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Are Good Companies Good Stocks? Evidence from Nairobi Stock Exchange

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ABSTRACT
The search for abnormal stock returns seems elusive for many investors in efficient markets unless there are anomalies in such markets. This has led to the development of numerous stock selection methods including the application of technical and fundamental analysis in an attempt to beat the market. There is uncertainty as to whether good companies that are defined by strong earnings and sales growth are also good stocks whose prices appreciate and outperform other stocks in the market. This research employs a study sample consisting of 32 companies listed in the NSE to establish the relationship between good companies and good stocks. The Pearson's correlation coefficient and descriptive statistics techniques were employed. The results indicate that there is a strong positive correlation between the good companies and good stocks in the NSE.

INTRODUCTION
The ultimate aim of investors and speculators is to derive above average returns from the stock market by investing in winner stocks which outperform the average stocks and by using various trading strategies including exploitation of privileged or insider information that some investors have access to before it becomes public knowledge even though use of such information is illegal in many countries (Samuels, 1990). It is important to study stocks before investing as there may be growth companies that possess good fundamental features and may have stocks with high market value above their intrinsic value which can lead to capital losses when the stock price depreciates thereafter when the market corrects itself in a process referred to as mean reversion. This is unlike in the case of value companies whose intrinsic value is above the market value and hence possess the potential for price appreciation when the market corrects itself thereafter (Reilly and Brown, 2009).

A common representativeness error is that good companies in terms of strong earnings, high sales growth and good management are at the same time good stocks whose prices increase more than those of other stocks (Nosfinger, 2008). Good companies are popular and their reputation drives their prices high until investors realize that the firm's market price has exceeded its intrinsic value which gives rise to a price decline to achieve a fair value in a process termed as mean reversion (Chuvakhin 2011; Reilly and Brown 2009).

There is uncertainty as to whether the stocks of good companies make good investments (Nosfinger 2008) who also postulated that classifying good stocks as firms with a past of consistently good earnings is unrealistic as good stocks may be as a result of overreaction to investment information and very few companies can sustain the good earnings for long. The good stock performance is likely cause the overpricing of stocks due to the overreaction by the market participants by over demanding the stock (Alwathainani, 2011).

Good companies are popular implying that the public is aware of their good performance and hence abnormal returns should be generated from investing in the stocks. The performance of good companies is public information that should already have been incorporated in stock prices if the market is efficient in the weak form. This is true unless there is an anomaly in the market that investors can profit from (Bodie *et al*, 2010). Good companies are also supposed to be well known and should thus be fairly valued without possessing potential for significant capital gains if the market that is weak form efficient (Reilly and Brown 2009; Nosfinger 2008; Chuvakhin 2011).

In the NSE which is deemed as weak form efficient (Dickinson and Muragu 1994; Magnusson and Wydick 2005 and Mlambo *et al* 2007), there has been no study on the relationship between good companies in terms of earnings and sales growth and good stock performance in terms of positive stock price changes. This gap in knowledge is the motivation behind this research.

OBJECTIVE OF THE STUDY

Establish the strength of correlation between company performance and stock performance in the NSE.

RESEARCH HYPOTHESES

H_0**:** There is weak correlation between company performance and stock performance in the NSE.
H_A**:** There is strong correlation between company performance and stock performance in the NSE.

SIGNIFICANCE OF THE STUDY

The study is intended to benefit the investing public will benefit from knowledge of the relationship between good companies and good stocks.

LITERATURE REVIEW

Theory of Efficient Markets

Capitalism refers to the freedom of market participants to deploy assets as they deem fit at prices that are regarded as reasonable to the participants in markets that facilitate the discovery of the reasonable prices for the purpose of capital allocation (Ezra, 2009). Many of the theories in finance assume that capital markets are reasonably price efficient in reflecting all available information that is almost freely available to all participants and that in such markets a large number of rational profit maximizing investors are actively competing and each trying to outdo the other in predicting the future stock prices. The intense competition causes to new information being instantaneously reflected in stock prices which makes it difficult for any participant to outperform the market (Pike, 2009) and the continued attempts by stock market participants to outperform the stock market leads to enhancement of stock market efficiency (Reilly and Brown, 2009).

