pearson Correlation**	.626	.838	-.365	.573	.648	.749
	Sig. (2-tailed)	.002	.000	.095	.005	.001	.000
	N	22	22	22	22	22	22
EGLE	**Pearson Correlation**	-.581	-.722	.377	-.671	-.647	-.662
	Sig. (2-tailed)	.005	.000	.084	.001	.001	.001
	N	22	22	22	22	22	22
EXC	**Pearson Correlation**	-.723	-.832	.837	-.595	-.922	-.527
	Sig. (2-tailed)	.000	.000	.000	.004	.000	.012
	N	22	22	22	22	22	22
GDX	**Pearson Correlation**	1	.810	-.546	.709	.842	.885
	Sig. (2-tailed)		.000	.009	.000	.000	.000
	N	22	22	22	22	22	22
HSY	**Pearson Correlation**	.810	1	-.714	.670	.885	.750
	Sig. (2-tailed)	.000		.000	.001	.000	.000
	N	22	22	22	22	22	22
MON	**Pearson Correlation**	-.546	-.714	1	-.220	-.767	-.218
	Sig. (2-tailed)	.009	.000		.326	.000	.329
	N	22	22	22	22	22	22
SIVB	**Pearson Correlation**	.709	.670	-.220	1	.724	.780
	Sig. (2-tailed)	.000	.001	.326		.000	.000
	N	22	22	22	22	22	22
SJT	**Pearson Correlation**	.842	.885	-.767	.724	1	.693
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	22	22	22	22	22	22
SLV	**Pearson Correlation**	.885	.750	-.218	.780	.693	1
	Sig. (2-tailed)	.000	.000	.329	.000	.000	
	N	22	22	22	22	22	22
TIE	**Pearson Correlation**	.824	.896	-.797	.590	.950	.640
	Sig. (2-tailed)	.000	.000	.000	.004	.000	.001
	N	22	22	22	22	22	22
WY	**Pearson Correlation**	-.663	-.582	.425	-.158	-.466	-.600
	Sig. (2-tailed)	.001	.004	.049	.484	.029	.003
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TIE	*WY*	MO	NLY	PSEC	CPNO
ACI	**Pearson Correlation**	.664	-.493	.881	.509	.463	.911
	Sig. (2-tailed)	.001	.020	.000	.016	.030	.000
	N	22	22	22	22	22	22
COP	**Pearson Correlation**	.698	-.525	.885	.414	.403	.923
	Sig. (2-tailed)	.000	.012	.000	.055	.063	.000
	N	22	22	22	22	22	22
CPN	**Pearson Correlation**	.674	-.469	.652	.006	.084	.755
	Sig. (2-tailed)	.001	.028	.001	.980	.709	.000
	N	22	22	22	22	22	22
EGLE	**Pearson Correlation**	-.605	.386	-.613	-.521	-.248	-.735
	Sig. (2-tailed)	.003	.076	.002	.013	.265	.000
	N	22	22	22	22	22	22
EXC	**Pearson Correlation**	-.872	.345	-.719	-.219	- 027	-.752
	Sig. (2-tailed)	.000	.116	.000	.327	.907	.000
	N	22	22	22	22	22	22
GDX	**Pearson Correlation**	.824	-.663	.939	.503	.125	.894
	Sig. (2-tailed)	.000	.001	.000	.017	.579	.000
	N	22	22	22	22	22	22
HSY	**Pearson Correlation**	.896	-.582	.852	.309	.021	.851
	Sig. (2-tailed)	.000	.004	.000	.162	.928	.000
	N	22	22	22	22	22	22
MON	**Pearson Correlation**	-.797	.425	-.520	-.147	.361	-.473
	Sig. (2-tailed)	.000	.049	.013	.513	.099	.026
	N	22	22	22	22	22	22
SIVB	**Pearson Correlation**	.590	-.158	.745	.617	.663	.827
	Sig. (2-tailed)	.004	.484	.000	.002	.001	.000
	N	22	22	22	22	22	22
SJT	**Pearson Correlation**	.950	-.466	.866	.407	.173	.888
	Sig. (2-tailed)	.000	.029	.000	.060	.442	.000
	N	22	22	22	22	22	22
SLV	**Pearson Correlation**	.640	-.600	.880	.430	.322	.885
	Sig. (2-tailed)	.001	.003	.000	.046	.144	.000
	N	22	22	22	22	22	22
TIE	**Pearson Correlation**	1	-.600	.869	.328	.014	.873
	Sig. (2-tailed)		.003	.000	.136	.951	.000
	N	22	22	22	22	22	22
WY	**Pearson Correlation**	-.600	1	-.692	-.229	.443	-.553
	Sig. (2-tailed)	.003		.000	.306	.039	.008
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		HGT	CVX	TOT	XOM	WMB	T
ACI	**Pearson Correlation**	.864	.947	.059	.551	.915	.780
	Sig. (2-tailed)	.000	.000	.795	.008	.000	.000
	N	22	22	22	22	22	22
COP	**Pearson Correlation**	.878	.982	.026	.585	.917	.753
	Sig. (2-tailed)	.000	.000	.907	.004	.000	.000
	N	22	22	22	22	22	22
CPN	**Pearson Correlation**	.717	.720	-.318	.369	.647	.377
	Sig. (2-tailed)	.000	.000	.150	.091	.001	.084
	N	22	22	22	22	22	22
EGLE	**Pearson Correlation**	-.776	-.645	.180	-.248	-.617	-.383
	Sig. (2-tailed)	.000	.001	.424	.265	.002	.078
	N	22	22	22	22	22	22
EXC	**Pearson Correlation**	-.812	-.448	.655	.226	-.494	-.198
	Sig. (2-tailed)	.000	.037	.001	.312	.020	.376
	N	22	22	22	22	22	22
GDX	**Pearson Correlation**	.914	.807	-.250	.250	.700	.778
	Sig. (2-tailed)	.000	.000	.261	.262	.000	.000
	N	22	22	22	22	22	22
HSY	**Pearson Correlation**	.895	.670	-.534	.059	.611	.473
	Sig. (2-tailed)	.000	.001	.010	.795	.003	.026
	N	22	22	22	22	22	22
MON	**Pearson Correlation**	-.619	-.102	.822	.570	- 062	- 051
	Sig. (2-tailed)	.002	.653	.000	.006	.783	.823
	N	22	22	22	22	22	22
SIVB	**Pearson Correlation**	.807	.820	.069	.418	.904	.562
	Sig. (2-tailed)	.000	.000	.760	.053	.000	.007
	N	22	22	22	22	22	22
SJT	**Pearson Correlation**	.944	.636	-.461	- 063	.660	.423
	Sig. (2-tailed)	.000	.001	.031	.781	.001	.050
	N	22	22	22	22	22	22
SLV	**Pearson Correlation**	.851	.957	.017	.608	.868	.803
	Sig. (2-tailed)	.000	.000	.941	.003	.000	.000
	N	22	22	22	22	22	22
TIE	**Pearson Correlation**	.885	.570	-.557	-.146	.545	.450
	Sig. (2-tailed)	.000	.006	.007	.517	.009	.036
	N	22	22	22	22	22	22
WY	**Pearson Correlation**	-.581	-.452	.366	- 087	-.202	-.661
	Sig. (2-tailed)	.005	.035	.094	.700	.367	.001
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TEF	VZ	TGT	WMT
ACI	**Pearson Correlation**	-.654	.770	.768	.665
	Sig. (2-tailed)	.001	.000	.000	.001
	N	22	22	22	22
COP	**Pearson Correlation**	-.766	.787	.660	.554
	Sig. (2-tailed)	.000	.000	.001	.007
	N	22	22	22	22
CPN	**Pearson Correlation**	-.915	.524	.385	.076
	Sig. (2-tailed)	.000	.012	.077	.736
	N	22	22	22	22
EGLE	**Pearson Correlation**	.716	-.416	-.451	- 090
	Sig. (2-tailed)	.000	.054	.035	.689
	N	22	22	22	22
EXC	**Pearson Correlation**	.477	- 015	-.781	-.304
	Sig. (2-tailed)	.025	.948	.000	.168
	N	22	22	22	22
GDX	**Pearson Correlation**	-.483	.593	.780	.531
	Sig. (2-tailed)	.023	.004	.000	.011
	N	22	22	22	22
HSY	**Pearson Correlation**	-.676	.367	.684	.239
	Sig. (2-tailed)	.001	.093	.000	.284
	N	22	22	22	22
MON	**Pearson Correlation**	.154	.268	-.547	.020
	Sig. (2-tailed)	.495	.228	.008	.930
	N	22	22	22	22
SIVB	**Pearson Correlation**	-.591	.548	.832	.667
	Sig. (2-tailed)	.004	.008	.000	.001
	N	22	22	22	22
SJT	**Pearson Correlation**	-.546	.235	.820	.436
	Sig. (2-tailed)	.009	.292	.000	.043
	N	22	22	22	22
SLV	**Pearson Correlation**	-.717	.828	.612	.506
	Sig. (2-tailed)	.000	.000	.002	.016
	N	22	22	22	22
TIE	**Pearson Correlation**	-.519	.251	.744	.375
	Sig. (2-tailed)	.013	.259	.000	.085
	N	22	22	22	22
WY	**Pearson Correlation**	.298	-.498	-.287	- 083
	Sig. (2-tailed)	.178	.018	.196	.714
	N	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TBF	ANSS	CCF	DYSL	INTC	MSFT
MO	**Pearson Correlation**	-.703	.864	.922	.947	.498	.127
	Sig. (2-tailed)	.001	.000	.000	.000	.018	.572
	N	20	22	22	22	22	22
NLY	**Pearson Correlation**	.071	.582	.375	.600	.530	.446
	Sig. (2-tailed)	.767	.004	.086	.003	.011	.037
	N	20	22	22	22	22	22
PSEC	**Pearson Correlation**	.613	.557	.129	.166	.663	.815
	Sig. (2-tailed)	.004	.007	.568	.461	.001	.000
	N	20	22	22	22	22	22
CPNO	**Pearson Correlation**	-.586	.937	.859	.862	.589	.199
	Sig. (2-tailed)	.007	.000	.000	.000	.004	.374
	N	20	22	22	22	22	22
HGT	**Pearson Correlation**	-.735	.897	.837	.874	.557	.108
	Sig. (2-tailed)	.000	.000	.000	.000	.007	.632
	N	20	22	22	22	22	22
CVX	**Pearson Correlation**	-.315	.891	.839	.782	.493	.273
	Sig. (2-tailed)	.176	.000	.000	.000	.020	.218
	N	20	22	22	22	22	22
TOT	**Pearson Correlation**	730	.009	-.141	-.157	-.027	.519
	Sig. (2-tailed)	.000	.970	.531	.485	.907	.013
	N	20	22	22	22	22	22
XOM	**Pearson Correlation**	.251	.429	.415	.265	.145	.228
	Sig. (2-tailed)	.287	.047	.055	.234	.520	.307
	N	20	22	22	22	22	22
WMB	**Pearson Correlation**	-.107	.933	.729	.689	.681	.472
	Sig. (2-tailed)	.653	.000	.000	.000	.000	.026
	N	20	22	22	22	22	22
T	**Pearson Correlation**	-.354	.654	.799	.817	.254	.180
	Sig. (2-tailed)	.126	.001	.000	.000	.254	.423
	N	20	22	22	22	22	22
TEF	**Pearson Correlation**	.335	-.646	-.579	-.390	-.321	.126
	Sig. (2-tailed)	.149	.001	.005	.073	.145	.578
	N	20	22	22	22	22	22
VZ	**Pearson Correlation**	-.111	.627	.728	.621	.196	.140
	Sig. (2-tailed)	.642	.002	.000	.002	.382	.536
	N	20	22	22	22	22	22
TGT	**Pearson Correlation**	-.495	.829	.649	.792	.793	.462
	Sig. (2-tailed)	.026	.000	.001	.000	.000	.031
	N	20	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		'eNZ	MCHFX	'eNY	THO	CAG	KFT
MO	**Pearson Correlation**	.757	.964	.929	.983	.404	.949
	Sig. (2-tailed)	.000	.000	.000	.000	.062	.000
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	.744	.620	.633	.528	.459	.470
	Sig. (2-tailed)	.000	.002	.002	.012	.032	.027
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	.452	.228	.421	.107	.625	.203
	Sig. (2-tailed)	.035	.307	.051	.637	.002	.365
	N	22	22	22	22	22	22
CPNO	**Pearson Correlation**	.674	.893	.925	.900	.522	.883
	Sig. (2-tailed)	.001	.000	.000	.000	.013	.000
	N	22	22	22	22	22	22
HGT	**Pearson Correlation**	.686	.868	.888	.906	.522	.834
	Sig. (2-tailed)	.000	.000	.000	.000	.013	.000
	N	22	22	22	22	22	22
CVX	**Pearson Correlation**	.675	.763	.892	.793	.294	.739
	Sig. (2-tailed)	.001	.000	.000	.000	.184	.000
	N	22	22	22	22	22	22
TOT	**Pearson Correlation**	.166	-.189	- 020	-.268	-.123	-.319
	Sig. (2-tailed)	.459	.398	.930	.228	.586	.148
	N	22	22	22	22	22	22
XOM	**Pearson Correlation**	.225	.178	.413	.220	-.187	.153
	Sig. (2-tailed)	.314	.429	.056	.325	.404	.496
	N	22	22	22	22	22	22
WMB	**Pearson Correlation**	.650	.701	.855	.687	.537	.702
	Sig. (2-tailed)	.001	.000	.000	.000	.010	.000
	N	22	22	22	22	22	22
T	**Pearson Correlation**	.766	.803	.816	.817	.008	.692
	Sig. (2-tailed)	.000	.000	.000	.000	.972	.000
	N	22	22	22	22	22	22
TEF	**Pearson Correlation**	- 083	-.369	-.557	-.482	-.223	-.527
	Sig. (2-tailed)	.713	.091	.007	.023	.318	.012
	N	22	22	22	22	22	22
VZ	**Pearson Correlation**	.494	.582	.722	.626	-.111	.553
	Sig. (2-tailed)	.019	.004	.000	.002	.624	.008
	N	22	22	22	22	22	22
TGT	**Pearson Correlation**	.768	.846	.833	.778	.700	.805
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		MCD	ACI	COP	CPN	EGLE	EXC
MO	**Pearson Correlation**	.970	.881	.885	.652	-.613	-.719
	Sig. (2-tailed)	.000	.000	.000	.001	.002	.000
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	.410	.509	.414	.006	-.521	-.219
	Sig. (2-tailed)	.058	.016	.055	.980	.013	.327
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	.099	.463	.403	.084	-.248	-.027
	Sig. (2-tailed)	.661	.030	.063	.709	.265	.907
	N	22	22	22	22	22	22
CPNO	**Pearson Correlation**	.916	.911	.923	.755	-.735	-.752
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	22	22	22	22	22	22
HGT	**Pearson Correlation**	.897	.864	.878	.717	-.776	-.812
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	22	22	22	22	22	22
CVX	**Pearson Correlation**	730	.947	.982	.720	-.645	-.448
	Sig. (2-tailed)	.000	.000	.000	.000	.001	.037
	N	22	22	22	22	22	22
TOT	**Pearson Correlation**	-.379	.059	.026	-.318	.180	.655
	Sig. (2-tailed)	.082	.795	.907	.150	.424	.001
	N	22	22	22	22	22	22
XOM	**Pearson Correlation**	.093	.551	.585	.369	-.248	.226
	Sig. (2-tailed)	.681	.008	.004	.091	.265	.312
	N	22	22	22	22	22	22
WMB	**Pearson Correlation**	.674	.915	.917	.647	-.617	-.494
	Sig. (2-tailed)	.001	.000	.000	.001	.002	.020
	N	22	22	22	22	22	22
T	**Pearson Correlation**	.682	.780	.753	.377	-.383	-.198
	Sig. (2-tailed)	.000	.000	.000	.084	.078	.376
	N	22	22	22	22	22	22
TEF	**Pearson Correlation**	-.482	-.654	-.766	-.915	.716	.477
	Sig. (2-tailed)	.023	.001	.000	.000	.000	.025
	N	22	22	22	22	22	22
VZ	**Pearson Correlation**	.488	.770	.787	.524	-.416	- 015
	Sig. (2-tailed)	.021	.000	.000	.012	.054	.948
	N	22	22	22	22	22	22
TGT	**Pearson Correlation**	.820	.768	.660	.385	-.451	-.781
	Sig. (2-tailed)	.000	.000	.001	.077	.035	.000
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		GDX	HSY	MON	SIVB	SJT	SLV
MO	**Pearson Correlation**	.939	.852	-.520	.745	.866	.880
	Sig. (2-tailed)	.000	.000	.013	.000	.000	.000
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	.503	.309	-.147	.617	.407	.430
	Sig. (2-tailed)	.017	.162	.513	.002	.060	.046
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	.125	.021	.361	.663	.173	.322
	Sig. (2-tailed)	.579	.928	.099	.001	.442	.144
	N	22	22	22	22	22	22
CPNO	**Pearson Correlation**	.894	.851	-.473	.827	.888	.885
	Sig. (2-tailed)	.000	.000	.026	.000	.000	.000
	N	22	22	22	22	22	22
HGT	**Pearson Correlation**	.914	.895	-.619	.807	.944	.851
	Sig. (2-tailed)	.000	.000	.002	.000	.000	.000
	N	22	22	22	22	22	22
CVX	**Pearson Correlation**	.807	.670	-.102	.820	.636	.957
	Sig. (2-tailed)	.000	.001	.653	.000	.001	.000
	N	22	22	22	22	22	22
TOT	**Pearson Correlation**	-.250	-.534	.822	.069	-.461	.017
	Sig. (2-tailed)	.261	.010	.000	.760	.031	.941
	N	22	22	22	22	22	22
XOM	**Pearson Correlation**	.250	.059	.570	.418	- 063	.608
	Sig. (2-tailed)	.262	.795	.006	.053	.781	.003
	N	22	22	22	22	22	22
WMB	**Pearson Correlation**	.700	.611	- 062	.904	.660	.868
	Sig. (2-tailed)	.000	.003	.783	.000	.001	.000
	N	22	22	22	22	22	22
T	**Pearson Correlation**	.778	.473	- 051	.562	.423	.803
	Sig. (2-tailed)	.000	.026	.823	.007	.050	.000
	N	22	22	22	22	22	22
TEF	**Pearson Correlation**	-.483	-.676	.154	-.591	-.546	-.717
	Sig. (2-tailed)	.023	.001	.495	.004	.009	.000
	N	22	22	22	22	22	22
VZ	**Pearson Correlation**	.593	.367	.268	.548	.235	.828
	Sig. (2-tailed)	.004	.093	.228	.008	.292	.000
	N	22	22	22	22	22	22
TGT	**Pearson Correlation**	.780	.684	-.547	.832	.820	.612
	Sig. (2-tailed)	.000	.000	.008	.000	.000	.002
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TIE	WY	MO	NLY	PSEC	CPNO
MO	**Pearson Correlation**	.869	-.692	1	.522	.201	.940
	Sig. (2-tailed)	.000	.000		.013	.370	.000
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	.328	-.229	.522	1	.405	.459
	Sig. (2-tailed)	.136	.306	.013		.061	.032
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	.014	.443	.201	.405	1	.335
	Sig. (2-tailed)	.951	.039	.370	.061		.127
	N	22	22	22	22	22	22
CPNO	**Pearson Correlation**	.873	-.553	.940	.459	.335	1
	Sig. (2-tailed)	.000	.008	.000	.032	.127	
	N	22	22	22	22	22	22
HGT	**Pearson Correlation**	.885	-.581	.919	.530	.210	.934
	Sig. (2-tailed)	.000	.005	.000	.011	.348	.000
	N	22	22	22	22	22	22
CVX	**Pearson Correlation**	.570	-.452	.821	.428	.493	.851
	Sig. (2-tailed)	.006	.035	.000	.047	.020	.000
	N	22	22	22	22	22	22
TOT	**Pearson Correlation**	-.557	.366	-.244	.158	.614	-.225
	Sig. (2-tailed)	.007	.094	.274	.481	.002	.314
	N	22	22	22	22	22	22
XOM	**Pearson Correlation**	-.146	- 087	.223	.115	.500	.285
	Sig. (2-tailed)	.517	.700	.319	.611	.018	.199
	N	22	22	22	22	22	22
WMB	**Pearson Correlation**	.545	-.202	.753	.432	.713	.846
	Sig. (2-tailed)	.009	.367	.000	.045	.000	.000
	N	22	22	22	22	22	22
T	**Pearson Correlation**	.450	-.661	.785	.579	.219	.653
	Sig. (2-tailed)	.036	.001	.000	.005	.327	.001
	N	22	22	22	22	22	22
TEF	**Pearson Correlation**	-.519	.298	-.542	.001	-.301	-.707
	Sig. (2-tailed)	.013	.178	.009	.996	.173	.000
	N	22	22	22	22	22	22
VZ	**Pearson Correlation**	.251	-.498	.619	.341	.379	.608
	Sig. (2-tailed)	.259	.018	.002	.120	.082	.003
	N	22	22	22	22	22	22
TGT	**Pearson Correlation**	.744	-.287	.787	.585	.349	.788
	Sig. (2-tailed)	.000	.196	.000	.004	.111	.000
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		HGT	CVX	TOT	XOM	WMB	T
MO	**Pearson Correlation**	.919	.821	-.244	.223	.753	.785
	Sig. (2-tailed)	.000	.000	.274	.319	.000	.000
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	.530	.428	.158	.115	.432	.579
	Sig. (2-tailed)	.011	.047	.481	.611	.045	.005
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	.210	.493	.614	.500	.713	.219
	Sig. (2-tailed)	.348	.020	.002	.018	.000	.327
	N	22	22	22	22	22	22
CPNO	**Pearson Correlation**	.934	.851	-.225	.285	.846	.653
	Sig. (2-tailed)	.000	.000	.314	.199	.000	.001
	N	22	22	22	22	22	22
HGT	**Pearson Correlation**	1	.793	-.301	.178	.752	.616
	Sig. (2-tailed)		.000	.173	.428	.000	.002
	N	22	22	22	22	22	22
CVX	**Pearson Correlation**	.793	1	.203	.699	.931	.786
	Sig. (2-tailed)	.000		.364	.000	.000	.000
	N	22	22	22	22	22	22
TOT	**Pearson Correlation**	-.301	.203	1	.668	.226	.213
	Sig. (2-tailed)	.173	.364		.001	.312	.342
	N	22	22	22	22	22	22
XOM	**Pearson Correlation**	.178	.699	.668	1	.631	.502
	Sig. (2-tailed)	.428	.000	.001		.002	.017
	N	22	22	22	22	22	22
WMB	**Pearson Correlation**	.752	.931	.226	.631	1	.607
	Sig. (2-tailed)	.000	.000	.312	.002		.003
	N	22	22	22	22	22	22
T	**Pearson Correlation**	.616	.786	.213	.502	.607	1
	Sig. (2-tailed)	.002	.000	.342	.017	.003	
	N	22	22	22	22	22	22
TEF	**Pearson Correlation**	-.629	-.731	.102	-.522	-.736	-.264
	Sig. (2-tailed)	.002	.000	.653	.013	.000	.235
	N	22	22	22	22	22	22
VZ	**Pearson Correlation**	.469	.852	.406	.828	.718	.847
	Sig. (2-tailed)	.028	.000	.061	.000	.000	.000
	N	22	22	22	22	22	22
TGT	**Pearson Correlation**	.793	.579	-.299	- 015	.649	.505
	Sig. (2-tailed)	.000	.005	.177	.948	.001	.016
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TEF	VZ	TGT	WMT
MO	**Pearson Correlation**	-.542	.619	.787	.607
	Sig. (2-tailed)	.009	.002	.000	.003
	N	22	22	22	22
NLY	**Pearson Correlation**	.001	.341	.585	.509
	Sig. (2-tailed)	.996	.120	.004	.015
	N	22	22	22	22
PSEC	**Pearson Correlation**	-.301	.379	.349	.654
	Sig. (2-tailed)	.173	.082	.111	.001
	N	22	22	22	22
CPNO	**Pearson Correlation**	-.707	.608	.788	.583
	Sig. (2-tailed)	.000	.003	.000	.004
	N	22	22	22	22
HGT	**Pearson Correlation**	-.629	.469	.793	.434
	Sig. (2-tailed)	.002	.028	.000	.044
	N	22	22	22	22
CVX	**Pearson Correlation**	-.731	.852	.579	.580
	Sig. (2-tailed)	.000	.000	.005	.005
	N	22	22	22	22
TOT	**Pearson Correlation**	.102	.406	-.299	.281
	Sig. (2-tailed)	.653	.061	.177	.205
	N	22	22	22	22
XOM	**Pearson Correlation**	-.522	.828	- 015	.310
	Sig. (2-tailed)	.013	.000	.948	.161
	N	22	22	22	22
WMB	**Pearson Correlation**	-.736	.718	.649	.684
	Sig. (2-tailed)	.000	.000	.001	.000
	N	22	22	22	22
T	**Pearson Correlation**	-.264	.847	.505	.583
	Sig. (2-tailed)	.235	.000	.016	.004
	N	22	22	22	22
TEF	**Pearson Correlation**	1	-.551	-.285	-.130
	Sig. (2-tailed)		.008	.199	.563
	N	22	22	22	22
VZ	**Pearson Correlation**	-.551	1	.275	.508
	Sig. (2-tailed)	.008		.216	.016
	N	22	22	22	22
TGT	**Pearson Correlation**	-.285	.275	1	.709
	Sig. (2-tailed)	.199	.216		.000
	N	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TBF	ANSS	CCF	DYSL	INTC	MSFT
WMT	**Pearson Correlation**	.097	.693	.510	.645	.625	.757
	Sig. (2-tailed)	.683	.000	.015	.001	.002	.000
	N	20	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

