RETURN ON EQUITY : AN EMPIRICAL STUDY

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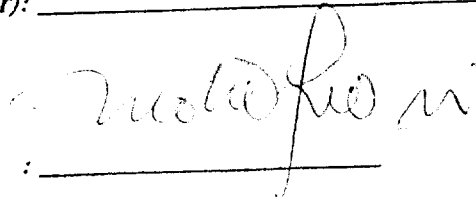*(as it appears on the title page and front cover of project paper)*

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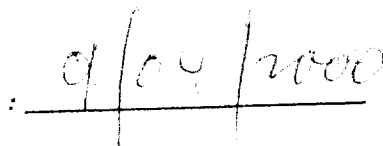
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ABSTRAK

Kertas projek ini mengkaji nisbah pulangan atas ekuiti untuk syarikat-syarikat yang tersenarai di papan utama Bursa Saham Kuala Lumpur. Sebanyak 40 syarikat dari sektor hartanah, kewangan, penggguna dan industri digunakan sebagai sampel kajian

Hasil kajian menunjukkan bahawa pulangan atas ekuiti bagi sepuluh tahun dari 1987 hingga 1996 ialah 1%. Purata pulangan atas ekuiti bagi sektor hartanah dan industri menunjukkan pulangan yang negatif iaitu -17.17% dan -6.7% masing-masing. Sementara sektor kewangan dan pegguna mempunyai pulangan yang positif iaitu 10.5% dan 13.9% masing-masing.

Berdasarkan pulangan atas ekuiti bagi tempoh sepuluh tahun, sebanyak 22 buah syarikat telah dipilih untuk mengkaji prestasi pulangan ringgitnya di mana 7 adalah dari sektor hartanah, 3 dari kewangan, 4 dari pengguna dan 8 dari industri. Daripada 22 buah syarikat tersebut, 6 syarikat yang tidak mencatatkan keuntungan yang positif. Antara keempat-empat sektor tersebut, sektor kewangan menunjukkan prestasi yang paling baik sekali dari segi prestasi pulangan ringgitnya secara keseluruhan iaitu kesemuanya mencatatkan pulangan prestasi ringgit yang positif di mana 70% daripada syarikat mencatatkan keuntungan modal yang lebih daripada 20%. Sebagai kesimpulan, daripada kajian ini, nisbah pulangan atas ekuiti yang positif tidak semestinya akan memberi pulangan ringgit yang positif kepada pelabur.

ABSTRACT

This project paper is a study on the ratio of return on equity for those companies, which are listed on the KLSE main board. Those companies, which are chosen for this study, consisted of property, financial, consumer and industrial sectors.

The result of this study shows that the return on equity for the period of 10 years from 1987 to 1996 is 1%. The average return on equity for the properties and industrial sectors nevertheless has shown a negative return i.e. -17.17% and -6.7%, respectively. On the other hand, the financial and consumer sectors experienced a positive turnover of 10.5% and 13.9%, respectively.

Based on the return on equity for the period of 10 years, 22 companies have further been chosen for a study to be made on the dollar performance. This time. the list consisted of 7 properties companies, 3 financial companies, 4 consumer products companies and 8 industrial products companies. Out of 18, 6 companies did not make a positive gain. Among all sectors, the finance sector had demonstrated the best positive overall performance on its dollar performance whereby 70% of the companies had indicated capital gain for more than 20%. As a conclusion, from the study, positive return on equity does not necessarily give investors a positive gain on their investment.

ACKNOWLEDGEMENT

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TABLE OF CONTENTS

LIST OF TABLE

LIST OF GRAPH DAN DIAGRAM

CHAPTER ONE

INTRODUCTION

1.1 Review of Economic Condition

The rapid and healthy growth of our capital market particularly between the period of 1989 and 1996, before the East Asian Crisis began in July 1997, have shown good prospects and promising returns to investors. The Composite Index rose dramatically especially during 1993 where it appreciated nearly 100% as compared to 1992. The Composite Index reached its highest level in 1993 and 1996, which were 1275.32 points and 1237.96 points respectively. (See Table 1). The KLSE's enormous growth has been a reflection of our country's strong, vibrant and sustainable economic development in recent years. During the five years period up until 1996, the real GDP growth averaged 8.7 per cent per annum, inflation was as low as 3.8% and unemployment rate was only at 2.5%. (The National Economic Recovery Plan 1998).

No doubt, the East Asian Crisis resulted in a significant wealth loss, decline in asset prices, sudden capital flight and threats to currency and banking systems stability. During the year 1997, the KLCI declined by 52%, the market capitalization of the KLSE was reduced by 53% to RM376 billion or 135.6 % of the nation's GDP. Between March and early September 1998,

the index fell again by 64.8% to its lowest level in 10 years at 262.70 points. However, several measures have been taken by our government which proven to be effective in recovering our economy. Venturing into new millennium, it can be seen that the economic growth is rebounding, interest rates are near bottom and companies are reporting a turnaround in profits. Moreover, foreign investors are returning in droves, KLCI touched the level of 1000 points in February 2000. To recapitulate, our equity market is still giving a promising returns to investors with their aim to invest in the long run.

TABLE 1
YEARLY GROWTH OF GROSS DOMESTIC PRODUCT
AND COMPOSITE INDEX

YEAR	GROSS DOMESTIC PRODUCT (%)	COMPOSITE INDEX	% CHANGE IN CI
1987	5.4	291.19	-
1988	8.7	359.32	18.9
1989	8.8	562.28	56.5
1990	9.8	505.02	-10.0
1991	8.7	556.22	10.0
1992	7.8	643.96	12.8
1993	8.3	1275.32	98.0
1994	9.2	971.21	-23.8
1995	9.5	995.17	2.5
1996	8.6	1237.96	24.4
1997	7.7	594.44	-54.0
1998	-6.7	586.13	-1.3

(Source: Bank Negara Annual Report 1998)

GRAPH 1 : KLSE COMPOSITE INDEX : YEARLY CLOSING LEVELS FROM 1987-1998
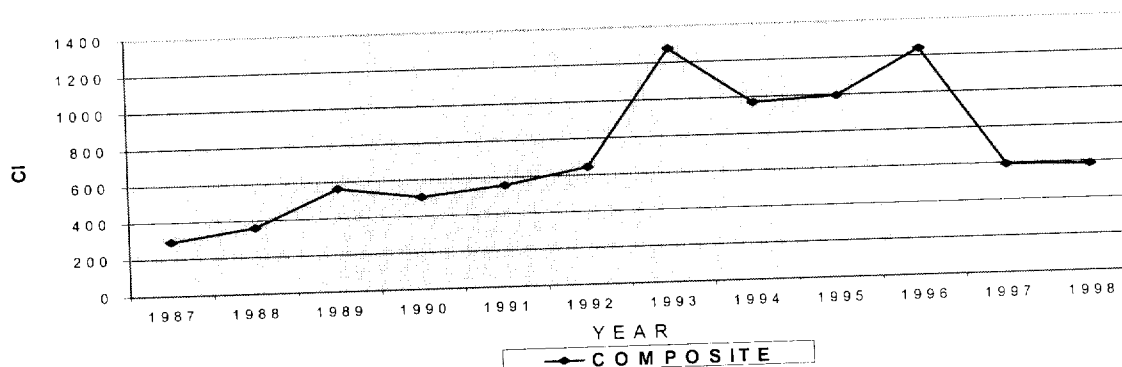
GRAPH 2 : GROSS DOMESTIC PRODUCT
FROM 1987-1998
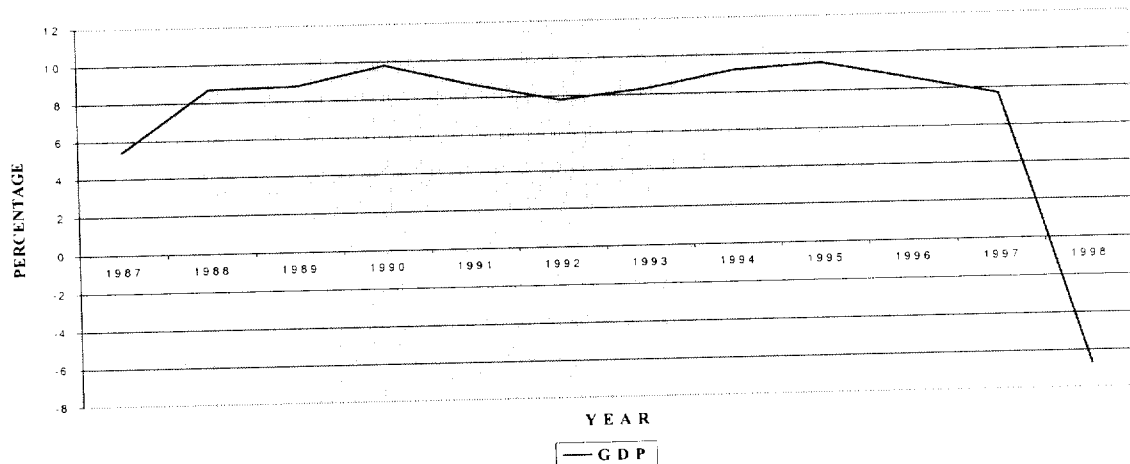
Prior to the crisis, as mentioned earlier, our capital market was in such an upward trend and with this favorable economic environment, most companies tend to perform well. Hence, it has attracted a lot of institutional as well as individual investors to take the advantage of the good economic condition to invest in the capital market. Therefore, a rational investor would seek those shares, which are fundamentally strong and in the long run lead to a profitable gain on his or her investment. However, due to the diversity in the sources of investment available, one must consider the most critical measurements. Return on equity is one of the many measurements that can be used. This is because majority investors are interested in the percentage returns that a company is able to achieve from its shareholders' equity. Return on equity is an indicator of profitability, which is determined by dividing net income for