A market that is efficient in the weak form will depict random walk behavior of stock prices. The term random walk is used in finance literature to characterize a price series where all subsequent price changes represent random departures from previous prices. The logic being that if the flow of information is unimpeded and that if information is immediately reflected in stock prices, then tomorrow's price change will only reflect tomorrow's news and will be independent of price changes today. News by definition is unpredictable and random and because prices reflect all known information, then even uniformed investors buying a diversified portfolio at the prices given by the market will obtain the same rate of return as by the experts (Malkiel, 2003).

The efficient market hypothesis as advocated for by Eugene Fama and others has been rejected by behavioral finance advocates who believe that psychological biases inhibit the ability of investors in making good investment decisions and that by learning about psychological biases, investors can be able to overcome them and thus increase their investment wealth (Nofsinger, 2008). The collective behavior that is common with stock market investors arises when a large group of investors make the same decision based on the action of others and this depicts the irrational behavior of groups which then causes excessive market swings in the form of herding and price bubbles (Pike, 2009).

Stock Market Anomalies

Econometricians have argued that profiting from stock movements is to a large extent predictable as a result of market anomalies (Malkiel, 2003) and that money can be made upon analysis of historical data in a market that is regarded to be efficient in the weak form due to existence of stock market anomalies (Nathan, 2006).

Anomalies are empirical results that appear to be inconsistent with the known theories of the behavior of asset pricing models. They either indicate market inefficiency hence create profit opportunities for investors or indicate inadequacies in the underlying asset pricing models. After academics and practitioners document and analyze anomalies, they often seem to disappear or reverse perhaps due to being arbitraged away when the market becomes efficient. Alternatively the anomalies may also be simply statistical aberrations that may have attracted the attention of academics or practitioners (Schwert, 2003).

Market anomalies as documented by numerous studies focus on the inability of the market to fully process and immediately reflect the implications of particular signals into prices (Elleuch, 2009). The proponents of efficient market hypothesis (EMH) believe that despite all the anomalies, EMH is still a valid hypothesis and that published work apparently is in favor of reporting anomalies rather than the confirmation of randomness which is deemed boring by the researchers (Nathan, 2006).

The significance of an anomaly can be measured by the ability of an efficient trader profiting from it otherwise it will be deemed to be irrelevant. Anomalies can arise from data snooping which involves using computers to search through huge data sets of past performance with the hope of finding some relationships and surprising results (Schwert, 2003). Anomalies can also arise due to the methodology used and therefore change of methodology can cause the anomalies to disappear (Keim, 2008).

Technical and Fundamental Analysis and Consistency of Performance

Technical analysis involves studying past data including prices and volumes of trading in order to estimate the future price trends in expectation that the patterns will be repeated in future hence creating profit making opportunities. The basic assumptions of technical analysis include that stock prices move in trends that tend to persist so that when new information is released in the market about a stock it is not be immediately available to all investors at the same time but is initially available to the informed professional, then the aggressive investors before finally it is known by all the investing public. Also when the investors know the news about a stock they do not act immediately but have to initially analyze and synthesize the news a process that takes time. The lag between the release of stock news and the reaction by investors to the news leads to the trend in stock price movements to persist and hence consistent performance (Reilly and Brown, 2009).

Fundamental analysts do not believe that the market is its own best predictor and hence involve the use of economic, industry and company data that is separate from the securities market to predict the future price trends (Reilly and Brown, 2009). A frequent concern regarding the fundamental analysis investment approach is the appropriateness of variables to be used in stock selection that can enable the investment managers and investment analysts narrow the potential investments universe to a manageable number of stocks possessing desirable characteristics (Sorensen, 2000).

Fund managers use fundamental analysis in stock selection by trying to understand a company's business before they can purchase its stock. This is done through in depth research to identify whether a company has strong features in the form of a monopoly position, talented management, promising research and development, defensible strategic niche and care for the environment. Quantitative fund management uses preset or predetermined models to select stocks without consulting a fund manager's subjective opinions or overriding the results generated from the models. These models are considered efficient as they can evaluate a large number of stocks using fewer investment professionals (Zhao, 2006).

Distribution of Stock Returns

The purpose of establishing the normality of a distribution is to enable inferences to be made to a population from the results of sample testing (Mugenda and Mugenda, 2003). Normal distribution is established by observing the skewness also referred to as the statistical third moment which should have a zero value and kurtosis also referred to as the statistical fourth moment which should have a value of three if data is normally distributed. Skewness determines the lopsidedness or asymmetry of the distribution while kurtosis determines the peakedness of distributions whether they are mesokurtic meaning normal or platykurtic meaning flatter than normal or leptokurtic meaning more peaked than normal (Lucey 2002; Ezra 2009).