• Correlation is significant at the 0.05 level (2-tailed).

Correlation
s

		EW2	MCHFX	EWY	THO	CAG	KFT
WMT	**Pearson Correlation**	.789	.705	.706	.557	.543	.614
	Sig. (2-tailed)	.000	.000	.000	.007	.009	.002
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

Correlation
s

		MCD	ACI	COP	CPN	EGLE	EXC
WMT	**Pearson Correlation**	.590	.665	.554	.076	- 090	-.304
	Sig. (2-tailed)	.004	.001	.007	.736	.689	.168
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

Correlation
s

		GDX	HSY	MON	SIVB	SJT	SLV
WMT	**Pearson Correlation**	.531	.239	.020	.667	.436	.506
	Sig. (2-tailed)	.011	.284	.930	.001	.043	.016
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

• Correlation is significant at the 0.05 level (2-tailed).

Correlation
s

		TIE	WY	MO	NLY	PSEC	CPNO
WMT	**Pearson Correlation**	.375	- 083	.607	.509	.654	.583
	Sig. (2-tailed)	.085	.714	.003	.015	.001	.004
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		HGT	CVX	TOT	XOM	WMB	T
WMT	**Pearson Correlation**	.434	.580	.281	.310	.684	.583
	Sig. (2-tailed)	.044	.005	.205	.161	.000	.004
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

• Correlation is significant at the 0.05 level (2-tailed).

Correlation
s

		TEF	VZ	TGT	WMT
WMT	**Pearson Correlation**	-.130	.508	.709	1
	Sig. (2-tailed)	.563	.016	.000	
	N	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Current Portfolio Stocks Correlation Coefficients in a Bear Market

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Correlations

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Correlations

		ANSS	CCF	DYSL	INTC	MSFT	'eNZ
ANSS	**Pearson Correlation**	1	.760	.902	.903	.799	.916
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
CCF	**Pearson Correlation**	.760	1	.869	.875	.941	.853
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	20	20	20	20	20	20
DYSL	**Pearson Correlation**	.902	.869	1	.883	.813	.908
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	20	20	20	20	20	20
INTC	**Pearson Correlation**	.903	.875	.883	1	.947	.925
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	20	20	20	20	20	20
MSFT	**Pearson Correlation**	.799	.941	.813	.947	1	.862
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	20	20	20	20	20	20
EWZ	**Pearson Correlation**	.916	.853	.908	.925	.862	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	20	20	20	20	20	20
MCHFX	**Pearson Correlation**	.854	.950	.880	.973	.978	.931
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
EWY	**Pearson Correlation**	.827	.926	.865	.954	.950	.953
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
THO	**Pearson Correlation**	.863	.900	.832	.932	.933	.970
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	16	16	16	16	16	16
CAG	**Pearson Correlation**	.826	.875	.846	.954	.931	.936
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
KFT	**Pearson Correlation**	.822	.807	.820	.840	.847	.742
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
MCD	**Pearson Correlation**	.476	.099	.290	.323	.207	.184
	Sig. (2-tailed)	.034	.677	.216	.165	.382	.438
	N	20	20	20	20	20	20
ACI	**Pearson Correlation**	.945	.799	.954	.852	.760	.938
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20

Correlations

		MCHFX	EWY	THO	CAG	KFT	MCO
ANSS	**Pearson Correlation**	.854	.827	.863	.826	.822	.476
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.034
	N	20	20	16	20	20	20
CCF	**Pearson Correlation**	.950	.926	.900	.875	.807	.099
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.677
	N	20	20	16	20	20	20
OYSL	**Pearson Correlation**	.880	.865	.832	.846	.820	.290
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.216
	N	20	20	16	20	20	20
INTC	**Pearson Correlation**	.973	.954	.932	.954	.840	.323
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.165
	N	20	20	16	20	20	20
MSFT	**Pearson Correlation**	.978	.950	.933	.931	.847	.207
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.382
	N	20	20	16	20	20	20
EWZ	**Pearson Correlation**	.931	.953	.970	.936	.742	.184
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.438
	N	20	20	16	20	20	20
MCHFX	**Pearson Correlation**	1	.983	.964	.959	.836	.200
	Sig. (2-tailed)		.000	.000	.000	.000	.398
	N	20	20	16	20	20	20
EWY	**Pearson Correlation**	.983	1	.990	.976	.767	.127
	Sig. (2-tailed)	.000		.000	.000	.000	.594
	N	20	20	16	20	20	20
THO	**Pearson Correlation**	.964	.990	1	.980	.708	.380
	Sig. (2-tailed)	.000	.000		.000	.002	.146
	N	16	16	16	16	16	16
CAG	**Pearson Correlation**	.959	.976	.980	1	.802	.219
	Sig. (2-tailed)	.000	.000	.000		.000	.353
	N	20	20	16	20	20	20
KFT	**Pearson Correlation**	.836	.767	.708	.802	1	.554
	Sig. (2-tailed)	.000	.000	.002	.000		.011
	N	20	20	16	20	20	20
MCO	**Pearson Correlation**	.200	.127	.380	.219	.554	1
	Sig. (2-tailed)	.398	.594	.146	.353	.011	
	N	20	20	16	20	20	20
ACI	**Pearson Correlation**	.845	.838	.869	.810	.767	.273
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.245
	N	20	20	16	20	20	20

Correlations

		ACI	COP	CPN	EGLE	EXC	GDX
ANSS	**Pearson Correlation**	.945	.933	.948	.931	.912	.628
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.003
	N	20	20	19	20	20	20
CCF	**Pearson Correlation**	.799	.892	.846	.886	.895	.776
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
DYSL	**Pearson Correlation**	.954	.965	.903	.970	.976	.735
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
INTC	**Pearson Correlation**	.852	.906	.948	.924	.905	.735
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
MSFT	**Pearson Correlation**	.760	.865	.886	.857	.858	.721
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
EWZ	**Pearson Correlation**	.938	.918	.982	.957	.938	.849
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
MCHFX	**Pearson Correlation**	.845	.915	.948	.928	.920	.785
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
EWY	**Pearson Correlation**	.838	.884	.937	.917	.908	.862
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
THO	**Pearson Correlation**	.869	.844	.946	.898	.885	.823
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	16	16	16	16	16	16
CAG	**Pearson Correlation**	.810	.858	.921	.899	.879	.821
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
KFT	**Pearson Correlation**	.767	.885	.803	.834	.848	.436
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.054
	N	20	20	19	20	20	20
MCD	**Pearson Correlation**	.273	.342	.235	.280	.296	-.158
	Sig. (2-tailed)	.245	.140	.333	.232	.205	.505
	N	20	20	19	20	20	20
ACI	**Pearson Correlation**	1	.964	.957	.972	.961	.705
	Sig. (2-tailed)		.000	.000	.000	.000	.001
	N	20	20	19	20	20	20

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

Correlations

		HSY	MON	SIVB	SJT	SLV	TIE
ANSS	**Pearson Correlation**	.494	.932	.843	.830	.638	.653
	Sig. (2-tailed)	.027	.000	.000	.000	.002	.002
	N	20	20	20	20	20	20
CCF	**Pearson Correlation**	.462	.835	730	.776	.882	.942
	Sig. (2-tailed)	.040	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
DYSL	**Pearson Correlation**	.400	.946	.768	.860	.782	.739
	Sig. (2-tailed)	.080	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
INTC	**Pearson Correlation**	.651	.885	.785	.723	.746	.863
	Sig. (2-tailed)	.002	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
MSFT	**Pearson Correlation**	.656	.811	.783	.711	.798	.941
	Sig. (2-tailed)	.002	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
EWZ	**Pearson Correlation**	.450	.948	.699	.729	.855	.770
	Sig. (2-tailed)	.047	.000	.001	.000	.000	.000
	N	20	20	20	20	20	20
MCHFX	**Pearson Correlation**	.591	.881	.770	.747	.854	.932
	Sig. (2-tailed)	.006	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
EWY	**Pearson Correlation**	.551	.878	.672	.675	.891	.907
	Sig. (2-tailed)	.012	.000	.001	.001	.000	.000
	N	20	20	20	20	20	20
THO	**Pearson Correlation**	.487	.880	.629	.641	.860	.946
	Sig. (2-tailed)	.056	.000	.009	.007	.000	.000
	N	16	16	16	16	16	16
CAG	**Pearson Correlation**	.647	.847	.688	.652	.820	.861
	Sig. (2-tailed)	.002	.000	.001	.002	.000	.000
	N	20	20	20	20	20	20
KFT	**Pearson Correlation**	.743	.763	.918	.875	.600	.765
	Sig. (2-tailed)	.000	.000	.000	.000	.005	.000
	N	20	20	20	20	20	20
MCD	**Pearson Correlation**	.482	.206	.481	.410	-.155	.105
	Sig. (2-tailed)	.031	.383	.032	.072	.513	.659
	N	20	20	20	20	20	20
ACI	**Pearson Correlation**	.334	.985	.777	.871	.774	.655
	Sig. (2-tailed)	.150	.000	.000	.000	.000	.002
	N	20	20	20	20	20	20