4

the past 12 months by common stockholder equity. Stockholders' equity is the company's total assets minus total liabilities. A Company's net worth is the same thing. Result is shown as a percentage. Investors use ROE as a measure on how a company is utilizing its money. ROE may decompose into return on assets multiplied by financial leverage. It is the most fundamental indication of a company's ability to increase its earnings per share. ROE shows the amount of earnings produced by each dollar of equity; ROE gives investors a markedly handy gauge on how to measure the management performance. It should be noted that this stockholders' profitability measure will usually differ from the market yield on common stocks. The latter is defined as the ratio of dividends plus capital gains to the beginning of period price of the stock. The one, which differs, is the expectations of investors regarding the future economic conditions of the firm.

To what extend, however, does return on equity can be used as an effective tool for investors to make their investment decision? Is return on equity a good indicator of market value? Can investors based investment decision on this ratio and eventually make a profitable investment? How reliable or how well does this ratio reflect the company's share price?

The answer to these questions is critical and essential because return on equity may emerge as an important and invaluable information for investor's decision making. It may throw some light on future price movements,

dividend payments and dividend yields. This study attempts to shed some answers to such crucial questions.

1.2 Background of Study

Return on equity is a combination of profit margin, asset management and financial leverage. Breaking return on equity into these component parts not only allows the investor to determine what kind of return on equity is being generated by a company but also to examine the quality of that return as well as which financial levers management is creating it. In fact, this way of looking at return on equity creates a system of ratios that allows the individual investor to really understand how the basic business is being managed.

The use of ROE as an important benchmark can be traced back to 1970s when Wall Street began shifting away from comparing companies on earnings per share. It started using return on equity. ROE a form of return on investment had proven to be a reliable determinant of a company's market-to-book ratio, as well as its stock price. (Bandrowski, 1992). The higher the ratio, the more profitable the operation will be. Any company, which can consistently improve such a ratio, is a true growth company. A high ROE generally indicates that the company is strongly positioned in areas of growth. Moreover, companies with a high ROE are in a better position to finance future growth by using their own profits compared to those with a low ROE; consequently they are less dependent on borrowing. For a growing company

to be successful it must earn a high return on stockholders' equity and a significant portion of that return must be reinvested into the business.

According to Perritt (1996), one of the most successful approaches to common stock investing is to first identify quality companies and then acquire their common stocks at reasonable prices. This approach will differentiate a quality company and a quality common stock. One frequently used measure of quality is a firm's return on stockholders' equity. ROE is an important variable to consider when analyzing stocks for two reasons: First, ROE indicates how effective corporate management is using its assets to generate earnings. A favorable ROE, sometimes-called earning power is one that is rising over time and is greater than average ROE for all firms in a given industry. Secondly, ROE is directly linked to the future growth rate of the firm whilst common stockholders' total rate of return is directly affected by ROE. Additionally, there are three factors, which directly influence a firm's ROE: net profit margin, total asset turnover and financial leverage. Net profit margin is the net return earned on each dollar of revenue and is computed by dividing net income earned during the year by total revenues. Both the degree of competition in the market place and the overall cost of the firm's operations affect a firm's net profit margin. The latter, in turn, is influenced by the efficiency of the firm's operation.

Teitelbaum R.S. (1997) also mentioned that return on shareholders' equity, is the single most important and widely noted benchmark of corporate performance, which has sprinted over the past several years to its loftiest level in US history. The S&P 400 index of industrial sports a dizzying ROE of 22%. The 30 major companies have caused the Dow Jones industrial average finished with a year-end return of 20.5%. The increase in ROE goes a long way towards the bullish tenor of today's market. Like any statistic, ROE has its limitations. One has to be careful when weighing ROE for different industries. In some cases, accounting practices distort results and yield apple and orange comparisons. For example, a drug company's biggest investments, R&D are considered an expense instead of an asset. This reduces shareholder's equity; thus increasing leverage and the slim asset base keeps turnover high. The effect is to boost the industry's average ROE.

According to Elsemann P.C. (1996), a ROE below the required level is a sign that the firm is significantly weak. In our competitive economy, weak firms must either improve or die. This perspective makes ROE a good metric for overall performance. Furthermore, a loss in ROE places two limits on the firm's access to new capital. Firstly, the most important source of equity to a typical business is an internal generated fund. Firms with low ROE simply do not produce much retained earnings. This can lead to funding problems and excessive solvency risks. Secondly, a poor ROE can restrict external equity. For closely held companies, low returns may discourage owners from further investing. Public companies will find that the lower ROE is relative to

investor's required return, the lower the stock price will be. After all, a firm that can not earn its investors' required returns is subtracting rather than creating stockholder value. This makes the sale of stock much more dilative and in some cases, prohibitively expensive.

According to Kristy J.E. (1994), ROE is the ultimate measure of earnings performance. The standard of excellent is 14%. He mentioned that one of the most popular yardsticks of financial performance among investors and senior managers is the return on equity. Return on equity is a measure of the efficiency by which the company employs owners' capital. Return on equity for U.S. companies have been trending higher for decades. In the 1960s, the ROE for the S&P 400 industrials was about 10% and increased to 17 % in 1990s. The increase is largely due to the use of high technology to cut costs and improve productivity and it is the reason why money has continued to flow into stocks. ROE vary from industry to industry. However, generally speaking, the better-managed companies have ROE of 17% or more. Those with ROE of 8% to 10% are simply not as profitable as they should be. Those with ROE of 20 to 30% tend to be the leaders both in their industries and in the stock market.

It is undeniable that, stability of return on equity is the best way to attract long-term holders instead of short-term traders. It is the best means by which to lengthen portfolio manager's investment time horizons for their portfolio positions in a company's shares. A Company's record of profitability must be

considered in light of operating margins, relative to the use of leverage and the impact of inflation. However, a record of stable returns on equity is the best way to calm nervous hands and to build loyal shareholders' base.

1.3 Statement of the Problem

According to Fundamental Analysis, the return on invested capital can be forecasted by analyzing the factors influencing the worth of the expected future income streams (Ben Branch, 1991). Factors such as company's growth rate, capital requirement, turnover and so forth are analyzed to value company's earnings and dividend prospect. There are three types of Fundamental Analysis, namely:

a. Economic analysis

b. Industry analysis

c. Company analysis

In spite of all the evidence of financial ratio analysis which had widely used as an external analysis technique, there have been very few significant attempts to test empirically whether financial ratios employing published financial data are useful to external decision makers. Further, the investor's decision to buy, sell or hold a particular stock would depend largely on his expectations of the future rate of return on investment in that stock. If the investor is capable of predicting the future rate of return on each stock under consideration or the rankings of stocks in terms of their future rates of return,

then his investment decision will be much easier. Thus, the main concern of this study is on company analysis, which focuses on the company's strengths and weaknesses. The assessment is based on financial ratio mainly on return on equity of the company, as return on equity has appeared to be one of the most significant indicators of company's future growth. Which ratio is the best indicator remain unknown although many studies about financial ratios have been carried out. Furthermore there are merely few studies on return on equity especially in the Malaysian context.

1.4 Objectives of the Study

The general objective of the study is to provide the overall assessment of the return on equity in the Malaysian context.

1.41 Specific Objectives

1. To examine the mean differences of the return on equity of 40 companies from various sectors listed on the main board of Kuala Lumpur Stock Exchange covering a period of ten years from 1987 to 1996.