Normal distribution is used to characterize a series of values including stock returns and the distribution is centered at the mean while the standard deviation determines the width so that a series of values that are not be well distributed will tend to exhibit excess kurtosis implying that extreme values are more prevalent than those of a normal distribution which then causes a fat tailed distribution. Skewness in the distribution is likely and is caused by the likelihood of frequently big price depreciations than the frequently big price appreciations (Raju and Ghosh, 2004).

However, in the past, the distribution of stock returns has been proven to be non-normal in terms of being leptokurtic or heteroscedastic even though the traditional mean-variance framework assumes that investors have a perception of risk is that it is symmetrical around the mean return with the underlying assumption being that stock returns are normally distributed (Rachev *et al*, 2007). Arithmetic returns are also known to be often positively skewed (Mishra, 2005).

Past Studies

Dickinson and Muragu (1994) studied market efficiency in developing Countries and focused on the Nairobi stock Exchange. They employed the use of serial correlation test of individual companies, correlation coefficient testing across lags of individual companies, binomial test of individual companies, Q statistics test and Runs

tests. The results indicated that the NSE was efficient in the weak form and thereby implying lack of consistency in stock performance stock prices and the generation of stock prices in a random fashion. If the multi-regression model developed from this research is able to consistently predict stock performance it will imply that the NSE is not efficient in the weak form.

Magnusson and Wydick (2005) studied efficiency of African stock markets and in their methodology they analyzed weak form efficiency into 3 levels of random walk III which was the least limiting and postulated that it was not possible to use past prices to predict future prices and that the price movements should have uncorrelated increments that can be tested using partial auto-correlation function of random increments of past prices which can be tested for significance from zero which is the normal if the market is efficient in the weak form. Random walk II level imply compliance with random walk III and an additional test to ascertain the correlation of squared incremental changes which if not significantly different from zero, then random walk II requirements will have been fulfilled implying that variances can change over time (heteroscedasticity) but in an unpredictable manner. The random walk I was the most restrictive and required white test of heteroscedasticity. The results indicated that none of the African stock markets conformed to random walk I and only the US markets met its requirements. The NSE, and 5 other African markets conformed to random walk II just like markets in south East Asia and Europe. This implied that even African markets were not inferior to those in other parts of the world.

Mlambo *et al*, (2007) studied the weak form of efficiency of African stock markets and employed serial correlation tests of Runs test. He observed thin trading problem especially in Namibia and Botswana markets. In many of the markets studied, the random walk hypothesis was rejected except for the markets in Kenya, Namibia and Zimbabwe that were found to be relatively weak form efficient. Namibia's market weak form of efficiency was attributed to cross listings from JSE. For the markets in Mauritania, Ghana, Egypt and Cote d I'voire they were found to be weak form inefficient which implies that past trends analysis can generate abnormal returns.

Chiang and Chieh (2006) studied the comparison between the conventional and rigid crisp stock screening models and non-conventional and flexible fuzzy stock screening models using 475 stock data from Taiwan Stock Exchange to establish the prediction ability of the models. The conventional crisp screening criteria that contained 5 screening rules based on price earnings ratio, earnings growth rate, market value, return on equity and price to book ratio was tested. If a stock did not meet a preset set criteria in the crisp model even if on borderline it would be screened out unlike in the flexible fuzzy model which was more accommodating. The results indicated that the fuzzy screening model was superior in terms of investor expectations. From this study, the earnings growth rate is derived to be used as an independent variable in the current research.

Elleuch (2009) studied whether it was possible to predict returns using the fundamental analysis that was based on historical information. The research used 108 observations in the Tunisian Stock Exchange during the years 1995 to 2001. Twelve independent variables in the form of accounting ratios were used including: percentage change in sales over percentage change in inventory, percentage change in sales over percentage change in accounts receivables, percentage change in investments over percentage change in sales, percentage change in gross margin over percentage change in sales, percentage change in sales per employee, return on assets, cash flow over total assets, accruals to total assets, leverage to average total assets, liquidity and assets turnover ratios. The discriminant analysis technique was employed and the model was able to discriminate between the winner and loser stocks in the market. From this study, the sales growth rate is derived to be used as an independent variable in the current research.