Correlations

		WY	MO	NLY	PSEC	CPNO	HGT
ANSS	**Pearson Correlation**	.807	.314	.476	.785	.873	.916
	Sig. (2-tailed)	.000	.178	.034	.000	.000	.000
	N	20	20	20	20	20	20
CCF	**Pearson Correlation**	.944	.799	.839	.889	.935	.755
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
DYSL	**Pearson Correlation**	.859	.473	.609	.877	.938	.894
	Sig. (2-tailed)	.000	.035	.004	.000	.000	.000
	N	20	20	20	20	20	20
INTC	**Pearson Correlation**	.926	.599	.653	.777	.942	.773
	Sig. (2-tailed)	.000	.005	.002	.000	.000	.000
	N	20	20	20	20	20	20
MSFT	**Pearson Correlation**	.960	.748	.760	.806	.925	.722
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
EWZ	**Pearson Correlation**	.862	.474	.678	.801	.951	.824
	Sig. (2-tailed)	.000	.035	.001	.000	.000	.000
	N	20	20	20	20	20	20
MCHFX	**Pearson Correlation**	.965	.703	.762	.839	.969	.775
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000
	N	20	20	20	20	20	20
EWY	**Pearson Correlation**	.933	.678	.791	.806	.961	.722
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000
	N	20	20	20	20	20	20
THO	**Pearson Correlation**	.874	.877	.777	.771	.931	.771
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	16	16	16	16	16	16
CAG	**Pearson Correlation**	.919	.603	.712	.788	.944	.710
	Sig. (2-tailed)	.000	.005	.000	.000	.000	.000
	N	20	20	20	20	20	20
KFT	**Pearson Correlation**	.887	.488	.528	.887	.843	.850
	Sig. (2-tailed)	.000	.029	.017	.000	.000	.000
	N	20	20	20	20	20	20
MCD	**Pearson Correlation**	.227	-.189	- 096	.316	.165	.396
	Sig. (2-tailed)	.336	.424	.688	.175	.486	.084
	N	20	20	20	20	20	20
ACI	**Pearson Correlation**	.813	.342	.537	.841	.919	.939
	Sig. (2-tailed)	.000	.140	.015	.000	.000	.000
	N	20	20	20	20	20	20

Correlations

		CVX	TOT	XOM	WMB	T	TEF
ANSS	**Pearson Correlation**	.913	.920	.755	.916	.767	.785
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
CCF	**Pearson Correlation**	.842	.898	.904	.918	.940	.943
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
DYSL	**Pearson Correlation**	.925	.945	.875	.956	.865	.847
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
INTC	**Pearson Correlation**	.867	.935	.810	.921	.883	.938
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
MSFT	**Pearson Correlation**	.818	.887	.832	.891	.906	.962
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
EW2	**Pearson Correlation**	.900	.975	.822	.963	.877	.900
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
MCHFX	**Pearson Correlation**	.880	.950	.876	.948	.943	.978
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
EWY	**Pearson Correlation**	.855	.949	.857	.937	.938	.977
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
THO	**Pearson Correlation**	.845	.937	.785	.912	.891	.975
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	16	16	16	16	16	16
CAG	**Pearson Correlation**	.819	.918	.809	.905	.893	.950
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
KFT	**Pearson Correlation**	.846	.805	.820	.836	.795	.792
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
MCD	**Pearson Correlation**	.373	.255	.276	.217	.163	.174
	Sig. (2-tailed)	.105	.278	.239	.358	.493	.464
	N	20	20	20	20	20	20
ACI	**Pearson Correlation**	.946	.948	.821	.961	.821	.784
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

Correlations

		VZ	TGT	WMT
ANSS	**Pearson Correlation**	.715	.860	.550
	Sig. (2-tailed)	.000	.000	.012
	N	20	20	20
CCF	**Pearson Correlation**	.910	.884	.083
	Sig. (2-tailed)	.000	.000	.727
	N	20	20	20
DYSL	**Pearson Correlation**	.801	.827	.398
	Sig. (2-tailed)	.000	.000	.082
	N	20	20	20
INTC	**Pearson Correlation**	.889	.940	.242
	Sig. (2-tailed)	.000	.000	.303
	N	20	20	20
MSFT	**Pearson Correlation**	.909	.940	.101
	Sig. (2-tailed)	.000	.000	.673
	N	20	20	20
EWZ	**Pearson Correlation**	.801	.908	.279
	Sig. (2-tailed)	.000	.000	.234
	N	20	20	20
MCHFX	**Pearson Correlation**	.925	.950	.157
	Sig. (2-tailed)	.000	.000	.509
	N	20	20	20
EWY	**Pearson Correlation**	.911	.943	.090
	Sig. (2-tailed)	.000	.000	.707
	N	20	20	20
THO	**Pearson Correlation**	.879	.912	.540
	Sig. (2-tailed)	.000	.000	.031
	N	16	16	16
CAG	**Pearson Correlation**	.860	.948	.129
	Sig. (2-tailed)	.000	.000	.589
	N	20	20	20
KFT	**Pearson Correlation**	.761	.847	.447
	Sig. (2-tailed)	.000	.000	.048
	N	20	20	20
MCD	**Pearson Correlation**	.236	.266	.627
	Sig. (2-tailed)	.317	.257	.003
	N	20	20	20
ACI	**Pearson Correlation**	.714	.824	.510
	Sig. (2-tailed)	.000	.000	.022
	N	20	20	20

Correlations

		ANSS	CCF	DYSL	INTC	MSFT	EWZ
COP	**Pearson Correlation**	.933	.892	.965	.906	.865	.918
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
CPN	**Pearson Correlation**	.948	.846	.903	.948	.886	.982
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	19	19	19	19	19	19
EGLE	**Pearson Correlation**	.931	.886	.970	.924	.857	.957
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
EXC	**Pearson Correlation**	.912	.895	.976	.905	.858	.938
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
GDX	**Pearson Correlation**	.628	.776	.735	.735	.721	.849
	Sig. (2-tailed)	.003	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
HSY	**Pearson Correlation**	.494	.462	.400	.651	.656	.450
	Sig. (2-tailed)	.027	.040	.080	.002	.002	.047
	N	20	20	20	20	20	20
MON	**Pearson Correlation**	.932	.835	.946	.885	.811	.948
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
SIVB	**Pearson Correlation**	.843	730	.768	.785	.783	.699
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001
	N	20	20	20	20	20	20
SJT	**Pearson Correlation**	.830	.776	.860	.723	.711	.729
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
SLV	**Pearson Correlation**	.638	.882	.782	.746	.798	.855
	Sig. (2-tailed)	.002	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
TIE	**Pearson Correlation**	.653	.942	.739	.863	.941	.770
	Sig. (2-tailed)	.002	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
WY	**Pearson Correlation**	.807	.944	.859	.926	.960	.862
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
MO	**Pearson Correlation**	.314	.799	.473	.599	.748	.474
	Sig. (2-tailed)	.178	.000	.035	.005	.000	.035
	N	20	20	20	20	20	20

Correlations

		MCHFX	EWY	THO	CAG	KFT	MCD
COP	**Pearson Correlation**	.915	.884	.844	.858	.885	.342
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.140
	N	20	20	16	20	20	20
CPN	**Pearson Correlation**	.948	.937	.946	.921	.803	.235
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.333
	N	19	19	16	19	19	19
EGLE	**Pearson Correlation**	.928	.917	.898	.899	.834	.280
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.232
	N	20	20	16	20	20	20
EXC	**Pearson Correlation**	.920	.908	.885	.879	.848	.296
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.205
	N	20	20	16	20	20	20
GDX	**Pearson Correlation**	.785	.862	.823	.821	.436	-.158
	Sig. (2-tailed)	.000	.000	.000	.000	.054	.505
	N	20	20	16	20	20	20
HSY	**Pearson Correlation**	.591	.551	.487	.647	.743	.482
	Sig. (2-tailed)	.006	.012	.056	.002	.000	.031
	N	20	20	16	20	20	20
MON	**Pearson Correlation**	.881	.878	.880	.847	.763	.206
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.383
	N	20	20	16	20	20	20
SIVB	**Pearson Correlation**	770	.672	.629	.688	.918	.481
	Sig. (2-tailed)	.000	.001	.009	.001	.000	.032
	N	20	20	16	20	20	20
SJT	**Pearson Correlation**	.747	.675	.641	.652	.875	.410
	Sig. (2-tailed)	.000	.001	.007	.002	.000	.072
	N	20	20	16	20	20	20
SLV	**Pearson Correlation**	.854	.891	.860	.820	.600	-.155
	Sig. (2-tailed)	.000	.000	.000	.000	.005	.513
	N	20	20	16	20	20	20
TIE	**Pearson Correlation**	.932	.907	.946	.861	.765	.105
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.659
	N	20	20	16	20	20	20
WY	**Pearson Correlation**	.965	.933	.874	.919	.887	.227
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.336
	N	20	20	16	20	20	20
MO	**Pearson Correlation**	.703	.678	.877	.603	.488	-.189
	Sig. (2-tailed)	.001	.001	.000	.005	.029	.424
	N	20	20	16	20	20	20

Correlations

		ACI	COP	CPN	EGLE	EXC	GDX
COP	**Pearson Correlation**	.964	1	.940	.984	.985	.675
	Sig. (2-tailed)	.000		.000	.000	.000	.001
	N	20	20	19	20	20	20
CPN	**Pearson Correlation**	.957	.940	1	.956	.945	.758
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	19	19	19	19	19	19
EGLE	**Pearson Correlation**	.972	.984	.956	1	.984	.745
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	20	20	19	20	20	20
EXC	**Pearson Correlation**	.961	.985	.945	.984	1	.733
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	20	20	19	20	20	20
GDX	**Pearson Correlation**	.705	.675	.758	.745	.733	1
	Sig. (2-tailed)	.001	.001	.000	.000	.000	
	N	20	20	19	20	20	20
HSY	**Pearson Correlation**	.334	.470	.445	.455	.442	.201
	Sig. (2-tailed)	.150	.036	.056	.044	.051	.397
	N	20	20	19	20	20	20
MON	**Pearson Correlation**	.985	.961	.956	.976	.955	.734
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
SIVB	**Pearson Correlation**	.777	.856	.781	.799	.780	.321
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.167
	N	20	20	19	20	20	20
SJT	**Pearson Correlation**	.871	.926	.806	.869	.880	.397
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.083
	N	20	20	19	20	20	20
SLV	**Pearson Correlation**	.774	.800	.809	.827	.850	.850
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
TIE	**Pearson Correlation**	.655	.789	.801	.784	.794	.729
	Sig. (2-tailed)	.002	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
WY	**Pearson Correlation**	.813	.917	.878	.911	.900	.685
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001
	N	20	20	19	20	20	20
MO	**Pearson Correlation**	.342	.500	.397	.490	.495	.618
	Sig. (2-tailed)	.140	.025	.092	.028	.027	.004
	N	20	20	19	20	20	20

Correlations

		HSY	MON	SIVB	SJT	SLV	TIE
COP	**Pearson Correlation**	.470	.961	.856	.926	.800	.789
	Sig. (2-tailed)	.036	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
CPN	**Pearson Correlation**	.445	.956	.781	.806	.809	.801
	Sig. (2-tailed)	.056	.000	.000	.000	.000	.000
	N	19	19	19	19	19	19
EGLE	**Pearson Correlation**	.455	.976	.799	.869	.827	.784
	Sig. (2-tailed)	.044	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
EXC	**Pearson Correlation**	.442	.955	.780	.880	.850	.794
	Sig. (2-tailed)	.051	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
GDX	**Pearson Correlation**	.201	.734	.321	.397	.850	.729
	Sig. (2-tailed)	.397	.000	.167	.083	.000	.000
	N	20	20	20	20	20	20
HSY	**Pearson Correlation**	1	.374	.620	.391	.272	.559
	Sig. (2-tailed)		.104	.004	.088	.247	.010
	N	20	20	20	20	20	20
MON	**Pearson Correlation**	.374	1	.783	.849	.798	.704
	Sig. (2-tailed)	.104		.000	.000	.000	.001
	N	20	20	20	20	20	20
SIVB	**Pearson Correlation**	.620	.783	1	.903	.490	.635
	Sig. (2-tailed)	.004	.000		.000	.028	.003
	N	20	20	20	20	20	20
SJT	**Pearson Correlation**	.391	.849	.903	1	.644	.627
	Sig. (2-tailed)	.088	.000	.000		.002	.003
	N	20	20	20	20	20	20
SLV	**Pearson Correlation**	.272	.798	.490	.644	1	.826
	Sig. (2-tailed)	.247	.000	.028	.002		.000
	N	20	20	20	20	20	20
TIE	**Pearson Correlation**	.559	.704	.635	.627	.826	1
	Sig. (2-tailed)	.010	.001	.003	.003	.000	
	N	20	20	20	20	20	20
WY	**Pearson Correlation**	.635	.860	.827	.814	.824	.918
	Sig. (2-tailed)	.003	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
MO	**Pearson Correlation**	.369	.416	.377	.355	.660	.888
	Sig. (2-tailed)	.110	.068	.101	.125	.002	.000
	N	20	20	20	20	20	20

Correlations

		WY	MO	NLY	PSEC	CPNO	HGT
COP	**Pearson Correlation**	.917	.500	.617	.920	.959	.940
	Sig. (2-tailed)	.000	.025	.004	.000	.000	.000
	N	20	20	20	20	20	20
CPN	**Pearson Correlation**	.878	.397	.600	.833	.946	.908
	Sig. (2-tailed)	.000	.092	.007	.000	.000	.000
	N	19	19	19	19	19	19
EGLE	**Pearson Correlation**	.911	.490	.629	.893	.975	.907
	Sig. (2-tailed)	.000	.028	.003	.000	.000	.000
	N	20	20	20	20	20	20
EXC	**Pearson Correlation**	.900	.495	.655	.913	.962	.906
	Sig. (2-tailed)	.000	.027	.002	.000	.000	.000
	N	20	20	20	20	20	20
GDX	**Pearson Correlation**	.685	.618	.791	.585	.787	.489
	Sig. (2-tailed)	.001	.004	.000	.007	.000	.029
	N	20	20	20	20	20	20
HSY	**Pearson Correlation**	.635	.369	.373	.497	.529	.394
	Sig. (2-tailed)	.003	.110	.105	.026	.016	.086
	N	20	20	20	20	20	20
MON	**Pearson Correlation**	.860	.416	.570	.835	.947	.912
	Sig. (2-tailed)	.000	.068	.009	.000	.000	.000
	N	20	20	20	20	20	20
SIVB	**Pearson Correlation**	.827	.377	.357	.805	.790	.905
	Sig. (2-tailed)	.000	.101	.123	.000	.000	.000
	N	20	20	20	20	20	20
SJT	**Pearson Correlation**	.814	.355	.427	.919	.821	.964
	Sig. (2-tailed)	.000	.125	.061	.000	.000	.000
	N	20	20	20	20	20	20
SLV	**Pearson Correlation**	.824	.660	.826	.806	.878	.654
	Sig. (2-tailed)	.000	.002	.000	.000	.000	.002
	N	20	20	20	20	20	20
TIE	**Pearson Correlation**	.918	.888	.854	.771	.866	.585
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.007
	N	20	20	20	20	20	20
WY	**Pearson Correlation**	1	.707	.723	.896	.957	.794
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
MO	**Pearson Correlation**	.707	1	.832	.527	.620	.268
	Sig. (2-tailed)	.000		.000	.017	.004	.254
	N	20	20	20	20	20	20