2. To examine the mean differences of return on equity between consumer products sector, industrial product sector, finance sector and properties sector.

3. To examine the extend to which return on equity can be used as an indicator for investors in making their investment decisions.

4. To compare the performances of four different sectors namely, consumer sector, industrial products sector, finance sector and properties sector based on return on equity.

5. To test the normality distribution of the return on equity. It is important to know the distribution followed by a given ratio in determining such things as whether the mean has changed over time and the likelihood that the ratio for a given company falls within a certain interval from the industry mean ratio.

1.5 Plan of Study

In Chapter one, the performance of stock market and the economic condition of the country are reviewed. The problem statement and the objectives of the study are also presented.

Chapter Two reviews the current literature on return on equity which focuses on past studies done by various researchers in both local and developed capital market.

Chapter Three presents the methodology and research design of the study. Method of analysis adopted in this study includes One Way ANOVA and Kolmogorow Smirnov D-test.

Chapter Four highlights the findings of the study, which focuses on providing evidence relating to stated objectives.

Chapter Five summarizes the important findings and concludes the study. Recommendations for further research are also included.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Literature review

Fitzpatrick (1931) analyzed the prior three to five year trends of thirteen ratios of

twenty firms that had failed during the period of 1920 to 1929. He studied the

data on a case-by-case method of analysis and followed it up with a comparative

analysis of a matched sample of nineteen successful firms. He concluded that all

his ratios predicted failure to some extent through declining trends, but his best

predictors were the net worth to net earnings, in other term referring to the return

on equity.

Horrigan (1965) studied the empirical distribution of financial ratio and

found that most fundamental and important question about the statistical nature of

financial ratios concern the type of distribution they exhibited. In his opinion,

published statistical series provided measure of central tendency of financial ratio,

but frequency distributions were never evaluated, and measures of dispersion only

rarely. The study indicated that, financial ratios were normally distributed but

were often positively skewed. He also found that net earnings to net worth ratio

(ROE) was moderately correlated only with the profit margin ratio; in a sense, it stood virtually alone as a type of ratio

O'Connor (1973) found that commonly discussed financial ratios based on published financial data are not useful to investors interested in ranking common stocks by future rate of return. In his study, the statistically significant explanatory relationships found to exist between certain commonly discussed financial ratios and rate of return on investment in common stock, a variable assumed to be of interest to investors in common stock. The formation of expectation about future rate of return ranking was assumed to be important to investors. Hence, the explanatory relationships were tested for ability to predict rate of return rankings, both cross-sectionally and over time. Strong evidence of market effect on the rate of return yielded by a common stock was found by moving from unadjusted rate of return to market adjusted rate of return as the explained variable. Moving from market adjusted rate of return to market and industry adjusted rate of return yield evidence of a weak, but definite industry effect. However univariate analysis revealed that ratios using singly would not be useful in differentiating between common stock yielding high rates of return and common stocks yielding low rates of return. This result suggested that even on a multivariate basis, ratios might be found to be of questionable usefulness in the ranking on common stock.

Bougen & Druru (1975), stated that knowledge of the statistical distribution of financial ratios is important when undertaking cross-sectional analysis for a number of reasons. Primarily, if one knows the mean and standard

deviation of a particular distribution, and that the distribution approximates to normality, then one can determine the relative position of a specific company ratio within the industry distribution. In addition, knowledge of the existence of extreme outliers, either positive of negative, then a comparison of a company's ratio against some industry mean might be potentially misleading, since this benchmark might have suffered some distortion. Indeed, it is important to appreciate the implications for inter-firm comparisons when the distribution for a ratio exhibits non-normality and is characterized by extreme outliers. In such a situation it would seem inappropriate to use the mean value as a benchmark for comparative purposes.

According to Pinches (1975), financial ratio can be represented by seven factors,: return of investment, financial leverage, capital turnover, short term liquidity, cash position, inventory turnover and receivables turnover. He found that net income to net worth had a high loading on the return on investment.

Bird and McHuge (1977) in their analysis, means were calculated in order to compare two industries and to see whether there were trends over time in a single industry. It is generally believed that the mean ratio for a given industry is to some extent characteristic of that industry and quite different to that of other industries and they found this to be true of some of their data : thus, there were some statistically significant differences between the mean industry ratios of the Electrical and Accommodation industries and between the Accommodation and Food industries, in most years. In their study also showed that profitability ratios

were quite sensitive to the bad results of one or two firms in the industry. Thus the abnormal result for the mean of the random sample after tax profitability ratio in 1972 was due to contribution made by Olims Consolidated Limited, which had an individual profitable ratio -4.2 in that year. The normality tests were also very sensitive to these "a typical" extreme profit rates.

According to Short (1980), the ratio of net income to net worth is most highly associated with the factor measuring financing policy. This was somewhat surprising because this ratio was normally thought of as a measure of return but the return on net worth ratio was unusual in the sense that it had fairly substantial loading[1] of two factors, return and financing policy. The association of this ratio with the factor measuring financing policy may be an indication that firms which utilized financial leverage were able to do so successfully. However with the price-level adjustment, return on net worth was associated only with the return factors. This is indirect conflict with prior expectations. Monetary gains under price-level adjustment are influenced by the amount of debt carried by the firm. Thus it was anticipated that the ratios measuring return in equity and financial leverage would be more highly associated after price-level adjustment.

Chen and Shimerda (1981) examined the usefulness of financial ratios, suggested a total of 12 factors in their studies, with each study seemingly proposing a different set of factors to represents the variable space portrayed by

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[1] A factor loading represents the extent to which the variable is related to the factor and is commonly thought of as the correlation between the variable and the factor.

the financial ratios. Their findings showed that net income to net worth and net income to common equity had high loading on the factor of return on investment.

Ashton (1985) evaluated the effect of historical and current cost on the performance measurement. It was found that there was a high degree of association between the figures for historical cost and current cost profit before interest and tax. The findings as they related to the ratio are less conclusive. Whilst the ratios thought to be important in internal appraisal of performance such as return on operating assets, profit margin and asset turnover were highly correlated. The results were less conclusive in the case of those ratios thought to be used by external users such as return on equity, dividend cover and earnings per share. This suggests that current cost accounts may be of more important for external, rather than internal.

According to Estep (1987), the T-model decomposed investment return in three terms : growth, cash flow yield and valuation change – each of which depends on familiar accounting results – return on equity, growth and change in price/book ratio. This three components explain virtually all the return on individual stocks or portfolios, if the data are known exactly. That is, no matter how an investor picks stocks, his returns will turn out to be determined by these variables. When these data are known exactly, the T-model explained over 90 percent of the return on individual stocks or portfolios. Thus it showed that ROE is one of the most important criteria in determining the return of investors.

Baruch (1989) examined the usefulness of earnings, suggested that the ratios may provide more useful information to investors than the raw earnings. He regressed residual returns on annual changes in various profitability ratios of firms. An interesting of his findings was that regressing raw returns on ROI yielded the lowest R^2. Therefore, the ratio forms do not significantly improve the explanatory power of earnings.

A study done by Shari (1990), which focused on the importance of forecasted information as a key input to investors decision models, (using the accounting variables suggested by financial accounting theory, industry variables and economic variables) showed that return on investment yield and capital intensity were associated with earnings capacity.

G. Sivalingam (1993), examined the average rate of return on equity of 30 listed rubber companies and found that it was above 5.5 per cent between 1981 and 1985, but fell below 5 percent in 1986 and 1987 and exceeded 5 percent between 1988 and 1990. It is interesting to note that the return on equity of rubber companies between 1981 and 1990 as the Malaysian economy went through many phases during the period.

According to Block (1995), in his study mentioned that if earning were the only criterion of value, stocks with a return on equity of zero would have no value and the price/earnings ratio would be meaningless. Earnings multipliers rise with expectations of growth. Since growth is closely related to the return on equity,

the price/earnings ratio should rise when basic profitability rises. Yet , throughout the study, profitability shines forth as a clear beam of light, leading the way to the price paid for equity assets. Return on equity arise as a direct influence on the price/earnings ratio, reemerges as a major cause of growth and is seen in a consistent pattern with earnings stability. Even payout is controlled by expectations of profitability.

According to Annuar (1996), the formation of expectation about future rates of return rankings was assumed to be important to investors. Therefore, the explanatory power of the relationships were used to examine if the rates of return rankings over time are useful. Univariate analysis suggests that ratios are not useful individually in differentiating between stocks yielding high and low rate of return. Multivariate analyses also suggest that ratios are of questionable usefulness in the prediction of return of rankings for stocks.