RESEARCH DESIGN & METHODOLOGY

Introduction

The study focuses on long term horizon and employs panel data consisting of daily closing average stock price data for the decade between years 2001 to 2010 that is expected to have 2,500 days for 32 companies that constitutes the sample. The stock price change data is derived from closing average price data in the NSE as it represents the most current valuation of the firm before trading continues in the following day (Reilly and Brown, 2009).

Population

Currently there are 58 listed companies in the NSE and categorized into ten sectors of the economy including: agricultural, automobile and accessories, banking, commercial and services, construction and allied, energy and petroleum, insurance, investment, manufacturing and allied and telecommunication and technology sectors. In

the study period between years 2001 to 2010, the NSE had 56 listed companies that formed its population. The companies were categorized into Alternative Investment Market (AIM) that housed infrequently traded stocks and Main Investment Market (MIM) that housed the frequently traded stocks and further consisted of 4 sectors including: Agricultural, Commercial and Services, Finance and Investment and Industrial and Allied.

Sample

In order to identify whether there are any consistent winner and loser stocks in the NSE, the study focuses on company stocks that were actively and continuously traded in the NSE for at least 80% of the study period from January 2001 to December 2010. The application of least 80% of the study period for this research, is consistent with Cronbach' alpha criterion (Gliem and Gliem, 2003).

The inactively traded stocks are affected by the problem of thin or infrequent trading and were omitted from the study which is consistent with case deletion solution to thin trading (Scheffer, 2002). If a company was on suspension from trading during the study period hence had missing data, it was also omitted from the study. Out of the population of 56 NSE listed companies, 32 fitted the sample selection criteria and hence became the sample which was drawn from all the sectors of Kenya's economy as arranged in the NSE listing.

Data Collection

This research involves secondary data that has been collected from published annual reports of companies listed in the NSE and from the daily closing average stock prices of the listed companies.

Operationalization of Variables

S/N	Variable	Operational Definition
1	Good companies	Companies as exhibiting strong earnings and high sales growth
2	Bad companies	Companies as exhibiting weak earnings and low sales growth
3	Good stocks	Stocks with price appreciation (positive stock price changes)
4	Bad stocks	Stocks with price depreciation (negative stock price changes)

Data Analysis:

Normality Test

The stock price change data for the 2,500 days is the subject of normality tests of kurtosis and skewness. Normality of distribution is a condition that should exist before sample results can be generalized to the entire population and before application parametric tests on the data (Bai and Serena, 2005).

Test of the Correlation of Company Performance and Stock Performance

The 32 companies forming the study sample is divided into 2 groups that include good companies and bad companies. The 2 groups are then coded to distinguish their performance. The company performance is correlated against the stock performance changes to establish the strength of the relationship existing between them. The Pearson's correlation technique which is parametric is employed for this purpose.

Measurement of Stock Performance

Stock performance is measured as the periodic capital gain or loss in addition to the periodic dividend yield in a model referred as holding period yield or arithmetic return formula as follows (Reilly & Brown, 2009):

Rate of arithmetic stock return $(R_1) = (P_1 – P_0 + D_1) / P_0$ (1)

Where:

R_1 = rate of return for current period
P_1 = price of current period
P_0 = price of previous period
D_1 = dividend income for current period

Distinction of Stock Returns from Stock Price Changes

The distinction between stock returns and the payoffs from stock price movements is that stock returns are targeted by long term investors as include both capital gains or losses summed up with the periodic dividends that are payable at end of periods as shown in equation (1). The potential payoffs from stock price movements

also termed as stock price changes are targeted by short run speculators and consist of capital gains or losses only without the periodic dividends component.

ANALYSIS AND INTERPRETATION OF RESULTS

General Description of the Data Analyzed

The stock price change data is tested for normality of distribution after eliminating outliers and the results indicate skewness value of -0.46 which is almost the ideal value of 0 and kurtosis value of 3.41 which is insignificantly above the ideal value of 3 as indicated in table 1. These results imply that the stock price change data is fairly normal and thus inferences can be made from the sample to the population and also parametric tests are suitable for data analysis.