Correlations

		CVX	TOT	XOM	WMB	T	TEF
COP	**Pearson Correlation**	.975	.963	.906	.981	.903	.865
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
CPN	**Pearson Correlation**	.924	.971	.826	.972	.866	.900
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	19	19	19	19	19	19
EGLE	**Pearson Correlation**	.958	.979	.887	.987	.911	.880
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
EXC	**Pearson Correlation**	.978	.981	.936	.987	.929	.892
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
GDX	**Pearson Correlation**	.625	.793	.664	.769	.742	.823
	Sig. (2-tailed)	.003	.000	.001	.000	.000	.000
	N	20	20	20	20	20	20
HSY	**Pearson Correlation**	.436	.444	.418	.447	.495	.570
	Sig. (2-tailed)	.054	.050	.066	.048	.026	.009
	N	20	20	20	20	20	20
MON	**Pearson Correlation**	.932	.950	.809	.967	.847	.815
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
SIVB	**Pearson Correlation**	.799	.743	.673	.800	.677	.671
	Sig. (2-tailed)	.000	.000	.001	.000	.001	.001
	N	20	20	20	20	20	20
SJT	**Pearson Correlation**	.909	.810	.828	.867	.775	.675
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001
	N	20	20	20	20	20	20
SLV	**Pearson Correlation**	.806	.866	.874	.875	.921	.878
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
TIE	**Pearson Correlation**	.747	.821	.852	.822	.907	.940
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
WY	**Pearson Correlation**	.872	.898	.874	.923	.941	.935
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
MO	**Pearson Correlation**	.415	.521	.600	.543	.675	.734
	Sig. (2-tailed)	.069	.019	.005	.013	.001	.000
	N	20	20	20	20	20	20

Correlations

		VZ	TGT	WMT
COP	**Pearson Correlation**	.829	.886	.457
	Sig. (2-tailed)	.000	.000	.043
	N	20	20	20
CPN	**Pearson Correlation**	.818	.914	.468
	Sig. (2-tailed)	.000	.000	.043
	N	19	19	19
EGLE	**Pearson Correlation**	.830	.899	.412
	Sig. (2-tailed)	.000	.000	.071
	N	20	20	20
EXC	**Pearson Correlation**	.858	.866	.390
	Sig. (2-tailed)	.000	.000	.089
	N	20	20	20
GDX	**Pearson Correlation**	.712	.734	-.172
	Sig. (2-tailed)	.000	.000	.469
	N	20	20	20
HSY	**Pearson Correlation**	.538	.677	.169
	Sig. (2-tailed)	.014	.001	.477
	N	20	20	20
MON	**Pearson Correlation**	.745	.872	.450
	Sig. (2-tailed)	.000	.000	.047
	N	20	20	20
SIVB	**Pearson Correlation**	.606	.806	.607
	Sig. (2-tailed)	.005	.000	.005
	N	20	20	20
SJT	**Pearson Correlation**	.659	.739	.642
	Sig. (2-tailed)	.002	.000	.002
	N	20	20	20
SLV	**Pearson Correlation**	.823	.774	- 010
	Sig. (2-tailed)	.000	.000	.968
	N	20	20	20
TIE	**Pearson Correlation**	.946	.852	-.100
	Sig. (2-tailed)	.000	.000	.674
	N	20	20	20
WY	**Pearson Correlation**	.896	.957	.238
	Sig. (2-tailed)	.000	.000	.313
	N	20	20	20
MO	**Pearson Correlation**	.758	.612	-.421
	Sig. (2-tailed)	.000	.004	.064
	N	20	20	20

Correlations

		ANSS	CCF	DYSL	INTC	MSFT	EWZ
NLY	**Pearson Correlation**	.476	.839	.609	.653	.760	.678
	Sig. (2-tailed)	.034	.000	.004	.002	.000	.001
	N	20	20	20	20	20	20
PSEC	**Pearson Correlation**	.785	.889	.877	.777	.806	.801
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
CPNO	**Pearson Correlation**	.873	.935	.938	.942	.925	.951
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
HGT	**Pearson Correlation**	.916	.755	.894	.773	.722	.824
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
CVX	**Pearson Correlation**	.913	.842	.925	.867	.818	.900
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
TOT	**Pearson Correlation**	.920	.898	.945	.935	.887	.975
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
XOM	**Pearson Correlation**	.755	.904	.875	.810	.832	.822
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
WMB	**Pearson Correlation**	.916	.918	.956	.921	.891	.963
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
T	**Pearson Correlation**	.767	.940	.865	.883	.906	.877
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
TEF	**Pearson Correlation**	.785	.943	.847	.938	.962	.900
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
VZ	**Pearson Correlation**	.715	.910	.801	.889	.909	.801
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
TGT	**Pearson Correlation**	.860	.884	.827	.940	.940	.908
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
WMT	**Pearson Correlation**	.550	.083	.398	.242	.101	.279
	Sig. (2-tailed)	.012	.727	.082	.303	.673	.234
	N	20	20	20	20	20	20

Correlations

		MCHFX	*'eNY*	THO	CAG	KFT	MCD
NLY	**Pearson Correlation**	.762	.791	.777	.712	.528	- 096
	Sig. (2-tailed)	.000	.000	.000	.000	.017	.688
	N	20	20	16	20	20	20
PSEC	**Pearson Correlation**	.839	.806	.771	.788	.887	.316
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.175
	N	20	20	16	20	20	20
CPNO	**Pearson Correlation**	.969	.961	.931	.944	.843	.165
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.486
	N	20	20	16	20	20	20
HGT	**Pearson Correlation**	.775	.722	.771	.710	.850	.396
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.084
	N	20	20	16	20	20	20
CVX	**Pearson Correlation**	.880	.855	.845	.819	.846	.373
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.105
	N	20	20	16	20	20	20
TOT	**Pearson Correlation**	.950	.949	.937	.918	.805	.255
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.278
	N	20	20	16	20	20	20
XOM	**Pearson Correlation**	.876	.857	.785	.809	.820	.276
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.239
	N	20	20	16	20	20	20
WMB	**Pearson Correlation**	.948	.937	.912	.905	.836	.217
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.358
	N	20	20	16	20	20	20
T	**Pearson Correlation**	.943	.938	.891	.893	.795	.163
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.493
	N	20	20	16	20	20	20
TEF	**Pearson Correlation**	.978	.977	.975	.950	.792	.174
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.464
	N	20	20	16	20	20	20
VZ	**Pearson Correlation**	.925	.911	.879	.860	.761	.236
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.317
	N	20	20	16	20	20	20
TGT	**Pearson Correlation**	.950	.943	.912	.948	.847	.266
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.257
	N	20	20	16	20	20	20
WMT	**Pearson Correlation**	.157	.090	.540	.129	.447	.627
	Sig. (2-tailed)	.509	.707	.031	.589	.048	.003
	N	20	20	16	20	20	20

Correlations

		ACI	COP	CPN	EGLE	EXC	GDX
NLY	**Pearson Correlation**	.537	.617	.600	.629	.655	.791
	Sig. (2-tailed)	.015	.004	.007	.003	.002	.000
	N	20	20	19	20	20	20
PSEC	**Pearson Correlation**	.841	.920	.833	.893	.913	.585
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.007
	N	20	20	19	20	20	20
CPNO	**Pearson Correlation**	.919	.959	.946	.975	.962	.787
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
HGT	**Pearson Correlation**	.939	.940	.908	.907	.906	.489
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.029
	N	20	20	19	20	20	20
CVX	**Pearson Correlation**	.946	.975	.924	.958	.978	.625
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.003
	N	20	20	19	20	20	20
TOT	**Pearson Correlation**	.948	.963	.971	.979	.981	.793
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
XOM	**Pearson Correlation**	.821	.906	.826	.887	.936	.664
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001
	N	20	20	19	20	20	20
WMB	**Pearson Correlation**	.961	.981	.972	.987	.987	.769
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
T	**Pearson Correlation**	.821	.903	.866	.911	.929	.742
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
TEF	**Pearson Correlation**	.784	.865	.900	.880	.892	.823
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
VZ	**Pearson Correlation**	.714	.829	.818	.830	.858	.712
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
TGT	**Pearson Correlation**	.824	.886	.914	.899	.866	.734
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	19	20	20	20
WMT	**Pearson Correlation**	.510	.457	.468	.412	.390	-.172
	Sig. (2-tailed)	.022	.043	.043	.071	.089	.469
	N	20	20	19	20	20	20

Correlations

		HSY	MON	SIVB	SJT	SLV	TIE
NLY	**Pearson Correlation**	.373	.570	.357	.427	.826	.854
	Sig. (2-tailed)	.105	.009	.123	.061	.000	.000
	N	20	20	20	20	20	20
PSEC	**Pearson Correlation**	.497	.835	.805	.919	.806	.771
	Sig. (2-tailed)	.026	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
CPNO	**Pearson Correlation**	.529	.947	.790	.821	.878	.866
	Sig. (2-tailed)	.016	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
HGT	**Pearson Correlation**	.394	.912	.905	.964	.654	.585
	Sig. (2-tailed)	.086	.000	.000	.000	.002	.007
	N	20	20	20	20	20	20
CVX	**Pearson Correlation**	.436	.932	.799	.909	.806	.747
	Sig. (2-tailed)	.054	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
TOT	**Pearson Correlation**	.444	.950	.743	.810	.866	.821
	Sig. (2-tailed)	.050	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
XOM	**Pearson Correlation**	.418	.809	.673	.828	.874	.852
	Sig. (2-tailed)	.066	.000	.001	.000	.000	.000
	N	20	20	20	20	20	20
WMB	**Pearson Correlation**	.447	.967	.800	.867	.875	.822
	Sig. (2-tailed)	.048	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
T	**Pearson Correlation**	.495	.847	.677	.775	.921	.907
	Sig. (2-tailed)	.026	.000	.001	.000	.000	.000
	N	20	20	20	20	20	20
TEF	**Pearson Correlation**	.570	.815	.671	.675	.878	.940
	Sig. (2-tailed)	.009	.000	.001	.001	.000	.000
	N	20	20	20	20	20	20
VZ	**Pearson Correlation**	.538	.745	.606	.659	.823	.946
	Sig. (2-tailed)	.014	.000	.005	.002	.000	.000
	N	20	20	20	20	20	20
TGT	**Pearson Correlation**	.677	.872	.806	.739	.774	.852
	Sig. (2-tailed)	.001	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
WMT	**Pearson Correlation**	.169	.450	.607	.642	- 010	-.100
	Sig. (2-tailed)	.477	.047	.005	.002	.968	.674
	N	20	20	20	20	20	20

Correlations

		WY	MO	NLY	PSEC	CPNO	HGT
NLY	**Pearson Correlation**	.723	.832	1	.683	.715	.408
	Sig. (2-tailed)	.000	.000		.001	.000	.074
	N	20	20	20	20	20	20
PSEC	**Pearson Correlation**	.896	.527	.683	1	.888	.881
	Sig. (2-tailed)	.000	.017	.001		.000	.000
	N	20	20	20	20	20	20
CPNO	**Pearson Correlation**	.957	.620	.715	.888	1	.851
	Sig. (2-tailed)	.000	.004	.000	.000		.000
	N	20	20	20	20	20	20
HGT	**Pearson Correlation**	.794	.268	.408	.881	.851	1
	Sig. (2-tailed)	.000	.254	.074	.000	.000	
	N	20	20	20	20	20	20
CVX	**Pearson Correlation**	.872	.415	.590	.907	.916	.922
	Sig. (2-tailed)	.000	.069	.006	.000	.000	.000
	N	20	20	20	20	20	20
TOT	**Pearson Correlation**	.898	.521	.685	.860	.964	.861
	Sig. (2-tailed)	.000	.019	.001	.000	.000	.000
	N	20	20	20	20	20	20
XOM	**Pearson Correlation**	.874	.600	.747	.923	.885	.785
	Sig. (2-tailed)	.000	.005	.000	.000	.000	.000
	N	20	20	20	20	20	20
WMB	**Pearson Correlation**	.923	.543	.676	.901	.982	.906
	Sig. (2-tailed)	.000	.013	.001	.000	.000	.000
	N	20	20	20	20	20	20
T	**Pearson Correlation**	.941	.675	.791	.901	.936	.751
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000
	N	20	20	20	20	20	20
TEF	**Pearson Correlation**	.935	.734	.826	.822	.931	.692
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001
	N	20	20	20	20	20	20
VZ	**Pearson Correlation**	.896	.758	.808	.794	.864	.621
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.003
	N	20	20	20	20	20	20
TGT	**Pearson Correlation**	.957	.612	.703	.836	.937	.781
	Sig. (2-tailed)	.000	.004	.001	.000	.000	.000
	N	20	20	20	20	20	20
WMT	**Pearson Correlation**	.238	-.421	-.263	.422	.261	.668
	Sig. (2-tailed)	.313	.064	.262	.064	.266	.001
	N	20	20	20	20	20	20

Correlations

		CVX	TOT	XOM	WMB	T	TEF
NLY	**Pearson Correlation**	.590	.685	.747	.676	.791	.826
	Sig. (2-tailed)	.006	.001	.000	.001	.000	.000
	N	20	20	20	20	20	20
PSEC	**Pearson Correlation**	.907	.860	.923	.901	.901	.822
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
CPNO	**Pearson Correlation**	.916	.964	.885	.982	.936	.931
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
HGT	**Pearson Correlation**	.922	.861	.785	.906	.751	.692
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001
	N	20	20	20	20	20	20
CVX	**Pearson Correlation**	1	.959	.932	.960	.913	.841
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
TOT	**Pearson Correlation**	.959	1	.912	.985	.933	.922
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	20	20	20	20	20	20
XOM	**Pearson Correlation**	.932	.912	1	.907	.960	.888
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	20	20	20	20	20	20
WMB	**Pearson Correlation**	.960	.985	.907	1	.928	.907
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	20	20	20	20	20	20
T	**Pearson Correlation**	.913	.933	.960	.928	1	.950
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	20	20	20	20	20	20
TEF	**Pearson Correlation**	.841	.922	.888	.907	.950	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	20	20	20	20	20	20
VZ	**Pearson Correlation**	.835	.875	.917	.845	.953	.949
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
TGT	**Pearson Correlation**	.833	.888	.778	.905	.873	.915
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	20	20	20	20	20	20
WMT	**Pearson Correlation**	.491	.310	.237	.347	.172	.056
	Sig. (2-tailed)	.028	.184	.314	.134	.470	.816
	N	20	20	20	20	20	20

Correlations

		VZ	TGT	WMT
NLY	**Pearson Correlation**	.808	.703	-.263
	Sig. (2-tailed)	.000	.001	.262
	N	20	20	20
PSEC	**Pearson Correlation**	.794	.836	.422
	Sig. (2-tailed)	.000	.000	.064
	N	20	20	20
CPNO	**Pearson Correlation**	.864	.937	.261
	Sig. (2-tailed)	.000	.000	.266
	N	20	20	20
HGT	**Pearson Correlation**	.621	.781	.668
	Sig. (2-tailed)	.003	.000	.001
	N	20	20	20
CVX	**Pearson Correlation**	.835	.833	.491
	Sig. (2-tailed)	.000	.000	.028
	N	20	20	20
TOT	**Pearson Correlation**	.875	.888	.310
	Sig. (2-tailed)	.000	.000	.184
	N	20	20	20
XOM	**Pearson Correlation**	.917	.778	.237
	Sig. (2-tailed)	.000	.000	.314
	N	20	20	20
WMB	**Pearson Correlation**	.845	.905	.347
	Sig. (2-tailed)	.000	.000	.134
	N	20	20	20
T	**Pearson Correlation**	.953	.873	.172
	Sig. (2-tailed)	.000	.000	.470
	N	20	20	20
TEF	**Pearson Correlation**	.949	.915	.056
	Sig. (2-tailed)	.000	.000	.816
	N	20	20	20
VZ	**Pearson Correlation**	1	.825	.032
	Sig. (2-tailed)		.000	.893
	N	20	20	20
TGT	**Pearson Correlation**	.825	1	.267
	Sig. (2-tailed)	.000		.255
	N	20	20	20
WMT	**Pearson Correlation**	.032	.267	1
	Sig. (2-tailed)	.893	.255	
	N	20	20	20

Porter Stansberry Stocks Correlation Coefficients in a Bull Market

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Correlations

Note
s

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Correlations

		WMT	JNJ	EXC	NLY	INTC	WY
WMT	**Pearson Correlation**	1	.792	-.304	.509	.625	- 083
	Sig. (2-tailed)		.000	.168	.015	.002	.714
	N	22	22	22	22	22	22
JNJ	**Pearson Correlation**	.792	1	- 050	.523	.648	.339
	Sig. (2-tailed)	.000		.826	.013	.001	.123
	N	22	22	22	22	22	22
EXC	**Pearson Correlation**	-.304	- 050	1	-.219	-.553	.345
	Sig. (2-tailed)	.168	.826		.327	.008	.116
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	.509	.523	-.219	1	.530	-.229
	Sig. (2-tailed)	.015	.013	.327		.011	.306
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	.625	.648	-.553	.530	1	.184
	Sig. (2-tailed)	.002	.001	.008	.011		.412
	N	22	22	22	22	22	22
WY	**Pearson Correlation**	- 083	.339	.345	-.229	.184	1
	Sig. (2-tailed)	.714	.123	.116	.306	.412	
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	.654	.675	-.027	.405	.663	.443
	Sig. (2-tailed)	.001	.001	.907	.061	.001	.039
	N	22	22	22	22	22	22
HSY	**Pearson Correlation**	.239	- 067	-.832	.309	.512	-.582
	Sig. (2-tailed)	.284	.767	.000	.162	.015	.004
	N	22	22	22	22	22	22
SIVB	**Pearson Correlation**	.667	.449	-.595	.617	.856	-.158
	Sig. (2-tailed)	.001	.036	.004	.002	.000	.484
	N	22	22	22	22	22	22
TIE	**Pearson Correlation**	.375	.025	-.872	.328	.452	-.600
	Sig. (2-tailed)	.085	.911	.000	.136	.035	.003
	N	22	22	22	22	22	22
CPN	**Pearson Correlation**	.076	-.333	-.591	.006	.331	-.469
	Sig. (2-tailed)	.736	.130	.004	.980	.133	.028