2.2 The Framework of Analysis

The study attempts to provide an insights on the ratio ROE by examining the characteristic of this ratio via mean, coefficient of variation, kurtosis and skewness analysis. The analysis also look at the performance of four different sectors based on ROE as ROE is one way to measure the return an investor receives on the capital that has been invested in the business.

From the diagram, ROE can be defined as the ratio of net earnings to net worth, which shows how company performed in three areas namely, company's growth, effectiveness in using assets to generate earnings and earnings power. By using ROE as a benchmark, the question to answer in this framework is, can an investors make the right decision which will give them profitable gain ultimately? Besides, ROE is a measure not simply of how much of a return the company is generating off of the equity it has created but also of how successful management has been in running the corporation. Indeed, we should look at ROE to determine if the company represents a growth situation. The ROE tells us how much a company is earning on the equity, that is, the capital, available to it. For a company and the stock that represents to be considered a growth situation, it must have a high ROE compared with other companies, and the trend of its ROE should be stable and rising. ROE provides us with some indication of the profitability and viability of a company.

DIAGRAM 1 : THE ANALYSIS FRAMEWORK
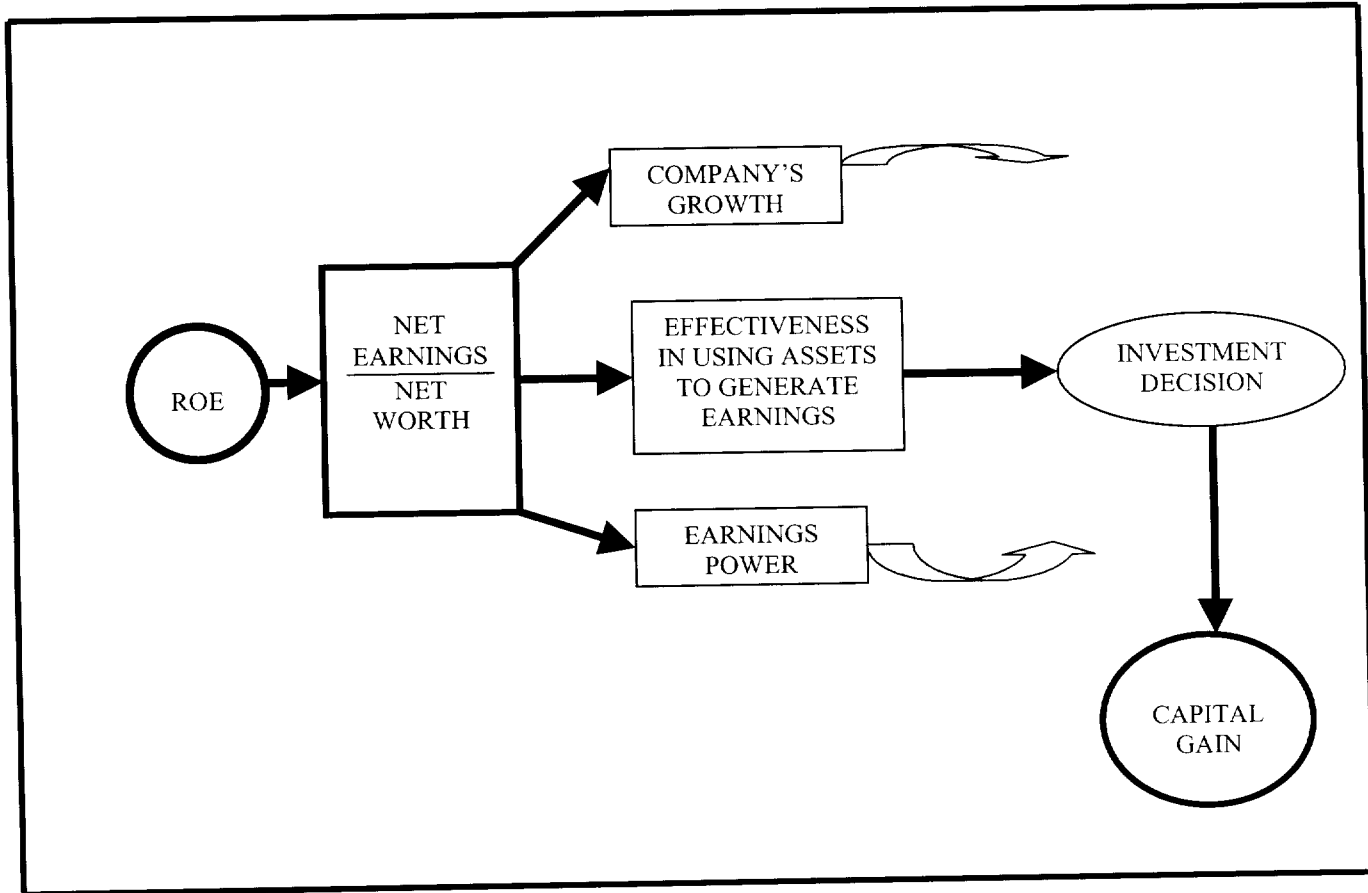
CHAPTER THREE

METHODOLOGY

3.1 Data Collection

In this chapter, the ROE is examined to indicate the relative profitability of companies in several sectors of KLSE. The sample data for the study consist of 40 companies listed on the main board of the KLSE. The companies were from Consumer, Industrial, Finance and Properties sectors. They were chosen based on the availability of complete data from 1987 to 1996. Companies that frequently changed their financial year end during the period of study were excluded from the sample. This is to maintain consistency in generating the return on equity ratio. The period of 1987 to 1996 was chosen because it covered the economic cycle of recession and boom. The year 1997 and 1998 were excluded from the study as these two years were abnormal years as our country was experiencing serious economic turmoil which resulted in slumping of share price across the board. The data for this study were extracted directly from KLSE Companies Annual Handbook covering the year 1987 to 1996.

Besides the data of ROE, the collected data also include the weekly closing prices for two years from January 1995 to December 1996. The closing prices were extracted from the exchange's Daily Dairy. Weekly closing prices refer

to every Friday's closing prices. In the event of Friday being a holiday, the most recently available closing price for the stock was used. It should be noted that the reason weekly closing prices were chosen over daily prices is to ensure that the percentage of non-trading observations included in this sturdy is reduced considerably. Heinkel and Kraus (1998) mentioned three possible alternatives in dealing with days or weeks with no transaction or trading. One possibility is to ignore the days with no trading and use only return data for trading days. A second approach is to get the most recent prices for days with no trading. The third approach is to construct a linear model which can be used to estimate the true return for the day with no return, based on the assumption that prices change when there is information, regardless of whether or not there is trading. In this study, the second approach is followed due to the reason as mentioned below:

1. It is not appropriate to ignore the weeks with no trading since non-trading is a characteristic of a thinly traded market.

2. By employing a linear model to fill in the missing observations, the values we use are not the actual ones, but rather the estimates.

3.2 Techniques of Analysis

Basically, 5 sets of data are analyzed. They comprise of :

a) 10 companies from finance sector

b) 10 companies from industrial sector

c) 10 companies from properties sector

d) 10 companies from consumer product sector

e) 40 companies for the above mentioned combined sample

A complete listing of all companies used in this study are presented in Appendix A. With respect to data processing requirements, Microsoft Excel is used as a tool for tabulating mean, standard deviation, coefficient of variation, skewness and kurtosis whereas Statistical Package Of Social Science - PC is used for normality test and one way ANOVA test.

3.2.1 Computation of Mean, Standard Deviation, Coefficient of Variation, Skewness and Kurtosis

The mean, standard deviation and coefficient of variation for each company and also for every year from 1987 to 1996 are computed for companies from the mentioned four sectors and combined sample using the formula below :

$$\text{Mean} = \frac{x_i}{n}$$

x_i = i observation of the sample

n = numbers of company

$$\text{Standard deviation} = \sqrt{\frac{\Sigma (x-x)^2}{n}}$$

$$\text{Coefficient of variation} = \frac{\text{Standard deviation}}{\text{Mean}}$$

Coefficient of variation measured the risk per unit of return. The smaller the coefficient of variation, the lower the risk per unit of return.

Skewness is to determine whether the data are distributed around their mean. Data sets which are asymmetric can be either positively or negatively skewed. Positive skewness arises when the mean is pulled upward in the direction of high or positive values due to the presence of one or more unusually high values. Negative skewness occurs when the mean is pulled downward toward low or negative values due to the presence of one or more unusually low values. In short, the analysis is done by comparing the mean and the median. If the mean is greater than the median, the data may be described as positive skewed. If the mean is less than the median, the data are considered to be negatively skewed. The sign of the skewness was calculated because it has been suggested that financial ratios tend to be positively skewed.