Table 1: Normality Test Results

Criteria	Stock price changes
Mean	192.8588
Median	212.8600
Maximum	572.4500
Minimum	-205.3900
Std. Dev.	163.8989
Skewness	**-0.467193**
Kurtosis	**3.491865**
Jarque-Bera	1.486676
Probability	0.475524
Sum	6171.480
Sum Sq. Dev.	832747.9
Observations	32

Correlation of Good Companies and Good Stock Performance

The descriptive statistics results indicate that bad companies have a lower mean stock price change over the years 2001 to 2010 decade while good companies have a higher mean stock price change over the decade as per table 2 and appendix A and B.

Table 2: Relationship Between Company Performance and Stock Performance

	No. of companies	Mean Total Growth (%)	Mean Decade stock price changes (%)
Bad companies	13	-1017.83	84.19
Good companies	19	439.01	267.29

The Pearson's correlation test results shoe a coefficient of 0.562 which indicates a fairly strong positive relationship. The results also show a p-value of 0.001 which is lower than the critical value 0.05 implying that the relationship is significantly strong as evidenced in table 3.

Table 3: Correlations Company performance and Stock Performance

Correlations			
		Company Performance	Stock Performance
Company Performance	Pearson Correlation	1	**.562****
	Sig. (2-tailed)		**.001**
	N	32	32
Stock Performance	Pearson Correlation	**.562****	1
	Sig. (2-tailed)	**.001**	
	N	32	32
**. Correlation is significant at the 0.01 level (2-tailed).			

DISCUSSIONS AND CONCLUSION

Correlation of Good Companies and Good Stocks

The descriptive statistics on the relationship between good companies and good stocks as per table 12 indicate the existence of a strong relationship. The Pearson's correlation coefficient of 0.562 is evidence that the correlation between good companies and good stocks is strong while a p-value of 0.001 which was lower than the 0.05 critical value at 95% level of significance is additional evidence of the strong relationship.

These findings are inconsistent with the views of Reilly and Brown (2009) that growth companies with good fundamental features above their intrinsic values lacked the potential for capital gains or price appreciation as the market soon corrected itself through mean reversion and thereby wiping out any potential gains. The findings are also inconsistent with the views of Chuvakhin (2011) also stated that well-known companies are fairly valued with values being equal to their intrinsic values and hence lack potential for capital gains or price appreciation. The findings further contradict the postulation of Nosfinger (2008) that regards the thinking of good companies as good stocks to being a representativeness error.

The findings imply that application of fundamental analysis that focuses on strong earnings growth and sales growth can lead to selection of good stocks whose prices appreciate leading to capital gains for the investor. This is however contradicting the theory of weak form market efficiency which advocates that study of past performance of companies is in vain as it cannot lead to selection of good stocks whose prices appreciate (Bodie *et al*, 2010; Reilly and Brown, 2009). Thus an additional market anomaly in the NSE can be exploited in the search for abnormal returns.

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Appendix A: Descriptive Statistics on Correlation of Good Companies and Good Stock Price Changes over years 2001 – 2010 Decade