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		PSEC	HSY	SIVB	TIE	CPN	COP
WMT	**Pearson Correlation**	.654	.239	.667	.375	.076	.554
	Sig. (2-tailed)	.001	.284	.001	.085	.736	.007
	N	22	22	22	22	22	22
JNJ	**Pearson Correlation**	.675	- 067	.449	.025	-.333	.114
	Sig. (2-tailed)	.001	.767	.036	.911	.130	.612
	N	22	22	22	22	22	22
EXC	**Pearson Correlation**	-.027	-.832	-.595	-.872	-.591	-.585
	Sig. (2-tailed)	.907	.000	.004	.000	.004	.004
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	.405	.309	.617	.328	.006	.414
	Sig. (2-tailed)	.061	.162	.002	.136	.980	.055
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	.663	.512	.856	.452	.331	.521
	Sig. (2-tailed)	.001	.015	.000	.035	.133	.013
	N	22	22	22	22	22	22
WY	**Pearson Correlation**	.443	-.582	-.158	-.600	-.469	-.525
	Sig. (2-tailed)	.039	.004	.484	.003	.028	.012
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	1	.021	.663	.014	.084	.403
	Sig. (2-tailed)		.928	.001	.951	.709	.063
	N	22	22	22	22	22	22
HSY	**Pearson Correlation**	.021	1	.670	.896	.838	.777
	Sig. (2-tailed)	.928		.001	.000	.000	.000
	N	22	22	22	22	22	22
SIVB	**Pearson Correlation**	.663	.670	1	.590	.573	.836
	Sig. (2-tailed)	.001	.001		.004	.005	.000
	N	22	22	22	22	22	22
TIE	**Pearson Correlation**	.014	.896	.590	1	.674	.698
	Sig. (2-tailed)	.951	.000	.004		.001	.000
	N	22	22	22	22	22	22
CPN	**Pearson Correlation**	.084	.838	.573	.674	1	.788
	Sig. (2-tailed)	.709	.000	.005	.001		.000

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		MON	ACI	EGLE	SJT	SLV	GDX
WMT	**Pearson Correlation**	.020	.665	- 090	.436	.506	.531
	Sig. (2-tailed)	.930	.001	.689	.043	.016	.011
	N	22	22	22	22	22	22
JNJ	**Pearson Correlation**	.142	.250	.118	.122	.078	.141
	Sig. (2-tailed)	.529	.263	.602	.588	.729	.531
	N	22	22	22	22	22	22
EXC	**Pearson Correlation**	.837	-.563	.529	-.922	-.527	-.723
	Sig. (2-tailed)	.000	.006	.011	.000	.012	.000
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	-.147	.509	-.521	.407	.430	.503
	Sig. (2-tailed)	.513	.016	.013	.060	.046	.017
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	-.225	.595	-.431	.582	.443	.466
	Sig. (2-tailed)	.314	.004	.045	.004	.039	.029
	N	22	22	22	22	22	22
WY	**Pearson Correlation**	.425	-.493	.386	-.466	-.600	-.663
	Sig. (2-tailed)	.049	.020	.076	.029	.003	.001
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	.361	.463	-.248	.173	.322	.125
	Sig. (2-tailed)	.099	.030	.265	.442	.144	.579
	N	22	22	22	22	22	22
HSY	**Pearson Correlation**	-.714	.712	-.722	.885	.750	.810
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	22	22	22	22	22	22
SIVB	**Pearson Correlation**	-.220	.892	-.671	.724	.780	.709
	Sig. (2-tailed)	.326	.000	.001	.000	.000	.000
	N	22	22	22	22	22	22
TIE	**Pearson Correlation**	-.797	.664	-.605	.950	.640	.824
	Sig. (2-tailed)	.000	.001	.003	.000	.001	.000
	N	22	22	22	22	22	22
CPN	**Pearson Correlation**	-.365	.669	-.701	.648	.749	.626
	Sig. (2-tailed)	.095	.001	.000	.001	.000	.002

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		WMT	JNJ	EXC	NLY	INTC	WY
CPN	N	22	22	22	22	22	22
COP	**Pearson Correlation**	.554	.114	-.585	.414	.521	-.525
	Sig. (2-tailed)	.007	.612	.004	.055	.013	.012
	N	22	22	22	22	22	22
MON	**Pearson Correlation**	.020	.142	.837	-.147	-.225	.425
	Sig. (2-tailed)	.930	.529	.000	.513	.314	.049
	N	22	22	22	22	22	22
ACI	**Pearson Correlation**	.665	.250	-.563	.509	.595	-.493
	Sig. (2-tailed)	.001	.263	.006	.016	.004	.020
	N	22	22	22	22	22	22
EGLE	**Pearson Correlation**	- 090	.118	.529	-.521	-.431	.386
	Sig. (2-tailed)	.689	.602	.011	.013	.045	.076
	N	22	22	22	22	22	22
SJT	**Pearson Correlation**	.436	.122	-.922	.407	.582	-.466
	Sig. (2-tailed)	.043	.588	.000	.060	.004	.029
	N	22	22	22	22	22	22
SLV	**Pearson Correlation**	.506	.078	-.527	.430	.443	-.600
	Sig. (2-tailed)	.016	.729	.012	.046	.039	.003
	N	22	22	22	22	22	22
GDX	**Pearson Correlation**	.531	.141	-.723	.503	.466	-.663
	Sig. (2-tailed)	.011	.531	.000	.017	.029	.001
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		PSEC	HSY	SIVB	TIE	CPN	COP
CPN	N	22	22	22	22	22	22
COP	**Pearson Correlation**	.403	.777	.836	.698	.788	1
	Sig. (2-tailed)	.063	.000	.000	.000	.000	
	N	22	22	22	22	22	22
MON	**Pearson Correlation**	.361	-.714	-.220	-.797	-.365	-.258
	Sig. (2-tailed)	.099	.000	.326	.000	.095	.245
	N	22	22	22	22	22	22
ACI	**Pearson Correlation**	.463	.712	.892	.664	.669	.966
	Sig. (2-tailed)	.030	.000	.000	.001	.001	.000
	N	22	22	22	22	22	22
EGLE	**Pearson Correlation**	-.248	-.722	-.671	-.605	-.701	-.696
	Sig. (2-tailed)	.265	.000	.001	.003	.000	.000
	N	22	22	22	22	22	22
SJT	**Pearson Correlation**	.173	.885	.724	.950	.648	.750
	Sig. (2-tailed)	.442	.000	.000	.000	.001	.000
	N	22	22	22	22	22	22
SLV	**Pearson Correlation**	.322	.750	.780	.640	.749	.974
	Sig. (2-tailed)	.144	.000	.000	.001	.000	.000
	N	22	22	22	22	22	22
GDX	**Pearson Correlation**	.125	.810	.709	.824	.626	.875
	Sig. (2-tailed)	.579	.000	.000	.000	.002	.000
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		MON	ACI	EGLE	SJT	SLV	GDX
CPN	N	22	22	22	22	22	22
COP	**Pearson Correlation**	-.258	.966	-.696	.750	.974	.875
	Sig. (2-tailed)	.245	.000	.000	.000	.000	.000
	N	22	22	22	22	22	22
MON	**Pearson Correlation**	1	-.222	.377	-.767	-.218	-.546
	Sig. (2-tailed)		.321	.084	.000	.329	.009
	N	22	22	22	22	22	22
ACI	**Pearson Correlation**	-.222	1	-.630	.734	.948	.869
	Sig. (2-tailed)	.321		.002	.000	.000	.000
	N	22	22	22	22	22	22
EGLE	**Pearson Correlation**	.377	-.630	1	-.647	-.662	-.581
	Sig. (2-tailed)	.084	.002		.001	.001	.005
	N	22	22	22	22	22	22
SJT	**Pearson Correlation**	-.767	.734	-.647	1	.693	.842
	Sig. (2-tailed)	.000	.000	.001		.000	.000
	N	22	22	22	22	22	22
SLV	**Pearson Correlation**	-.218	.948	-.662	.693	1	.885
	Sig. (2-tailed)	.329	.000	.001	.000		.000
	N	22	22	22	22	22	22
GDX	**Pearson Correlation**	-.546	.869	-.581	.842	.885	1
	Sig. (2-tailed)	.009	.000	.005	.000	.000	
	N	22	22	22	22	22	22

**.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).

Porter Stansberry Stocks Correlation Coefficients in a Bear Market

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Correlations

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Correlations

		WMT	JNJ	EXC	NLY	INTC	WY
WMT	**Pearson Correlation**	1	.577	.358	-.260	.237	.197
	Sig. (2-tailed)		.010	.132	.283	.328	.419
	N	19	19	19	19	19	19
JNJ	**Pearson Correlation**	.577	1	.861	.449	.851	.853
	Sig. (2-tailed)	.010		.000	.054	.000	.000
	N	19	19	19	19	19	19
EXC	**Pearson Correlation**	.358	.861	1	.682	.916	.895
	Sig. (2-tailed)	.132	.000		.001	.000	.000
	N	19	19	19	19	19	19
NLY	**Pearson Correlation**	-.260	.449	.682	1	.657	.753
	Sig. (2-tailed)	.283	.054	.001		.002	.000
	N	19	19	19	19	19	19
INTC	**Pearson Correlation**	.237	.851	.916	.657	1	.939
	Sig. (2-tailed)	.328	.000	.000	.002		.000
	N	19	19	19	19	19	19
WY	**Pearson Correlation**	.197	.853	.895	.753	.939	1
	Sig. (2-tailed)	.419	.000	.000	.000	.000	
	N	19	19	19	19	19	19
PSEC	**Pearson Correlation**	.386	.865	.908	.718	.790	.891
	Sig. (2-tailed)	.103	.000	.000	.001	.000	.000
	N	19	19	19	19	19	19
HSY	**Pearson Correlation**	.256	.759	.541	.376	.698	.750
	Sig. (2-tailed)	.291	.000	.017	.112	.001	.000
	N	19	19	19	19	19	19
SIVB	**Pearson Correlation**	.595	.946	.774	.369	.788	.823
	Sig. (2-tailed)	.007	.000	.000	.120	.000	.000
	N	19	19	19	19	19	19
TIE	**Pearson Correlation**	-.143	.673	.788	.874	.867	.917
	Sig. (2-tailed)	.559	.002	.000	.000	.000	.000
	N	19	19	19	19	19	19
CPN	**Pearson Correlation**	.465	.819	.952	.608	.949	.884
	Sig. (2-tailed)	.052	.000	.000	.007	.000	.000
	N	18	18	18	18	18	18
COP	**Pearson Correlation**	.422	.910	.986	.653	.926	.913
	Sig. (2-tailed)	.072	.000	.000	.002	.000	.000
	N	19	19	19	19	19	19
MON	**Pearson Correlation**	.418	.816	.953	.599	.899	.853
	Sig. (2-tailed)	.075	.000	.000	.007	.000	.000
	N	19	19	19	19	19	19

Correlations

		PSEC	HSY	SIVB	TIE	CPN	COP
WMT	**Pearson Correlation**	.386	.256	.595	-.143	.465	.422
	Sig. (2-tailed)	.103	.291	.007	.559	.052	.072
	N	19	19	19	19	18	19
JNJ	**Pearson Correlation**	.865	.759	.946	.673	.819	.910
	Sig. (2-tailed)	.000	.000	.000	.002	.000	.000
	N	19	19	19	19	18	19
EXC	**Pearson Correlation**	.908	.541	.774	.788	.952	.986
	Sig. (2-tailed)	.000	.017	.000	.000	.000	.000
	N	19	19	19	19	18	19
NLY	**Pearson Correlation**	.718	.376	.369	.874	.608	.653
	Sig. (2-tailed)	.001	.112	.120	.000	.007	.002
	N	19	19	19	19	18	19
INTC	**Pearson Correlation**	.790	.698	.788	.867	.949	.926
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000
	N	19	19	19	19	18	19
WY	**Pearson Correlation**	.891	.750	.823	.917	.884	.913
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	19	19	19	19	18	19
PSEC	**Pearson Correlation**	1	.617	.801	.765	.842	.914
	Sig. (2-tailed)		.005	.000	.000	.000	.000
	N	19	19	19	19	18	19
HSY	**Pearson Correlation**	.617	1	.704	.642	.508	.593
	Sig. (2-tailed)	.005		.001	.003	.031	.007
	N	19	19	19	19	18	19
SIVB	**Pearson Correlation**	.801	.704	1	.626	.780	.855
	Sig. (2-tailed)	.000	.001		.004	.000	.000
	N	19	19	19	19	18	19
TIE	**Pearson Correlation**	.765	.642	.626	1	.801	.785
	Sig. (2-tailed)	.000	.003	.004		.000	.000
	N	19	19	19	19	18	19
CPN	**Pearson Correlation**	.842	.508	.780	.801	1	.954
	Sig. (2-tailed)	.000	.031	.000	.000		.000
	N	18	18	18	18	18	18
COP	**Pearson Correlation**	.914	.593	.855	.785	.954	1
	Sig. (2-tailed)	.000	.007	.000	.000	.000	
	N	19	19	19	19	18	19
MON	**Pearson Correlation**	.825	.478	.778	.695	.967	.959
	Sig. (2-tailed)	.000	.039	.000	.001	.000	.000
	N	19	19	19	19	18	19

Correlations

		MON	ACI	EGLE	SJT	SLV	GDX
WMT	**Pearson Correlation**	.418	.484	.376	.615	- 054	-.184
	Sig. (2-tailed)	.075	.036	.113	.005	.826	.451
	N	19	19	19	19	19	19
JNJ	**Pearson Correlation**	.816	.821	.861	.923	.528	.422
	Sig. (2-tailed)	.000	.000	.000	.000	.020	.072
	N	19	19	19	19	19	19
EXC	**Pearson Correlation**	.953	.959	.984	.882	.844	.744
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	19	19	19	19	19	19
NLY	**Pearson Correlation**	.599	.562	.662	.477	.849	.793
	Sig. (2-tailed)	.007	.012	.002	.039	.000	.000
	N	19	19	19	19	19	19
INTC	**Pearson Correlation**	.899	.862	.942	.757	.750	.735
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	19	19	19	19	19	19
WY	**Pearson Correlation**	.853	.803	.907	.807	.818	.696
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001
	N	19	19	19	19	19	19
PSEC	**Pearson Correlation**	.825	.833	.886	.917	.799	.597
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.007
	N	19	19	19	19	19	19
HSY	**Pearson Correlation**	.478	.427	.570	.558	.345	.219
	Sig. (2-tailed)	.039	.068	.011	.013	.148	.367
	N	19	19	19	19	19	19
SIVB	**Pearson Correlation**	.778	.771	.795	.920	.476	.321
	Sig. (2-tailed)	.000	.000	.000	.000	.040	.181
	N	19	19	19	19	19	19
TIE	**Pearson Correlation**	.695	.644	.778	.618	.821	.734
	Sig. (2-tailed)	.001	.003	.000	.005	.000	.000
	N	19	19	19	19	19	19
CPN	**Pearson Correlation**	.967	.966	.968	.835	.810	.759
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
COP	**Pearson Correlation**	.959	.962	.983	.924	.793	.692
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001
	N	19	19	19	19	19	19
MON	**Pearson Correlation**	1	.984	.975	.842	.790	.749
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	19	19	19	19	19	19

Correlations

		WMT	JNJ	EXC	NLY	INTC	WY
ACI	**Pearson Correlation**	.484	.821	.959	.562	.862	.803
	Sig. (2-tailed)	.036	.000	.000	.012	.000	.000
	N	19	19	19	19	19	19
EGLE	**Pearson Correlation**	.376	.861	.984	.662	.942	.907
	Sig. (2-tailed)	.113	.000	.000	.002	.000	.000
	N	19	19	19	19	19	19
SJT	**Pearson Correlation**	.615	.923	.882	.477	.757	.807
	Sig. (2-tailed)	.005	.000	.000	.039	.000	.000
	N	19	19	19	19	19	19
SLV	**Pearson Correlation**	- 054	.528	.844	.849	.750	.818
	Sig. (2-tailed)	.826	.020	.000	.000	.000	.000
	N	19	19	19	19	19	19
GDX	**Pearson Correlation**	-.184	.422	.744	.793	.735	.696
	Sig. (2-tailed)	.451	.072	.000	.000	.000	.001
	N	19	19	19	19	19	19

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

• Correlation is significant at the 0.05 level (2-tailed).