Kurtosis is to examine the relative concentration of values in the center of the distribution as compared to the tails. It characterizes the relative peakedness or flatness of a distribution compared with the normal distribution. Positive kurtosis indicates a relative peaked distribution. Negative indicates a relatively flat distribution.

3.2.2 Computation of ANOVA

In addition, one way ANOVA, is applied to the 6 sets of sample at the 5% of significant level.

Hypothesis :

1   For combined sample

$H_o : \mu87 = \mu88 = \mu89 = \mu90 = \mu91 = \mu92 = \mu93 = \mu94 = \mu95 = \mu96$

H_A : Not all the means are equal.

2   For consumer sector

$H_o : \mu87 = \mu88 = \mu89 = \mu90 = \mu91 = \mu92 = \mu93 = \mu94 = \mu95 = \mu96$

H_A : Not all the means are equal.

3   For industrial sector

$H_o : \mu87 = \mu88 = \mu89 = \mu90 = \mu91 = \mu92 = \mu93 = \mu94 = \mu95 = \mu96$

H_A : Not all the means are equal.

4   For finance sector

$H_o : \mu87 = \mu88 = \mu89 = \mu90 = \mu91 = \mu92 = \mu93 = \mu94 = \mu95 = \mu96$

H_A : Not all the means are equal.

5   For properties sector

$H_o : \mu87 = \mu88 = \mu89 = \mu90 = \mu91 = \mu92 = \mu93 = \mu94 = \mu95 = \mu96$

H_A : Not all the means are equal.

6.   For four different sectors

$Ho: \mu Consumer = \mu Properties = \mu Finance = \mu Industrial$

H_A : Not all the means are equal.

$$F = \frac{MST}{MSE}$$

MST = The mean square for treatments.

MSE = The mean square for error.

3.2.3 Normality Test

An examination of normality distribution of return on equity is conducted via the Kolmogorev Smirnov D-test. It determines whether the scores in the sample can reasonably be thought to have come from a

population having the theoretical distribution   When the Kolmogorov Smirnov Test one sample goodness of fit test is applied, the focus is on two cumulative distribution functions : a hypothesized cumulative distribution (Fo (x)) and the observed cumulative distribution (F(x)). Suppose that a random sample S(x) is drawn from an unknown distribution function F(x). If F(x) = Fo(x), a close agreement between F(x) and S(x) can be expected.   The objective of the Kolmogrov Smirnov one sample goodness of fit test is to determine whether the lack of agreement between Fo(x) and S(X) is sufficient to cast doubt on the null hypothesis that F(x)=Fo(x).

Basically this test involves evaluating the null hypothesis that the sample represents data taken from a normal population.

$$D = \max | F(x) - S(x) |$$

D	=	The largest absolute difference between $F(x)$ and $S(x)$
$F(x)$	=	A cumulative distribution function defined as $F(x) = P(x < x)$
$S(x)$	=	A cumulative distribution function defined as proportion of sample values that are less than or equal

Ho : F(x) = Fo(x) for all values of x.

H_A : F(x) $\neq$ Fo(x) for at least one value of x

3.2.4 Assessment of he Price for Finance, Properties, Industrial and Consumer Sector

The 40 companies are divided into four portfolios according to their respective sector. They will be chosen to evaluate their dollar performance if the average mean for that particular company is higher than the average mean of the industry. The mean of the each year's price were tabulated . The mean of market price for 1995 is recorded as the initial investment price and the share is then disposed off at the mean price of 1996. The comparison is made to evaluate whether the investment based on return on equity generates any profit. If the ROE of a company is large and it is creditworthy, then it may be able to expand. If its expansionary activities are profitable, then the market value of its shares will also rise.

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Introduction

In this chapter, the performance of companies based on ROE will be discussed for four different sectors start with properties sector followed by finance, consumer and industrial products sector. Besides, the overall performance of the market will also be presented in order to gauge some understanding of the trend of ROE over the past ten years.

4.1.1 Properties Sector

Table 2 shows some descriptive statistics on properties sector. The average ROE for properties companies for the period of 1987 to 1996 was -17.17% with a coefficient of variation of -6.471. A negative value in ROE was observed from 1987 to 1990 where 1987 witnessed the lowest average ROE of −13.11%. The cause of this lackluster performance of the properties sector can be attributed to the October Crash of 1987. Moreover,

the economic growth remained sluggish during that year and due to this, most of the properties sector did not performe up to the expectation. Even though the economy recovered after 1988 with GDP of 8.7%, the impact of the recession on the properties sector prolonged until 1991. Despite of a four years period of virtually stagnated growth for properties sector, the performance of properties companies nevertheless had displayed an upward trend in respond to the gradual economic recovery from 1991 to 1996. The performance was particularly noteworthy for the year 1996 where CI reached one of the highest level and ended at 1237 points. In general, except for the year 1996, the mean ROE for ten years for properties companies showed a return of less than 10%.

When the economic condition was favorable, the risk per unit of return for properties sector was smaller i.e. centered on 0.4 to 0.8 from 1990 to 1996. For the normality test, the ROE for properties sector was normally distributed at 5% significant level. The ROE was negatively skewed from 1987 to 1993. This findings were not consistent with the findings of Horrigan whereby skews were always positive. There was no significant trend for the kurtosis analysis as it fluctuated over the periods.

TABLE 2

MEAN, STANDARD DEVIATION, COEFFICIENT OF VARIATION, NORMALITY TEST (p VALUE), KURTOSIS AND SKEWNESS OF RETURN ON EQUITY FOR PROPERTIES SECTOR

	MEAN	SD	CV	K-S	KURT	SKEW
96	0.127	0.113	0.890	0.796*	5.774	2.222
95	0.080	0.039	0.482	0.640*	-0.663	0.261
94	0.070	0.045	0.642	0.647*	0.087	0.953
93	0.067	0.037	0.545	0.440*	-0.945	-0.196
92	0.064	0.057	0.888	0.443*	0.627	-0.598
91	0.044	0.037	0.845	0.813*	3.543	-0.800
90	-0.037	0.108	-2.908	0.534*	-1.370	-0.515
89	-0.159	0.421	-2.648	1.095*	8.378	-2.815
88	-0.662	1.907	-2.881	1.385*	9.802	-3.121
87	-1.311	2.755	-2.101	1.468*	1.715	-1.822
AVG	-0.1717	1.111	-6.471			

*normal distribution at 5% significant level

By looking at the dollar performance in properties sector (refer Table 3), seven companies had the positive ROE greater than the average industry ratio. Those companies were Arab-Malaysian Development Bhd, Fima Corporation Bhd, Larut Consolidated Bhd, MCB Holdings Bhd, Pelangi Bhd, Selangor Dredging Bhd and Bolton Properties Bhd. Amongst which, Fima Corporation Bhd had the highest ROE and coupled with the highest percentage of gains i.e. at 46.27%. Bolton Properties Berhad with a gain of 23.5% followed this. However, even though Pelangi Berhad had the

second highest ROE among the ten companies, the dollar performance was not promising at all. It incurred –10.31% losses. Out of the seven companies that had been chosen for investment purpose based on ROE, four companies showed positive gain, namely Arab-Malaysian Development Bhd, Fima Corporation, MCB holding Bhd and Bolton Properties Bhd. The other interesting point to note was that those companies with negative ROE showed losses, indicating that companies with negative ROE were not advisable to invest.