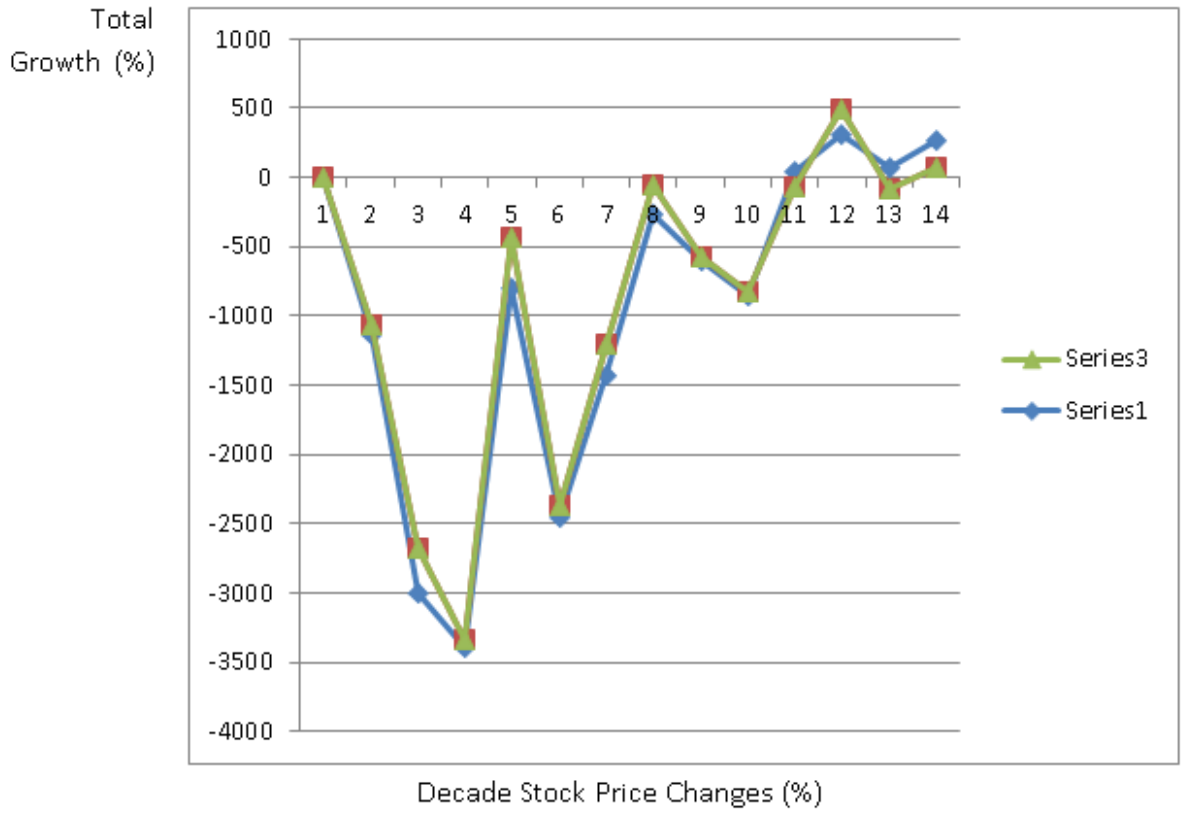
S/N	Good Companies	Sales Growth (%)	EPS Growth (%)	SERIES 1: Total Growth (%)	SERIES 2: Cumulative Decade stock price changes (%)
1	Co.1	125.0	22.8	147.8	286.09
2	Co.2	154.9	367.0	521.9	212.98
3	Co.3	124.2	111.8	236.0	205.33
4	Co.4	94.1	104.7	198.8	204.51
5	Co.5	373.0	446.0	818.9	71.16
6	Co.6	59.1	95.7	154.8	572.45
7	Co.7	371.7	265.1	636.8	248.84
8	Co.8	238.8	303.3	542.2	253.70
9	Co.9	97.0	225.7	322.7	333.50
10	Co.10	403.7	259.8	663.5	213.81
11	Co.11	69.6	85.7	155.3	234.66
12	Co.12	217.0	367.9	584.9	412.44
13	Co.13	458.5	407.6	866.1	275.78
14	Co.14	38.1	118.9	157.0	300.43
15	Co.15	144.9	401.8	546.7	352.70
16	Co.16	300.5	778.3	1078.8	309.08
17	Co.17	35.0	188.1	223.1	151.00
18	Co.18	211.7	108.3	320.1	147.40
19	Co.19	55.4	110.5	165.9	292.63
	MEAN			**439.0**	**267.3**

Appendix B: Descriptive Statistics on Correlation of Bad Companies and Poor

Stock Price Changes over years 2001 – 2010 Decade

S/N	Bad Companies	Sales growth (%)	EPS growth (%)	SERIES 1: Total growth (%)	SERIES 3: Cumulative Decade stock price changes (%)
1	Co.20	83.1	-1213.7	-1130.7	71.16
2	Co.21	95.1	-3092.6	-2997.5	318.29
3	Co.22	100.9	-3500.9	-3400.0	58.35
4	Co.23	149.8	-946.7	-796.9	368.74
5	Co.24	636.2	-3092.6	-2456.4	85.19
6	Co.25	153.6	-1576.3	-1422.7	212.74
7	Co.26	126.7	-395.5	-268.8	211.13
8	Co.27	29.1	-624.2	-595.1	25.76
9	Co.28	97.3	-948.8	-851.5	25.76
10	Co.29	543.8	-501.4	42.3	-113.56
11	Co.30	397.8	-91.3	306.5	183.04
12	Co.31	182.7	-116.1	66.6	-146.78
13	Co.32	62.7	209.6	272.3	-205.39
	MEAN			**-1017.8**	**84.2**

GRAPH1: BAD COMPANIES AND BAD STOCKS



GRAPH 2: GOOD COMPANIES AND GOOD STOCKS