Correlation
s

		PSEC	HSY	SIVB	TIE	CPN	COP
ACI	**Pearson Correlation**	.833	.427	.771	.644	.966	.962
	Sig. (2-tailed)	.000	.068	.000	.003	.000	.000
	N	19	19	19	19	18	19
EGLE	**Pearson Correlation**	.886	.570	.795	.778	.968	.983
	Sig. (2-tailed)	.000	.011	.000	.000	.000	.000
	N	19	19	19	19	18	19
SJT	**Pearson Correlation**	.917	.558	.920	.618	.835	.924
	Sig. (2-tailed)	.000	.013	.000	.005	.000	.000
	N	19	19	19	19	18	19
SLV	**Pearson Correlation**	.799	.345	.476	.821	.810	.793
	Sig. (2-tailed)	.000	.148	.040	.000	.000	.000
	N	19	19	19	19	18	19
GDX	**Pearson Correlation**	.597	.219	.321	.734	.759	.692
	Sig. (2-tailed)	.007	.367	.181	.000	.000	.001
	N	19	19	19	19	18	19

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		MON	ACI	EGLE	SJT	SLV	GDX
ACI	**Pearson Correlation**	.984	1	.970	.870	.766	.716
	Sig. (2-tailed)	.000		.000	.000	.000	.001
	N	19	19	19	19	19	19
EGLE	**Pearson Correlation**	.975	.970	1	.862	.821	.761
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	19	19	19	19	19	19
SJT	**Pearson Correlation**	.842	.870	.862	1	.631	.415
	Sig. (2-tailed)	.000	.000	.000		.004	.077
	N	19	19	19	19	19	19
SLV	**Pearson Correlation**	.790	.766	.821	.631	1	.859
	Sig. (2-tailed)	.000	.000	.000	.004		.000
	N	19	19	19	19	19	19
GDX	**Pearson Correlation**	.749	.716	.761	.415	.859	1
	Sig. (2-tailed)	.000	.001	.000	.077	.000	
	N	19	19	19	19	19	19

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

Breakfast Club Meeting Stocks Correlation Coefficients in a Bull Market

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Correlations

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Correlations

		TBF	ANSS	CCF	DYSL	INTC	MSFT
TBF	**Pearson Correlation**	1	-.347	-.584	-.635	.114	.588
	Sig. (2-tailed)		.134	.007	.003	.633	.006
	N	20	20	20	20	20	20
ANSS	**Pearson Correlation**	-.347	1	.796	.839	.722	.440
	Sig. (2-tailed)	.134		.000	.000	.000	.041
	N	20	22	22	22	22	22
CCF	**Pearson Correlation**	-.584	.796	1	.907	.385	.003
	Sig. (2-tailed)	.007	.000		.000	.077	.989
	N	20	22	22	22	22	22
DYSL	**Pearson Correlation**	-.635	.839	.907	1	.474	.204
	Sig. (2-tailed)	.003	.000	.000		.026	.361
	N	20	22	22	22	22	22
INTC	**Pearson Correlation**	.114	.722	.385	.474	1	.644
	Sig. (2-tailed)	.633	.000	.077	.026		.001
	N	20	22	22	22	22	22
MSFT	**Pearson Correlation**	.588	.440	.003	.204	.644	1
	Sig. (2-tailed)	.006	.041	.989	.361	.001	
	N	20	22	22	22	22	22
EWZ	**Pearson Correlation**	-.260	.768	.640	.829	.574	.604
	Sig. (2-tailed)	.269	.000	.001	.000	.005	.003
	N	20	22	22	22	22	22
MCHFX	**Pearson Correlation**	-.640	.850	.872	.970	.545	.276
	Sig. (2-tailed)	.002	.000	.000	.000	.009	.213
	N	20	22	22	22	22	22
EWY	**Pearson Correlation**	-.458	.943	.890	.917	.651	.333
	Sig. (2-tailed)	.043	.000	.000	.000	.001	.130
	N	20	22	22	22	22	22
THO	**Pearson Correlation**	-.726	.825	.942	.964	.444	.061
	Sig. (2-tailed)	.000	.000	.000	.000	.038	.787
	N	20	22	22	22	22	22
CAG	**Pearson Correlation**	.033	.610	.165	.330	.795	.642
	Sig. (2-tailed)	.889	.003	.464	.133	.000	.001

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		EWZ	MCHFX	EWY	THO	CAG	KFT
TBF	**Pearson Correlation**	-.260	-.640	-.458	-.726	.033	-.648
	Sig. (2-tailed)	.269	.002	.043	.000	.889	.002
	N	20	20	20	20	20	20
ANSS	**Pearson Correlation**	.768	.850	.943	.825	.610	.793
	Sig. (2-tailed)	.000	.000	.000	.000	.003	.000
	N	22	22	22	22	22	22
CCF	**Pearson Correlation**	.640	.872	.890	.942	.165	.879
	Sig. (2-tailed)	.001	.000	.000	.000	.464	.000
	N	22	22	22	22	22	22
OYSL	**Pearson Correlation**	.829	.970	.917	.964	.330	.871
	Sig. (2-tailed)	.000	.000	.000	.000	.133	.000
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	.574	.545	.651	.444	.795	.576
	Sig. (2-tailed)	.005	.009	.001	.038	.000	.005
	N	22	22	22	22	22	22
MSFT	**Pearson Correlation**	.604	.276	.333	.061	.642	.108
	Sig. (2-tailed)	.003	.213	.130	.787	.001	.633
	N	22	22	22	22	22	22
EWZ	**Pearson Correlation**	1	.868	.810	.756	.532	.666
	Sig. (2-tailed)		.000	.000	.000	.011	.001
	N	22	22	22	22	22	22
MCHFX	**Pearson Correlation**	.868	1	.932	.964	.445	.916
	Sig. (2-tailed)	.000		.000	.000	.038	.000
	N	22	22	22	22	22	22
EWY	**Pearson Correlation**	.810	.932	1	.923	.455	.890
	Sig. (2-tailed)	.000	.000		.000	.033	.000
	N	22	22	22	22	22	22
THO	**Pearson Correlation**	.756	.964	.923	1	.314	.929
	Sig. (2-tailed)	.000	.000	.000		.155	.000
	N	22	22	22	22	22	22
CAG	**Pearson Correlation**	.532	.445	.455	.314	1	.424
	Sig. (2-tailed)	.011	.038	.033	.155		.049

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TUR	MCD	MO	NLY	PSEC	CPNO
TBF	**Pearson Correlation**	-.721	-.760	-.703	.071	.613	-.586
	Sig. (2-tailed)	.000	.000	.001	.767	.004	.007
	N	20	20	20	20	20	20
ANSS	**Pearson Correlation**	.731	.816	.864	.582	.557	.937
	Sig. (2-tailed)	.000	.000	.000	.004	.007	.000
	N	22	22	22	22	22	22
CCF	**Pearson Correlation**	.801	.881	.922	.375	.129	.859
	Sig. (2-tailed)	.000	.000	.000	.086	.568	.000
	N	22	22	22	22	22	22
DYSL	**Pearson Correlation**	.906	.929	.947	.600	.166	.862
	Sig. (2-tailed)	.000	.000	.000	.003	.461	.000
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	.542	.474	.498	.530	.663	.589
	Sig. (2-tailed)	.009	.026	.018	.011	.001	.004
	N	22	22	22	22	22	22
MSFT	**Pearson Correlation**	.199	.115	.127	.446	.815	.199
	Sig. (2-tailed)	.374	.610	.572	.037	.000	.374
	N	22	22	22	22	22	22
EWZ	**Pearson Correlation**	.802	.729	.757	.744	.452	.674
	Sig. (2-tailed)	.000	.000	.000	.000	.035	.001
	N	22	22	22	22	22	22
MCHFX	**Pearson Correlation**	.946	.952	.964	.620	.228	.893
	Sig. (2-tailed)	.000	.000	.000	.002	.307	.000
	N	22	22	22	22	22	22
EWY	**Pearson Correlation**	.844	.868	.929	.633	.421	.925
	Sig. (2-tailed)	.000	.000	.000	.002	.051	.000
	N	22	22	22	22	22	22
THO	**Pearson Correlation**	.917	.960	.983	.528	.107	.900
	Sig. (2-tailed)	.000	.000	.000	.012	.637	.000
	N	22	22	22	22	22	22
CAG	**Pearson Correlation**	.462	.430	.404	.459	.625	.522
	Sig. (2-tailed)	.030	.046	.062	.032	.002	.013

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		HGT	CVX	TOT	XOM	WMB	T
TBF	**Pearson Correlation**	-.735	-.315	730	.251	-.107	-.354
	Sig. (2-tailed)	.000	.176	.000	.287	.653	.126
	N	20	20	20	20	20	20
ANSS	**Pearson Correlation**	.897	.891	.009	.429	.933	.654
	Sig. (2-tailed)	.000	.000	.970	.047	.000	.001
	N	22	22	22	22	22	22
CCF	**Pearson Correlation**	.837	.839	-.141	.415	.729	.799
	Sig. (2-tailed)	.000	.000	.531	.055	.000	.000
	N	22	22	22	22	22	22
DYSL	**Pearson Correlation**	.874	.782	-.157	.265	.689	.817
	Sig. (2-tailed)	.000	.000	.485	.234	.000	.000
	N	22	22	22	22	22	22
INTC	**Pearson Correlation**	.557	.493	-.027	.145	.681	.254
	Sig. (2-tailed)	.007	.020	.907	.520	.000	.254
	N	22	22	22	22	22	22
MSFT	**Pearson Correlation**	.108	.273	.519	.228	.472	.180
	Sig. (2-tailed)	.632	.218	.013	.307	.026	.423
	N	22	22	22	22	22	22
EW2	**Pearson Correlation**	.686	.675	.166	.225	.650	.766
	Sig. (2-tailed)	.000	.001	.459	.314	.001	.000
	N	22	22	22	22	22	22
MCHFX	**Pearson Correlation**	.868	.763	-.189	.178	.701	.803
	Sig. (2-tailed)	.000	.000	.398	.429	.000	.000
	N	22	22	22	22	22	22
EWY	**Pearson Correlation**	.888	.892	- 020	.413	.855	.816
	Sig. (2-tailed)	.000	.000	.930	.056	.000	.000
	N	22	22	22	22	22	22
THO	**Pearson Correlation**	.906	.793	-.268	.220	.687	.817
	Sig. (2-tailed)	.000	.000	.228	.325	.000	.000
	N	22	22	22	22	22	22
CAG	**Pearson Correlation**	.522	.294	-.123	-.187	.537	.008
	Sig. (2-tailed)	.013	.184	.586	.404	.010	.972

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TEF	VZ	TGT	WMT
TBF	**Pearson Correlation**	.335	-.111	-.495	.097
	Sig. (2-tailed)	.149	.642	.026	.683
	N	20	20	20	20
ANSS	**Pearson Correlation**	-.646	.627	.829	.693
	Sig. (2-tailed)	.001	.002	.000	.000
	N	22	22	22	22
CCF	**Pearson Correlation**	-.579	.728	.649	.510
	Sig. (2-tailed)	.005	.000	.001	.015
	N	22	22	22	22
DYSL	**Pearson Correlation**	-.390	.621	.792	.645
	Sig. (2-tailed)	.073	.002	.000	.001
	N	22	22	22	22
INTC	**Pearson Correlation**	-.321	.196	.793	.625
	Sig. (2-tailed)	.145	.382	.000	.002
	N	22	22	22	22
MSFT	**Pearson Correlation**	.126	.140	.462	.757
	Sig. (2-tailed)	.578	.536	.031	.000
	N	22	22	22	22
EWZ	**Pearson Correlation**	- 083	.494	.768	.789
	Sig. (2-tailed)	.713	.019	.000	.000
	N	22	22	22	22
MCHFX	**Pearson Correlation**	-.369	.582	.846	.705
	Sig. (2-tailed)	.091	.004	.000	.000
	N	22	22	22	22
EWY	**Pearson Correlation**	-.557	.722	.833	.706
	Sig. (2-tailed)	.007	.000	.000	.000
	N	22	22	22	22
THO	**Pearson Correlation**	-.482	.626	.778	.557
	Sig. (2-tailed)	.023	.002	.000	.007
	N	22	22	22	22
CAG	**Pearson Correlation**	-.223	-.111	.700	.543
	Sig. (2-tailed)	.318	.624	.000	.009