TABLE 3
THE BUYING PRICE AND SELLING PRICE AND
DOLLAR PERFORMANCE OF PROPERTIES SECTOR

Properties sector	Buying price	Selling price	gain	%gain/ (loss)	ROE
AMDB	1.69	1.75	0.06	3.63	0.04
APLB	1.57	1.41	-0.16	-10.39	-0.01
FCB	5.62	8.23	2.60	46.27	0.09
LCB	3.68	3.64	-0.04	-1.01	0.01
MCB Hld.	1.81	2.12	0.31	17.17	0.00
PB	2.89	2.60	-0.30	-10.31	0.09
SDB	1.85	1.79	-0.06	-3.07	0.02
TCB	3.85	3.59	-0.26	-6.69	-0.60
LLB	2.84	2.68	-0.15	-5.39	-1.40
BPB	3.36	4.15	0.79	23.50	0.06
AVG				5.37	-0.17

GRAPH 3 : THE DOLLAR PERFORMANCE OF PROPERTIES SECTOR
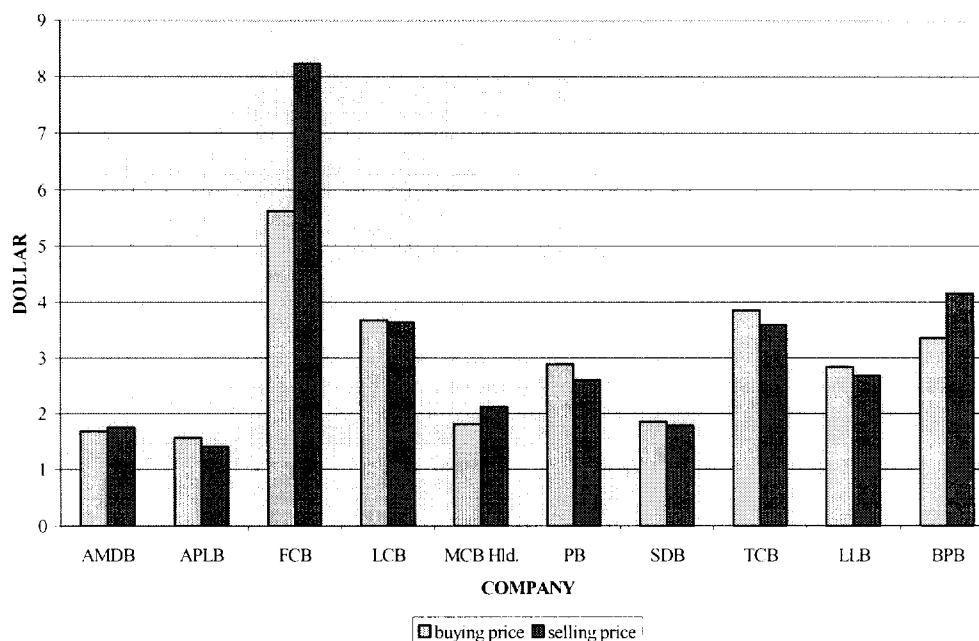
4.1.2 Finance Sector

For ten years, none of the mean showed a negative return (refer Table 4). This indicated that even when the economy was in a bad shape and the business environment was in a downward trend, finance companies had managed to provide a positive return to shareholders' equity due to their stable earnings capacity. Generally, the finance sector performed better as compared to properties sector with an average mean of 10.5% and a coefficient of variation of 0.638. Moreover the mean had shown a gradual incremental i.e. from 4.8% in 1987 to 17% in 1996. The ratio had been quite stable over time. The ROE showed a normal distribution over the ten

and again the ratio was negatively skewed except for 1991,1994 and 1995. Also there is no significant trend for kurtosis analysis.

For the finance sector, three companies recorded a higher ROE as compared to the industry average, which was at 11% (refer Table 5). These three companies are Public Bank Berhad, Southern Bank Berhad and Hong Leong Credit Berhad. All these companies recorded a positive gain. In fact, if observed closely, all the companies under finance sector have had a positive gain. The Pacific Bank Berhad recorded the highest gain of 111.52%, but with ROE below the industry average.

TABLE 4

MEAN, STANDARD DEVIATION, COEFFICIENT OF VARIATION, NORMALITY TEST (p VALUE), KURTOSIS AND SKEWNESS OF RETURN ON EQUITY FOR FINANCE SECTOR

	MEAN	SD	CV	K-S	KURT	SKEW
96	0.170	0.057	0.337	0.482*	-1.052	-0.128
95	0.132	0.066	0.498	0.545*	0.085	0.607
94	0.174	0.090	0.516	0.645*	3.489	1.636
93	0.134	0.046	0.343	0.677*	-0.387	-0.809
92	0.098	0.039	0.402	0.557*	-0.530	-0.032
91	0.077	0.043	0.558	0.554*	-0.443	0.215
90	0.072	0.044	0.606	0.575*	-0.100	-0.589
89	0.086	0.037	0.432	0.499*	0.097	-0.060
88	0.059	0.053	0.891	0.703*	3.902	-1.855
87	0.048	0.044	0.910	1.035*	7.519	-2.574
AVG	0.105	0.067	0.638			

*normal distribution at 5% significant level

TABLE 5

THE BUYING PRICE AND SELLING PRICE AND DOLLAR PERFORMANCE OF FINANCE SECTOR

Finance sector	Buying Price	Selling price	gain	%gain/ (loss)	ROE
MBB	18.73	23.97	5.23	27.94	0.11
TPBB	4.27	9.04	4.77	111.52	0.09
K(M)B	3.27	3.48	0.21	6.32	0.09
MBSB	5.81	7.89	2.08	35.70	0.08
MGIC	3.24	3.91	0.67	20.63	0.09
PBB	3.64	3.70	0.06	1.65	0.13
SBB	4.82	6.14	1.32	27.30	0.15
MAA	8.91	13.26	4.36	48.91	0.11
HLC	11.29	12.53	1.24	10.96	0.16
MBA	4.53	8.61	4.07	89.93	0.11
AVG				38.09	0.11

GRAPH 4 : THE DOLLAR PERFORMANCE OF FINANCE SECTOR
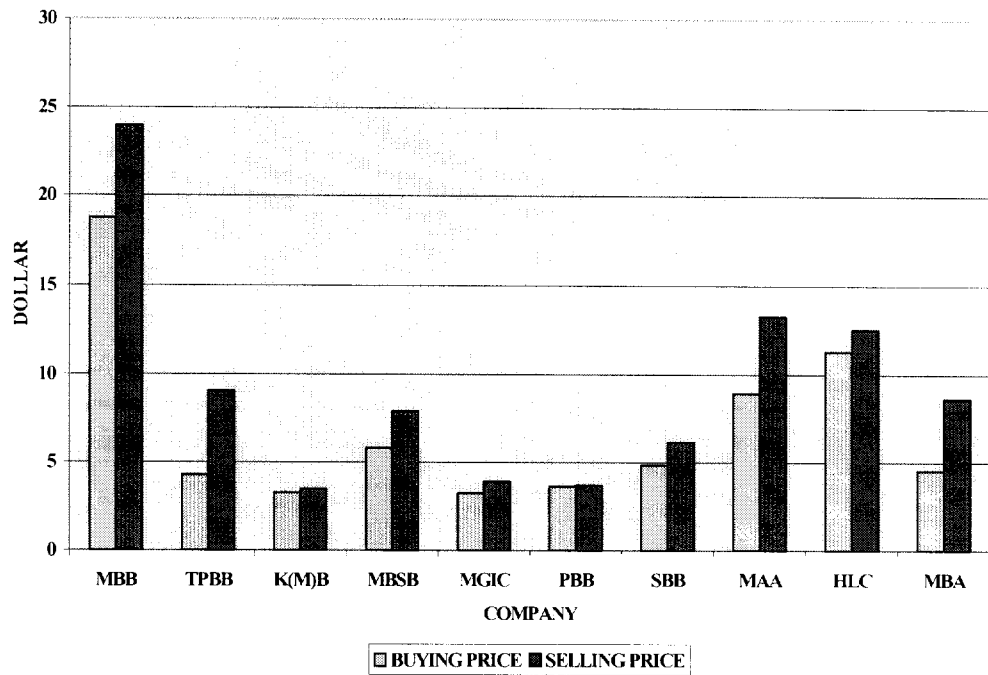
4.1.3 Consumer Sector

Consumer sector recorded the highest return over ten years as compared to the other three sectors, namely finance, properties and industrial sectors (refer Table 6). The average ROE for consumer sector was 13.9% with the coefficient of variation of 0.655. Again the ROE over ten years for consumer sector was normally distributed. The ratio was positively skewed except for 1988. The return for ROE over the ten years was quite stable where the ROE overall was more than 10%. The consumer sector was able to weather the severe recession and to register a positive return on equity,

and appeared to have done better than the other three sectors particularly the finance sector. None of the companies in consumer sector registered a negative return throughout the said ten years period. There was no significant trend for kurtosis analysis nevertheless all ratios over the ten years period was positively skewed except in 1988.

TABLE 6

MEAN, STANDARD DEVIATION, COEFFICIENT OF VARIATION, NORMALITY TEST (p VALUE), KURTOSIS AND SKEWNESS OF RETURN ON EQUITY FOR CONSUMER PRODUCT SECTOR

	MEAN	SD	CV	K-S	KURT	SKEW
96	0.141	0.082	0.582	0.648*	-0.773	0.447
95	0.139	0.076	0.545	0.502*	-0.648	0.045
94	0.139	0.073	0.525	0.673*	-0.913	0.352
93	0.130	0.068	0.524	0.681*	-0.222	0.974
92	0.142	0.064	0.448	0.428*	-0.172	0.454
91	0.148	0.058	0.392	0.701*	-0.229	0.762
90	0.124	0.080	0.643	0.697*	1.044	1.426
89	0.120	0.058	0.484	0.632*	0.133	0.174
88	0.116	0.047	0.407	0.520*	-1.040	-0.408
87	0.191	0.228	1.191	1.089*	7.545	2.675
AVG	0.139	0.091	0.655			

*normal distribution at 5% significant level

For the consumer sector (refer Table 7), a total of four companies, comprised of Carlsberg Brewery Malaysia Bhd, Federal Flour Mills Bhd,

Oriental Holdings Bhd and Dutch Baby Milk Industries (M) Bhd. have experienced ROE higher than the average industry ratio. All recorded positive gain except for the Federal Flour Mills Bhd, which had suffered quite a significant loss of –15.32%. On the other hand, Carlsberg Brewery Malaysia Bhd had acquired the highest ROE of 24% with the highest gain of 46.53%.

TABLE 7
THE BUYING PRICE AND SELLING PRICE AND DOLLAR PERFORMANCE OF CONSUMER SECTOR

consumer	Buying price	Selling price	gain	%gain/ (loss)	ROE
CBMB	11.17	16.36	5.20	46.53	0.24
FFMB	7.49	6.34	-1.15	-15.32	0.15
GC(M)B	6.15	8.15	1.99	32.35	0.11
KFC	14.27	13.07	-1.19	-8.35	0.13
MWE	2.66	2.87	0.21	8.04	0.08
OHB	12.42	15.88	3.46	27.83	0.19
YHB	6.35	6.65	0.30	4.72	0.11
DNP	2.58	2.02	-0.57	-21.94	0.07
DBMI	14.31	18.43	4.11	28.75	0.17
AMB	6.08	6.84	0.77	12.59	0.07
AVG				11.52	0.13

GRAPH 5 : THE DOLLAR PERFORMANCE OF CONSUMER SECTOR

BUYING PRICE ■ SELLING PRICE
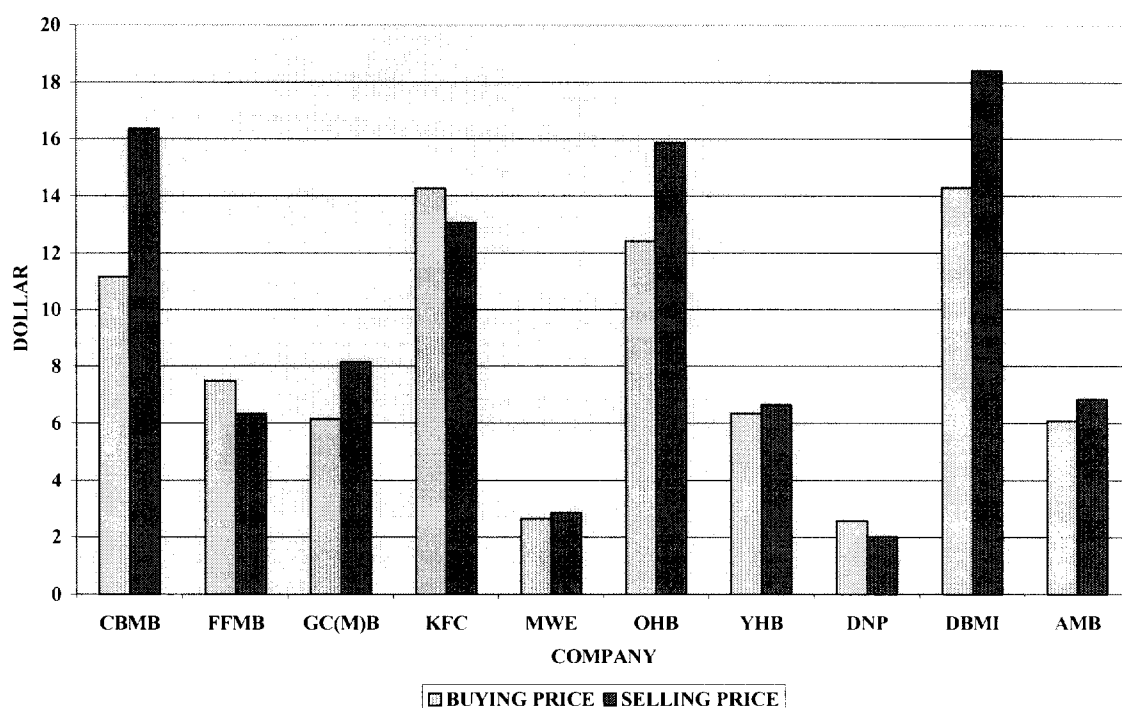
4.1.4 Industrial Products Sector

Generally, industrial products sector portrayed a similar trend to the properties sector where it had an average ROE of –6.8% (refer Table 8). In addition, the highest risk per unit of return among the four sectors, were – 23.04. The sector showed a negative return when the economy condition was in a bad shape and the impact prolonged until 1989. After the recession, the average ROE of industrial product companies rose sharply to more than 10% . When examined further, the negative return could be attributed mainly to two underperforming companies namely, Advance

40

Synergy Bhd and Grand United Holdings Bhd with an average ROE of –

7% and -183%, respectively. Shell and Maruichi Malaysia Steel Tube Bhd

were the only two companies, which had shown a consistent return of more

than 10% throughout the period of ten years. The difference between

properties sector and industrial sector is that the companies under

properties sector suffered the same effect regardless of whether the

economy was down or up. Whereas, for the industrial sector, the

performance was due to just one or two companies with low performance

level.

The ROE for industrial sector was normally distributed and the

data was negatively skewed from 1987 to 1993. The results showed that

the mean had a negative kurtosis from 1993 to 1996, meaning that it had a

relatively peaked distribution during the period mentioned.

TABLE 8

MEAN, STANDARD DEVIATION, COEFFICIENT OF VARIATION, NORMALITY TEST (p VALUE), KURTOSIS AND SKEWNESS OF RETURN ON EQUITY FOR INDUSTRIAL PRODUCTS SECTOR

	MEAN	SD	CV	K-S	KURT	SKEW
96	0.147	0.070	0.475	0.443*	-0.594	0.467
95	0.151	0.068	0.450	0.549*	-1.605	0.065
94	0.156	0.075	0.481	0.565*	-0.311	0.092
93	0.146	0.091	0.626	0.595*	-0.295	-0.361
92	0.142	0.100	0.701	0.797*	3.912	-1.671
91	0.124	0.156	1.262	0.756*	1.920	-1.117
90	0.125	0.149	1.192	0.506*	0.605	-0.986
89	-1.485	4.901	-3.301	1.507*	9.941	-3.150
88	-0.011	0.304	-27.625	1.281*	4.909	-2.243
87	-0.170	0.482	-2.837	1.165*	2.785	-1.840
AVG	-0.068	1.567	-23.044			

*normal distribution at 5% significant level

For Industrial sector, out of ten only two companies did not have ROE higher than the industry average (refer Table 9). These companies are Advance Synergy Bhd and Grand United Holding Bhd. For the eight companies which registered higher ROE as compared to the industry average, recorded a positive gain with Keat Seng Holding as an exception.

TABLE 9

THE BUYING PRICE AND SELLING PRICE AND DOLLAR PERFORMANCE OF INDUSTRIAL SECTOR

Industrial	Buying price	Selling price	gain	%gain/ (loss)	ROE
ASB	4.15	3.98	-0.17	-4.08	-0.07
ACMB	3.62	3.84	0.22	5.99	0.14
ESSO	7.05	7.05	0.00	0.00	0.25
GUHB	2.83	2.58	-0.26	-9.07	-1.83
KS	4.81	3.76	-1.05	-21.84	0.11
KJ	9.58	13.66	4.08	42.62	0.21
MMST	8.70	9.06	0.35	4.06	0.12
CC	7.18	7.48	0.30	4.20	0.13
MCB	4.24	5.92	1.68	39.61	0.15
MOB	8.64	12.29	3.65	42.23	0.24
AVG				10.36	-0.06