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TBF	ANSS	CCF	DYSL	INTC	MSFT
CAG	N	20	22	22	22	22	22
KFT	**Pearson Correlation**	-.648	.793	.879	.871	.576	.108
	Sig. (2-tailed)	.002	.000	.000	.000	.005	.633
	N	20	22	22	22	22	22
TUR	**Pearson Correlation**	-.721	.731	.801	.906	.542	.199
	Sig. (2-tailed)	.000	.000	.000	.000	.009	.374
	N	20	22	22	22	22	22
MCD	**Pearson Correlation**	-.760	.816	.881	.929	.474	.115
	Sig. (2-tailed)	.000	.000	.000	.000	.026	.610
	N	20	22	22	22	22	22
MO	**Pearson Correlation**	-.703	.864	.922	.947	.498	.127
	Sig. (2-tailed)	.001	.000	.000	.000	.018	.572
	N	20	22	22	22	22	22
NLY	**Pearson Correlation**	.071	.582	.375	.600	.530	.446
	Sig. (2-tailed)	.767	.004	.086	.003	.011	.037
	N	20	22	22	22	22	22
PSEC	**Pearson Correlation**	.613	.557	.129	.166	.663	.815
	Sig. (2-tailed)	.004	.007	.568	.461	.001	.000
	N	20	22	22	22	22	22
CPNO	**Pearson Correlation**	-.586	.937	.859	.862	.589	.199
	Sig. (2-tailed)	.007	.000	.000	.000	.004	.374
	N	20	22	22	22	22	22
HGT	**Pearson Correlation**	-.735	.897	.837	.874	.557	.108
	Sig. (2-tailed)	.000	.000	.000	.000	.007	.632
	N	20	22	22	22	22	22
CVX	**Pearson Correlation**	-.315	.891	.839	.782	.493	.273
	Sig. (2-tailed)	.176	.000	.000	.000	.020	.218
	N	20	22	22	22	22	22
TOT	**Pearson Correlation**	730	.009	-.141	-.157	-.027	.519
	Sig. (2-tailed)	.000	.970	.531	.485	.907	.013
	N	20	22	22	22	22	22
XOM	**Pearson Correlation**	.251	.429	.415	.265	.145	.228
	Sig. (2-tailed)	.287	.047	.055	.234	.520	.307
	N	20	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		'eNZ	MCHFX	'eNY	THO	CAG	KFT
CAG	N	22	22	22	22	22	22
KFT	**Pearson Correlation**	.666	.916	.890	.929	.424	1
	Sig. (2-tailed)	.001	.000	.000	.000	.049	
	N	22	22	22	22	22	22
TUR	**Pearson Correlation**	.802	.946	.844	.917	.462	.904
	Sig. (2-tailed)	.000	.000	.000	.000	.030	.000
	N	22	22	22	22	22	22
MCD	**Pearson Correlation**	.729	.952	.868	.960	.430	.922
	Sig. (2-tailed)	.000	.000	.000	.000	.046	.000
	N	22	22	22	22	22	22
MO	**Pearson Correlation**	.757	.964	.929	.983	.404	.949
	Sig. (2-tailed)	.000	.000	.000	.000	.062	.000
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	.744	.620	.633	.528	.459	.470
	Sig. (2-tailed)	.000	.002	.002	.012	.032	.027
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	.452	.228	.421	.107	.625	.203
	Sig. (2-tailed)	.035	.307	.051	.637	.002	.365
	N	22	22	22	22	22	22
CPNO	**Pearson Correlation**	.674	.893	.925	.900	.522	.883
	Sig. (2-tailed)	.001	.000	.000	.000	.013	.000
	N	22	22	22	22	22	22
HGT	**Pearson Correlation**	.686	.868	.888	.906	.522	.834
	Sig. (2-tailed)	.000	.000	.000	.000	.013	.000
	N	22	22	22	22	22	22
CVX	**Pearson Correlation**	.675	.763	.892	.793	.294	.739
	Sig. (2-tailed)	.001	.000	.000	.000	.184	.000
	N	22	22	22	22	22	22
TOT	**Pearson Correlation**	.166	-.189	- 020	-.268	-.123	-.319
	Sig. (2-tailed)	.459	.398	.930	.228	.586	.148
	N	22	22	22	22	22	22
XOM	**Pearson Correlation**	.225	.178	.413	.220	-.187	.153
	Sig. (2-tailed)	.314	.429	.056	.325	.404	.496
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TUR	MCD	MO	NLY	PSEC	CPNO
CAG	N	22	22	22	22	22	22
KFT	**Pearson Correlation**	.904	.922	.949	.470	.203	.883
	Sig. (2-tailed)	.000	.000	.000	.027	.365	.000
	N	22	22	22	22	22	22
TUR	**Pearson Correlation**	1	.911	.916	.609	.117	.799
	Sig. (2-tailed)		.000	.000	.003	.606	.000
	N	22	22	22	22	22	22
MCD	**Pearson Correlation**	.911	1	.970	.410	.099	.916
	Sig. (2-tailed)	.000		.000	.058	.661	.000
	N	22	22	22	22	22	22
MO	**Pearson Correlation**	.916	.970	1	.522	.201	.940
	Sig. (2-tailed)	.000	.000		.013	.370	.000
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	.609	.410	.522	1	.405	.459
	Sig. (2-tailed)	.003	.058	.013		.061	.032
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	.117	.099	.201	.405	1	.335
	Sig. (2-tailed)	.606	.661	.370	.061		.127
	N	22	22	22	22	22	22
CPNO	**Pearson Correlation**	.799	.916	.940	.459	.335	1
	Sig. (2-tailed)	.000	.000	.000	.032	.127	
	N	22	22	22	22	22	22
HGT	**Pearson Correlation**	.824	.897	.919	.530	.210	.934
	Sig. (2-tailed)	.000	.000	.000	.011	.348	.000
	N	22	22	22	22	22	22
CVX	**Pearson Correlation**	.593	730	.821	.428	.493	.851
	Sig. (2-tailed)	.004	.000	.000	.047	.020	.000
	N	22	22	22	22	22	22
TOT	**Pearson Correlation**	-.327	-.379	-.244	.158	.614	-.225
	Sig. (2-tailed)	.138	.082	.274	.481	.002	.314
	N	22	22	22	22	22	22
XOM	**Pearson Correlation**	- 061	.093	.223	.115	.500	.285
	Sig. (2-tailed)	.786	.681	.319	.611	.018	.199
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		HGT	CVX	TOT	XOM	WMB	T
CAG	N	22	22	22	22	22	22
KFT	**Pearson Correlation**	.834	.739	-.319	.153	.702	.692
	Sig. (2-tailed)	.000	.000	.148	.496	.000	.000
	N	22	22	22	22	22	22
TUR	**Pearson Correlation**	.824	.593	-.327	- 061	.546	.715
	Sig. (2-tailed)	.000	.004	.138	.786	.009	.000
	N	22	22	22	22	22	22
MCD	**Pearson Correlation**	.897	730	-.379	.093	.674	.682
	Sig. (2-tailed)	.000	.000	.082	.681	.001	.000
	N	22	22	22	22	22	22
MO	**Pearson Correlation**	.919	.821	-.244	.223	.753	.785
	Sig. (2-tailed)	.000	.000	.274	.319	.000	.000
	N	22	22	22	22	22	22
NLY	**Pearson Correlation**	.530	.428	.158	.115	.432	.579
	Sig. (2-tailed)	.011	.047	.481	.611	.045	.005
	N	22	22	22	22	22	22
PSEC	**Pearson Correlation**	.210	.493	.614	.500	.713	.219
	Sig. (2-tailed)	.348	.020	.002	.018	.000	.327
	N	22	22	22	22	22	22
CPNO	**Pearson Correlation**	.934	.851	-.225	.285	.846	.653
	Sig. (2-tailed)	.000	.000	.314	.199	.000	.001
	N	22	22	22	22	22	22
HGT	**Pearson Correlation**	1	.793	-.301	.178	.752	.616
	Sig. (2-tailed)		.000	.173	.428	.000	.002
	N	22	22	22	22	22	22
CVX	**Pearson Correlation**	.793	1	.203	.699	.931	.786
	Sig. (2-tailed)	.000		.364	.000	.000	.000
	N	22	22	22	22	22	22
TOT	**Pearson Correlation**	-.301	.203	1	.668	.226	.213
	Sig. (2-tailed)	.173	.364		.001	.312	.342
	N	22	22	22	22	22	22
XOM	**Pearson Correlation**	.178	.699	.668	1	.631	.502
	Sig. (2-tailed)	.428	.000	.001		.002	.017
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TEF	VZ	TGT	WMT
CAG	N	22	22	22	22
KFT	**Pearson Correlation**	-.527	.553	.805	.614
	Sig. (2-tailed)	.012	.008	.000	.002
	N	22	22	22	22
TUR	**Pearson Correlation**	-.223	.389	.852	.619
	Sig. (2-tailed)	.318	.074	.000	.002
	N	22	22	22	22
MCD	**Pearson Correlation**	-.482	.488	.820	.590
	Sig. (2-tailed)	.023	.021	.000	.004
	N	22	22	22	22
MO	**Pearson Correlation**	-.542	.619	.787	.607
	Sig. (2-tailed)	.009	.002	.000	.003
	N	22	22	22	22
NLY	**Pearson Correlation**	.001	.341	.585	.509
	Sig. (2-tailed)	.996	.120	.004	.015
	N	22	22	22	22
PSEC	**Pearson Correlation**	-.301	.379	.349	.654
	Sig. (2-tailed)	.173	.082	.111	.001
	N	22	22	22	22
CPNO	**Pearson Correlation**	-.707	.608	.788	.583
	Sig. (2-tailed)	.000	.003	.000	.004
	N	22	22	22	22
HGT	**Pearson Correlation**	-.629	.469	.793	.434
	Sig. (2-tailed)	.002	.028	.000	.044
	N	22	22	22	22
CVX	**Pearson Correlation**	-.731	.852	.579	.580
	Sig. (2-tailed)	.000	.000	.005	.005
	N	22	22	22	22
TOT	**Pearson Correlation**	.102	.406	-.299	.281
	Sig. (2-tailed)	.653	.061	.177	.205
	N	22	22	22	22
XOM	**Pearson Correlation**	-.522	.828	- 015	.310
	Sig. (2-tailed)	.013	.000	.948	.161
	N	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TBF	ANSS	CCF	DYSL	INTC	MSFT
WMB	**Pearson Correlation**	-.107	.933	.729	.689	.681	.472
	Sig. (2-tailed)	.653	.000	.000	.000	.000	.026
	N	20	22	22	22	22	22
T	**Pearson Correlation**	-.354	.654	.799	.817	.254	.180
	Sig. (2-tailed)	.126	.001	.000	.000	.254	.423
	N	20	22	22	22	22	22
TEF	**Pearson Correlation**	.335	-.646	-.579	-.390	-.321	.126
	Sig. (2-tailed)	.149	.001	.005	.073	.145	.578
	N	20	22	22	22	22	22
VZ	**Pearson Correlation**	-.111	.627	.728	.621	.196	.140
	Sig. (2-tailed)	.642	.002	.000	.002	.382	.536
	N	20	22	22	22	22	22
TGT	**Pearson Correlation**	-.495	.829	.649	.792	.793	.462
	Sig. (2-tailed)	.026	.000	.001	.000	.000	.031
	N	20	22	22	22	22	22
WMT	**Pearson Correlation**	.097	.693	.510	.645	.625	.757
	Sig. (2-tailed)	.683	.000	.015	.001	.002	.000
	N	20	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		EWZ	MCHFX	EWY	THO	CAG	KFT
WMB	**Pearson Correlation**	.650	.701	.855	.687	.537	.702
	Sig. (2-tailed)	.001	.000	.000	.000	.010	.000
	N	22	22	22	22	22	22
T	**Pearson Correlation**	.766	.803	.816	.817	.008	.692
	Sig. (2-tailed)	.000	.000	.000	.000	.972	.000
	N	22	22	22	22	22	22
TEF	**Pearson Correlation**	- 083	-.369	-.557	-.482	-.223	-.527
	Sig. (2-tailed)	.713	.091	.007	.023	.318	.012
	N	22	22	22	22	22	22
VZ	**Pearson Correlation**	.494	.582	.722	.626	-.111	.553
	Sig. (2-tailed)	.019	.004	.000	.002	.624	.008
	N	22	22	22	22	22	22
TGT	**Pearson Correlation**	.768	.846	.833	.778	.700	.805
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	22	22	22	22	22	22
WMT	**Pearson Correlation**	.789	.705	.706	.557	.543	.614
	Sig. (2-tailed)	.000	.000	.000	.007	.009	.002
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TUR	MCD	MO	NLY	PSEC	CPNO
WMB	**Pearson Correlation**	.546	.674	.753	.432	.713	.846
	Sig. (2-tailed)	.009	.001	.000	.045	.000	.000
	N	22	22	22	22	22	22
T	**Pearson Correlation**	.715	.682	.785	.579	.219	.653
	Sig. (2-tailed)	.000	.000	.000	.005	.327	.001
	N	22	22	22	22	22	22
TEF	**Pearson Correlation**	-.223	-.482	-.542	.001	-.301	-.707
	Sig. (2-tailed)	.318	.023	.009	.996	.173	.000
	N	22	22	22	22	22	22
VZ	**Pearson Correlation**	.389	.488	.619	.341	.379	.608
	Sig. (2-tailed)	.074	.021	.002	.120	.082	.003
	N	22	22	22	22	22	22
TGT	**Pearson Correlation**	.852	.820	.787	.585	.349	.788
	Sig. (2-tailed)	.000	.000	.000	.004	.111	.000
	N	22	22	22	22	22	22
WMT	**Pearson Correlation**	.619	.590	.607	.509	.654	.583
	Sig. (2-tailed)	.002	.004	.003	.015	.001	.004
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		HGT	CVX	TOT	XOM	WMB	T
WMB	**Pearson Correlation**	.752	.931	.226	.631	1	.607
	Sig. (2-tailed)	.000	.000	.312	.002		.003
	N	22	22	22	22	22	22
T	**Pearson Correlation**	.616	.786	.213	.502	.607	1
	Sig. (2-tailed)	.002	.000	.342	.017	.003	
	N	22	22	22	22	22	22
TEF	**Pearson Correlation**	-.629	-.731	.102	-.522	-.736	-.264
	Sig. (2-tailed)	.002	.000	.653	.013	.000	.235
	N	22	22	22	22	22	22
VZ	**Pearson Correlation**	.469	.852	.406	.828	.718	.847
	Sig. (2-tailed)	.028	.000	.061	.000	.000	.000
	N	22	22	22	22	22	22
TGT	**Pearson Correlation**	.793	.579	-.299	- 015	.649	.505
	Sig. (2-tailed)	.000	.005	.177	.948	.001	.016
	N	22	22	22	22	22	22
WMT	**Pearson Correlation**	.434	.580	.281	.310	.684	.583
	Sig. (2-tailed)	.044	.005	.205	.161	.000	.004
	N	22	22	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		TEF	VZ	TGT	WMT
WMB	**Pearson Correlation**	-.736	.718	.649	.684
	Sig. (2-tailed)	.000	.000	.001	.000
	N	22	22	22	22
T	**Pearson Correlation**	-.264	.847	.505	.583
	Sig. (2-tailed)	.235	.000	.016	.004
	N	22	22	22	22
TEF	**Pearson Correlation**	1	-.551	-.285	-.130
	Sig. (2-tailed)		.008	.199	.563
	N	22	22	22	22
VZ	**Pearson Correlation**	-.551	1	.275	.508
	Sig. (2-tailed)	.008		.216	.016
	N	22	22	22	22
TGT	**Pearson Correlation**	-.285	.275	1	.709
	Sig. (2-tailed)	.199	.216		.000
	N	22	22	22	22
WMT	**Pearson Correlation**	-.130	.508	.709	1
	Sig. (2-tailed)	.563	.016	.000	
	N	22	22	22	22

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Breakfast Club Meeting Stocks Correlation Coefficients in a Bear Market

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Correlations

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Correlations

		ANSS	CCF	DYSL	INTC	MSFT	'eNZ
ANSS	**Pearson Correlation**	1	.753	.901	.940	.819	.913
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
CCF	**Pearson Correlation**	.753	1	.867	.873	.952	.853
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	18	18	18	18	18	18
DYSL	**Pearson Correlation**	.901	.867	1	.924	.842	.910
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	18	18	18	18	18	18
INTC	**Pearson Correlation**	.940	.873	.924	1	.934	.954
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	18	18	18	18	18	18
MSFT	**Pearson Correlation**	.819	.952	.842	.934	1	.880
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	18	18	18	18	18	18
EWZ	**Pearson Correlation**	.913	.853	.910	.954	.880	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	18	18	18	18	18	18
MCHFX	**Pearson Correlation**	.874	.952	.906	.968	.975	.954
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
EWY	**Pearson Correlation**	.835	.925	.884	.948	.942	.968
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
THO	**Pearson Correlation**	.869	.918	.850	.932	.933	.972
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	15	15	15	15	15	15
CAG	**Pearson Correlation**	.836	.870	.867	.948	.920	.949
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
KFT	**Pearson Correlation**	.822	.780	.820	.819	.827	730
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001
	N	18	18	18	18	18	18
TUR	**Pearson Correlation**	.946	.912	.890	.982	.951	.935
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	15	15	15	15	15	15

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

Correlations

		MCHFX	EWY	THO	CAG	KFT	TUR
ANSS	**Pearson Correlation**	.874	.835	.869	.836	.822	.946
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
CCF	**Pearson Correlation**	.952	.925	.918	.870	.780	.912
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
OYSL	**Pearson Correlation**	.906	.884	.850	.867	.820	.890
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
INTC	**Pearson Correlation**	.968	.948	.932	.948	.819	.982
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
MSFT	**Pearson Correlation**	.975	.942	.933	.920	.827	.951
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
EWZ	**Pearson Correlation**	.954	.968	.972	.949	730	.935
	Sig. (2-tailed)	.000	.000	.000	.000	.001	.000
	N	18	18	15	18	18	15
MCHFX	**Pearson Correlation**	1	.981	.967	.954	.809	.961
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
EWY	**Pearson Correlation**	.981	1	.990	.972	730	.937
	Sig. (2-tailed)	.000		.000	.000	.001	.000
	N	18	18	15	18	18	15
THO	**Pearson Correlation**	.967	.990	1	.980	.713	.929
	Sig. (2-tailed)	.000	.000		.000	.003	.000
	N	15	15	15	15	15	15
CAG	**Pearson Correlation**	.954	.972	.980	1	.775	.960
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	18	18	15	18	18	15
KFT	**Pearson Correlation**	.809	.730	.713	.775	1	.813
	Sig. (2-tailed)	.000	.001	.003	.000		.000
	N	18	18	15	18	18	15
TUR	**Pearson Correlation**	.961	.937	.929	.960	.813	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	15	15	15	15	15	15

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

Correlations

		MCD	MO	NLY	PSEC	CPNO	HGT
ANSS	**Pearson Correlation**	.454	.256	.461	.784	.873	.935
	Sig. (2-tailed)	.058	.306	.054	.000	.000	.000
	N	18	18	18	18	18	18
CCF	**Pearson Correlation**	.025	.779	.852	.900	.927	.784
	Sig. (2-tailed)	.922	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
DYSL	**Pearson Correlation**	.256	.441	.616	.871	.939	.902
	Sig. (2-tailed)	.304	.067	.006	.000	.000	.000
	N	18	18	18	18	18	18
INTC	**Pearson Correlation**	.261	.474	.621	.829	.960	.874
	Sig. (2-tailed)	.295	.047	.006	.000	.000	.000
	N	18	18	18	18	18	18
MSFT	**Pearson Correlation**	.130	.678	.744	.861	.939	.812
	Sig. (2-tailed)	.608	.002	.000	.000	.000	.000
	N	18	18	18	18	18	18
EWZ	**Pearson Correlation**	.144	.436	.668	.808	.957	.848
	Sig. (2-tailed)	.568	.070	.002	.000	.000	.000
	N	18	18	18	18	18	18
MCHFX	**Pearson Correlation**	.121	.617	.752	.882	.980	.854
	Sig. (2-tailed)	.633	.006	.000	.000	.000	.000
	N	18	18	18	18	18	18
EWY	**Pearson Correlation**	.049	.604	.779	.839	.968	.785
	Sig. (2-tailed)	.847	.008	.000	.000	.000	.000
	N	18	18	18	18	18	18
THO	**Pearson Correlation**	.386	.892	.795	.800	.945	.797
	Sig. (2-tailed)	.155	.000	.000	.000	.000	.000
	N	15	15	15	15	15	15
CAG	**Pearson Correlation**	.153	.512	.687	.825	.953	.778
	Sig. (2-tailed)	.544	.030	.002	.000	.000	.000
	N	18	18	18	18	18	18
KFT	**Pearson Correlation**	.523	.374	.491	.912	.826	.904
	Sig. (2-tailed)	.026	.127	.038	.000	.000	.000
	N	18	18	18	18	18	18
TUR	**Pearson Correlation**	.569	.944	.615	.797	.938	.862
	Sig. (2-tailed)	.027	.000	.015	.000	.000	.000
	N	15	15	15	15	15	15

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		CVX	TOT	XOM	WMB	T	TEF
ANSS	**Pearson Correlation**	.921	.922	.757	.917	.768	.805
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
CCF	**Pearson Correlation**	.828	.886	.890	.912	.931	.957
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
DYSL	**Pearson Correlation**	.922	.946	.877	.954	.868	.883
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
INTC	**Pearson Correlation**	.902	.953	.801	.951	.880	.922
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
MSFT	**Pearson Correlation**	.844	.895	.831	.913	.909	.953
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
EW2	**Pearson Correlation**	.911	.981	.832	.969	.891	.925
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
MCHFX	**Pearson Correlation**	.900	.959	.869	.968	.942	.975
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
EWY	**Pearson Correlation**	.871	.955	.854	.951	.941	.976
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
THO	**Pearson Correlation**	.880	.952	.820	.931	.917	.975
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	15	15	15	15	15	15
CAG	**Pearson Correlation**	.836	.924	.805	.920	.893	.943
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
KFT	**Pearson Correlation**	.844	.784	.800	.826	.764	.762
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
TUR	**Pearson Correlation**	.848	.914	.724	.916	.814	.921
	Sig. (2-tailed)	.000	.000	.002	.000	.000	.000
	N	15	15	15	15	15	15

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

Correlations

		VZ	TGT	WMT
ANSS	**Pearson Correlation**	.753	.858	.640
	Sig. (2-tailed)	.000	.000	.004
	N	18	18	18
CCF	**Pearson Correlation**	.927	.875	.158
	Sig. (2-tailed)	.000	.000	.531
	N	18	18	18
DYSL	**Pearson Correlation**	.854	.827	.454
	Sig. (2-tailed)	.000	.000	.058
	N	18	18	18
INTC	**Pearson Correlation**	.866	.947	.448
	Sig. (2-tailed)	.000	.000	.062
	N	18	18	18
MSFT	**Pearson Correlation**	.898	.945	.272
	Sig. (2-tailed)	.000	.000	.275
	N	18	18	18
EWZ	**Pearson Correlation**	.848	.906	.358
	Sig. (2-tailed)	.000	.000	.145
	N	18	18	18
MCHFX	**Pearson Correlation**	.916	.954	.317
	Sig. (2-tailed)	.000	.000	.200
	N	18	18	18
EWY	**Pearson Correlation**	.914	.940	.224
	Sig. (2-tailed)	.000	.000	.371
	N	18	18	18
THO	**Pearson Correlation**	.891	.913	.585
	Sig. (2-tailed)	.000	.000	.022
	N	15	15	15
CAG	**Pearson Correlation**	.852	.947	.278
	Sig. (2-tailed)	.000	.000	.265
	N	18	18	18
KFT	**Pearson Correlation**	.724	.830	.610
	Sig. (2-tailed)	.001	.000	.007
	N	18	18	18
TUR	**Pearson Correlation**	.818	.954	.732
	Sig. (2-tailed)	.000	.000	.002
	N	15	15	15

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		ANSS	CCF	DYSL	INTC	MSFT	EWZ
MCD	**Pearson Correlation**	.454	.025	.256	.261	.130	.144
	Sig. (2-tailed)	.058	.922	.304	.295	.608	.568
	N	18	18	18	18	18	18
MO	**Pearson Correlation**	.256	.779	.441	.474	.678	.436
	Sig. (2-tailed)	.306	.000	.067	.047	.002	.070
	N	18	18	18	18	18	18
NLY	**Pearson Correlation**	.461	.852	.616	.621	.744	.668
	Sig. (2-tailed)	.054	.000	.006	.006	.000	.002
	N	18	18	18	18	18	18
PSEC	**Pearson Correlation**	.784	.900	.871	.829	.861	.808
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
CPNO	**Pearson Correlation**	.873	.927	.939	.960	.939	.957
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
HGT	**Pearson Correlation**	.935	.784	.902	.874	.812	.848
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
CVX	**Pearson Correlation**	.921	.828	.922	.902	.844	.911
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
TOT	**Pearson Correlation**	.922	.886	.946	.953	.895	.981
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
XOM	**Pearson Correlation**	.757	.890	.877	.801	.831	.832
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
WMB	**Pearson Correlation**	.917	.912	.954	.951	.913	.969
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
T	**Pearson Correlation**	.768	.931	.868	.880	.909	.891
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
TEF	**Pearson Correlation**	.805	.957	.883	.922	.953	.925
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		MCHFX	*'eNY*	THO	CAG	KFT	TUR
MCD	**Pearson Correlation**	.121	.049	.386	.153	.523	.569
	Sig. (2-tailed)	.633	.847	.155	.544	.026	.027
	N	18	18	15	18	18	15
MO	**Pearson Correlation**	.617	.604	.892	.512	.374	.944
	Sig. (2-tailed)	.006	.008	.000	.030	.127	.000
	N	18	18	15	18	18	15
NLY	**Pearson Correlation**	.752	.779	.795	.687	.491	.615
	Sig. (2-tailed)	.000	.000	.000	.002	.038	.015
	N	18	18	15	18	18	15
PSEC	**Pearson Correlation**	.882	.839	.800	.825	.912	.797
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
CPNO	**Pearson Correlation**	.980	.968	.945	.953	.826	.938
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
HGT	**Pearson Correlation**	.854	.785	.797	.778	.904	.862
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
CVX	**Pearson Correlation**	.900	.871	.880	.836	.844	.848
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
TOT	**Pearson Correlation**	.959	.955	.952	.924	.784	.914
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
XOM	**Pearson Correlation**	.869	.854	.820	.805	.800	.724
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.002
	N	18	18	15	18	18	15
WMB	**Pearson Correlation**	.968	.951	.931	.920	.826	.916
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
T	**Pearson Correlation**	.942	.941	.917	.893	.764	.814
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
TEF	**Pearson Correlation**	.975	.976	.975	.943	.762	.921
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		MCD	MO	NLY	PSEC	CPNO	HGT
MCD	**Pearson Correlation**	1	-.370	-.159	.293	.105	400
	Sig. (2-tailed)		.130	.529	.237	.680	.100
	N	18	18	18	18	18	18
MO	**Pearson Correlation**	-.370	1	.857	.535	.567	.286
	Sig. (2-tailed)	.130		.000	.022	.014	.249
	N	18	18	18	18	18	18
NLY	**Pearson Correlation**	-.159	.857	1	.717	.714	446
	Sig. (2-tailed)	.529	.000		.001	.001	.063
	N	18	18	18	18	18	18
PSEC	**Pearson Correlation**	.293	.535	.717	1	.893	.880
	Sig. (2-tailed)	.237	.022	.001		.000	.000
	N	18	18	18	18	18	18
CPNO	**Pearson Correlation**	.105	.567	.714	.893	1	.880
	Sig. (2-tailed)	.680	.014	.001	.000		.000
	N	18	18	18	18	18	18
HGT	**Pearson Correlation**	400	.286	446	.880	.880	1
	Sig. (2-tailed)	.100	.249	.063	.000	.000	
	N	18	18	18	18	18	18
CVX	**Pearson Correlation**	.340	.338	.601	.903	.911	.940
	Sig. (2-tailed)	.168	.170	.008	.000	.000	.000
	N	18	18	18	18	18	18
TOT	**Pearson Correlation**	.204	447	.680	.862	.960	.889
	Sig. (2-tailed)	418	.063	.002	.000	.000	.000
	N	18	18	18	18	18	18
XOM	**Pearson Correlation**	.216	.514	.769	.940	.871	.820
	Sig. (2-tailed)	.390	.029	.000	.000	.000	.000
	N	18	18	18	18	18	18
WMB	**Pearson Correlation**	.168	492	.681	.900	.982	.927
	Sig. (2-tailed)	.505	.038	.002	.000	.000	.000
	N	18	18	18	18	18	18
T	**Pearson Correlation**	.084	.601	.808	.921	.930	.790
	Sig. (2-tailed)	.739	.008	.000	.000	.000	.000
	N	18	18	18	18	18	18
TEF	**Pearson Correlation**	.091	.658	.821	.884	.948	.782
	Sig. (2-tailed)	.718	.003	.000	.000	.000	.000
	N	18	18	18	18	18	18

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		CVX	TOT	XOM	WMB	T	TEF
MCD	**Pearson Correlation**	.340	.204	.216	.168	.084	.091
	Sig. (2-tailed)	.168	.418	.390	.505	.739	.718
	N	18	18	18	18	18	18
MO	**Pearson Correlation**	.338	.447	.514	.492	.601	.658
	Sig. (2-tailed)	.170	.063	.029	.038	.008	.003
	N	18	18	18	18	18	18
NLY	**Pearson Correlation**	.601	.680	.769	.681	.808	.821
	Sig. (2-tailed)	.008	.002	.000	.002	.000	.000
	N	18	18	18	18	18	18
PSEC	**Pearson Correlation**	.903	.862	.940	.900	.921	.884
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
CPNO	**Pearson Correlation**	.911	.960	.871	.982	.930	.948
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
HGT	**Pearson Correlation**	.940	.889	.820	.927	.790	.782
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
CVX	**Pearson Correlation**	1	.960	.928	.957	.912	.874
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
TOT	**Pearson Correlation**	.960	1	.905	.985	.928	.939
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	18	18	18	18	18	18
XOM	**Pearson Correlation**	.928	.905	1	.902	.953	.902
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	18	18	18	18	18	18
WMB	**Pearson Correlation**	.957	.985	.902	1	.926	.935
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	18	18	18	18	18	18
T	**Pearson Correlation**	.912	.928	.953	.926	1	.965
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	18	18	18	18	18	18
TEF	**Pearson Correlation**	.874	.939	.902	.935	.965	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	18	18	18	18	18	18

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		VZ	TGT	WMT
MCD	**Pearson Correlation**	.141	.215	.749
	Sig. (2-tailed)	.578	.391	.000
	N	18	18	18
MO	**Pearson Correlation**	.650	.558	-.373
	Sig. (2-tailed)	.003	.016	.127
	N	18	18	18
NLY	**Pearson Correlation**	.846	.685	-.190
	Sig. (2-tailed)	.000	.002	.451
	N	18	18	18
PSEC	**Pearson Correlation**	.874	.852	.451
	Sig. (2-tailed)	.000	.000	.060
	N	18	18	18
CPNO	**Pearson Correlation**	.881	.935	.351
	Sig. (2-tailed)	.000	.000	.154
	N	18	18	18
HGT	**Pearson Correlation**	.728	.820	.686
	Sig. (2-tailed)	.001	.000	.002
	N	18	18	18
CVX	**Pearson Correlation**	.874	.835	.572
	Sig. (2-tailed)	.000	.000	.013
	N	18	18	18
TOT	**Pearson Correlation**	.899	.881	.403
	Sig. (2-tailed)	.000	.000	.097
	N	18	18	18
XOM	**Pearson Correlation**	.932	.764	.332
	Sig. (2-tailed)	.000	.000	.178
	N	18	18	18
WMB	**Pearson Correlation**	.879	.905	.422
	Sig. (2-tailed)	.000	.000	.081
	N	18	18	18
T	**Pearson Correlation**	.969	.868	.274
	Sig. (2-tailed)	.000	.000	.272
	N	18	18	18
TEF	**Pearson Correlation**	.953	.917	.222
	Sig. (2-tailed)	.000	.000	.375
	N	18	18	18

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		ANSS	CCF	DYSL	INTC	MSFT	EWZ
VZ	**Pearson Correlation**	.753	.927	.854	.866	.898	.848
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
TGT	**Pearson Correlation**	.858	.875	.827	.947	.945	.906
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
WMT	**Pearson Correlation**	.640	.158	.454	.448	.272	.358
	Sig. (2-tailed)	.004	.531	.058	.062	.275	.145
	N	18	18	18	18	18	18

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

Correlation
s

		MCHFX	EWY	THO	CAG	KFT	TUR
VZ	**Pearson Correlation**	.916	.914	.891	.852	.724	.818
	Sig. (2-tailed)	.000	.000	.000	.000	.001	.000
	N	18	18	15	18	18	15
TGT	**Pearson Correlation**	.954	.940	.913	.947	.830	.954
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	15	18	18	15
WMT	**Pearson Correlation**	.317	.224	.585	.278	.610	.732
	Sig. (2-tailed)	.200	.371	.022	.265	.007	.002
	N	18	18	15	18	18	15

****.Correlation is significant at the 0.01 level (2-tailed).**

• Correlation is significant at the 0.05 level (2-tailed).

Correlation
s

		MCD	MO	NLY	PSEC	CPNO	HGT
VZ	**Pearson Correlation**	.141	.650	.846	.874	.881	.728
	Sig. (2-tailed)	.578	.003	.000	.000	.000	.001
	N	18	18	18	18	18	18
TGT	**Pearson Correlation**	.215	.558	.685	.852	.935	.820
	Sig. (2-tailed)	.391	.016	.002	.000	.000	.000
	N	18	18	18	18	18	18
WMT	**Pearson Correlation**	.749	-.373	-.190	.451	.351	.686
	Sig. (2-tailed)	.000	.127	.451	.060	.154	.002
	N	18	18	18	18	18	18

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

•. Correlation is significant at the 0.05 level (2-tailed).

Correlations

		CVX	TOT	XOM	WMB	T	TEF
VZ	**Pearson Correlation**	.874	.899	.932	.879	.969	.953
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
TGT	**Pearson Correlation**	.835	.881	.764	.905	.868	.917
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000
	N	18	18	18	18	18	18
WMT	**Pearson Correlation**	.572	.403	.332	.422	.274	.222
	Sig. (2-tailed)	.013	.097	.178	.081	.272	.375
	N	18	18	18	18	18	18

****.Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).**

- Correlation is significant at the 0.05 level (2-tailed).

Correlation
s

		VZ	TGT	WMT
VZ	**Pearson Correlation**	1	.833	.216
	Sig. (2-tailed)		.000	.389
	N	18	18	18
TGT	**Pearson Correlation**	.833	1	.384
	Sig. (2-tailed)	.000		.115
	N	18	18	18
WMT	**Pearson Correlation**	.216	.384	1
	Sig. (2-tailed)	.389	.115	
	N	18	18	18

****.Correlation is significant at the 0.01 level (2-tailed).**

Foreign Stocks Correlation Coefficients in a Bull Market

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Correlations

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Correlations

		EWZ	MCHFX	EWY	THO	TEF	TUR
EWZ	**Pearson Correlation**	1	.868	.810	.756	- 083	.802
	Sig. (2-tailed)		.000	.000	.000	.713	.000
	N	22	22	22	22	22	22
MCHFX	**Pearson Correlation**	.868	1	.932	.964	-.369	.946
	Sig. (2-tailed)	.000		.000	.000	.091	.000
	N	22	22	22	22	22	22
EWY	**Pearson Correlation**	.810	.932	1	.923	-.557	.844
	Sig. (2-tailed)	.000	.000		.000	.007	.000
	N	22	22	22	22	22	22
THO	**Pearson Correlation**	.756	.964	.923	1	-.482	.917
	Sig. (2-tailed)	.000	.000	.000		.023	.000
	N	22	22	22	22	22	22
TEF	**Pearson Correlation**	- 083	-.369	-.557	-.482	1	-.223
	Sig. (2-tailed)	.713	.091	.007	.023		.318
	N	22	22	22	22	22	22
TUR	**Pearson Correlation**	.802	.946	.844	.917	-.223	1
	Sig. (2-tailed)	.000	.000	.000	.000	.318	
	N	22	22	22	22	22	22

. **Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).

•. Correlation is significant at the 0.05 level (2-tailed).

Foreign Stocks Correlation Coefficients in a Bear Market

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Correlations

Notes

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Comments		
Input	**Active**	DataSet1
Dataset		
	Filter	**<none>**
	Weight	**<none>**
	Split	**<none>**
	File	
	N of Rows in Working Data File	20
Missing Value Handling	**Definition of Missing**	**User-defined missing values are treated as missing.**
	Cases Used	**Statistics for each pair of variables are based on all the cases with valid** data for that pair
Syntax		CORRELATIONS /VARIABLES=EW2 MCHFX EWY THO TEF /PRINT=TWOTAIL NOSIG /MISSING=PAIRWISE.
Resources	**Processor Time**	0:00:00.000
	Elapsed Time	0:00:00.036

[DataSetl]

Correlations

Correlations

		EWZ	MCHFX	EWY	THO	TEF
EWZ	Pearson Correlation	1	.931	.953	.970	.900
	Sig. (2-tailed)		.000	.000	.000	.000
	N	20	20	20	16	20
MCHFX	Pearson Correlation	.931	1	.983	.964	.978
	Sig. (2-tailed)	.000		.000	.000	.000
	N	20	20	20	16	20
EWY	Pearson Correlation	.953	.983	1	.990	.977
	Sig. (2-tailed)	.000	.000		.000	.000
	N	20	20	20	16	20
THO	Pearson Correlation	.970	.964	.990	1	.975
	Sig. (2-tailed)	.000	.000	.000		.000
	N	16	16	16	16	16
TEF	Pearson Correlation	.900	.978	.977	.975	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	20	20	20	16	20

**. Correlation 1s s1gn1f1cant at the 0.01 level (2-talled).