GRAPH 6 : THE DOLLAR PERFORMANCE OF INDUSTRIAL PRODUCTS SECTOR
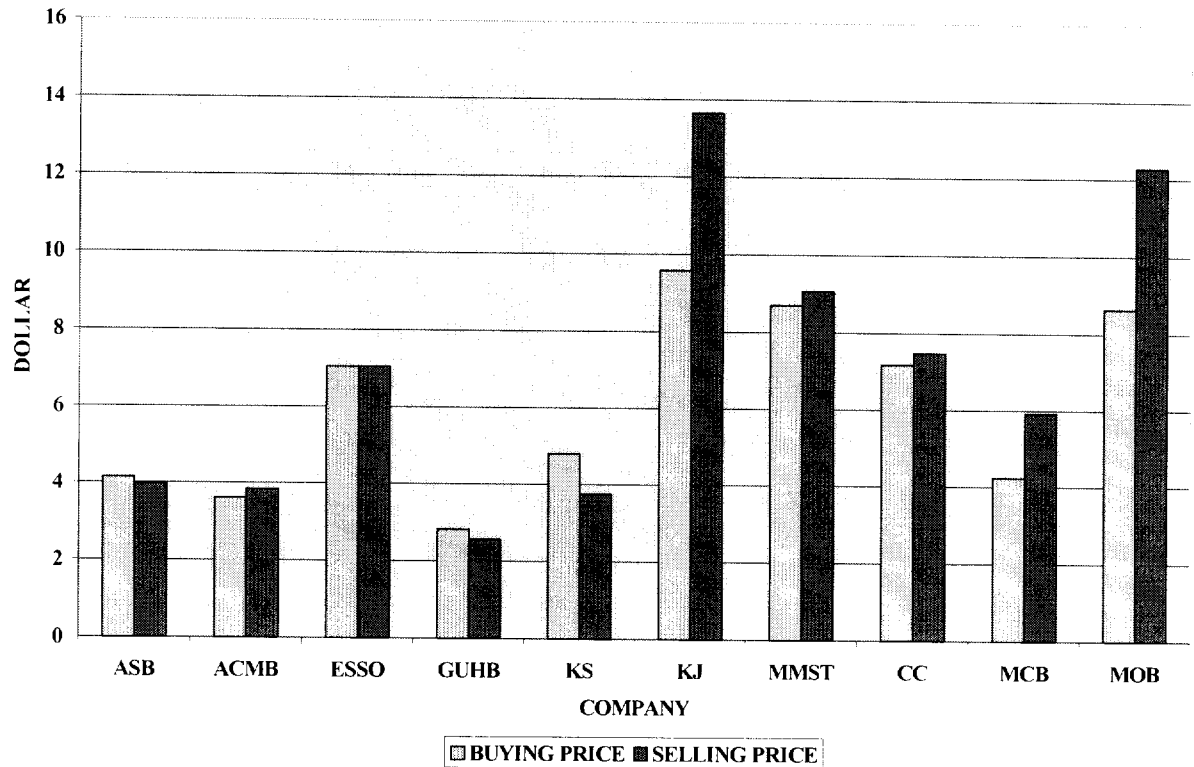
4.2 Overall Performance for Combined Sample

For the combined sector, the ROE gave a 1% return with a very high risk per unit of return of 967 (refer Table 10). The market showed a negative return from 1987 to 1989. There with the ROE showed a gradually incremental from 7.1% in 1990 to 14.6% in 1996. The ROE for the combined sample was normally distributed. After examining the average rate of return on equity of combined sample it is interesting to note that the ratio showed a negative return from 1987

to 1989 i.e. below 10% and later the return rose and exceeded 10% in 1992 onwards.

TABLE 10

**MEAN, STANDARD DEVIATION, COEFFICIENT OF VARIATION, NORMALITY TEST (p VALUE), KURTOSIS AND SKEWNESS OF RETURN ON EQUITY FOR COMBINED SAMPLE**

	MEAN	SD	CV	K-S	KURT	SKEW
96	0.146	0.081	0.557	0.698*	1.797	1.026
95	0.126	0.067	0.534	0.737*	-0.692	0.457
94	0.135	0.080	0.596	0.743*	1.168	0.899
93	0.119	0.069	0.579	0.513*	-0.180	0.390
92	0.112	0.074	0.660	0.547*	1.112	-0.377
91	0.098	0.094	0.957	0.848*	3.009	-0.380
90	0.071	0.119	1.676	0.980*	0.536	-0.401
89	-0.360	2.456	-6.831	2.811*	39.059	-6.220
88	-0.125	0.981	-7.880	2.516*	37.103	-6.006
87	-0.312	1.474	-4.721	2.700*	16.477	-4.101
AVG	0.001	0.967	967			

*normal distribution at 5% significant level

The One Way Anova examines the mean differences for four different sectors. The results show that only finance sector has the mean differences at the 5% significant level. Whereas the others are vice versa. The companies' tendency to follow the trend of the economic condition could be the explanation for the above result.

TABLE 11
ONE WAY ANOVA

	Properties	finance	consumer	industrial	combined	four
F VALUE	0.066	0.000*	0.923	0.400	0.104	0.076

*Reject Ho at 5% significant level

CHAPTER FIVE
CONCLUSION

5.1 Introduction

In some cases, the demand for the firm's products or services may be cyclical, and as a result, the firm may report negative returns during a recession and positive returns during a boom. A good example was the properties sectors. In the recession year of 1987, nine out of ten companies under properties sector reported returns of less than 5%. The boom years of 1993 to 1996 were good years for properties sector as none of the company reported negative returns. It seems obvious that, on average, a recession tends to lower the average annual return on equity and boom or recovery years tend to push it up.

There are some companies, however, seem to be recession resistant. These companies generally come from consumer sector. Their ROE in any environment is positive because they produce essentials. The demand for basic necessities is always strong such as Dutch Baby Milk Industries (M) Bhd, even when the economy is in downward trend, the company still generate more than 10% of return on equity (refer Appendix B). It should be noted that beer company and petrol company such as Carlsberg Brewery Malaysia Bhd and

Esso Malaysia Bhd also reported a high positive, which is more than 10% return on their equity throughout the period 1987 to 1996.

For the industrial sector, the worst year for this sector was the recession year of 1987. This is similar to the trend we noted in the case of the properties companies. However, the performance is much better as compared to properties sector as out of ten companies, only three companies showed a negative return on equity. But If examined further, it is obvious that Advance Synergy Bhd and Grand United Holdings Bhd had contributed the negative return on equity for the whole industry. If these two companies were ignored from the computation, the average figures look better. The reason for dropping these two companies is that they made extraordinary losses and hence have a distorting effect on the average figures.

For the finance sector, only Malaysian assurance Alliance Berhad reported a negative return on equity during 1987. Generally, finance companies had shown a stable return throughout the ten years period. In comparison, finance sector has the best dollar performance as compared to the other three sectors. None of the companies reported negative gain, even the consumer sector with the highest ROE, still three companies reported losses on their dollar performance.

5.2 Recommendation for Further Research

Further work might evaluate the dollar performance of all the sectors over a longer time window and the long run effect of using return on equity as an investment tool. Besides, the use of DuPont analysis also recommended to further assess the validity of return on equity in predicting the future price. DuPont analysis provides the structure to systematically identify the strengths and weaknesses of the company and this approach can be used to identify the sources of problems.

5.3 Conclusion and Implication of Findings

Return on Equity is one of the profitability ratios that can be used to evaluate the performance of the company. The findings suggest that return on equity is a good indicator against unexpected changes in economic condition only for finance sector. In term of providing good hedged against economic swings, finance companies tend to be better than other non finance companies due to their well structure and stable earnings capacity. Even in terms of dollar performance, finance sector seems to outperform the other three sectors. However, this findings should not be used as a generalization because a positive return on equity does not necessarily give investors a positive gain on their investment. But it is interesting to note that companies with negative

return on equity will give investors a negative return on their investment (see

Table 12).

TABLE 12
SUMMARY OF COMPANY WITH NEGATIVE ROE

Company	Buying Price	Selling Price	Losses	% Losses	ROE
APLB	1.57	1.41	-0.16	-10.39	-0.01
TCB	3.85	3.59	-0.26	-6.69	-0.01
LLB	2.84	2.68	-0.15	-5.39	-9.76
ASB	4.15	3.98	-0.17	-4.08	-0.07
GUHB	2.83	2.58	-0.26	-9.07	-1.83

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LIST OF COMPANIES

Industrial Products Companies

ASB	Advance Synergy Bhd.
ACMB	Aluminium Company Of Malaysia Bhd.
ESSO	ESSO Malaysia Bhd.
GUHB	Grand United Holdings Bhd.
KS	Keck Seng (Malaysia) Bhd.
KJ	Kian Joo Can Factory Bhd
MMST	Maruichi Malaysia Steel Tube Bhd.
CC	Chemical Cement Bhd.
MCB	Malayan Cement Bhd.
MOB	Malaysian Oxygen Bhd.

Properties Companies

AMDB	Arab-Malaysian Development Berhad
APLB	Asia Pacific Land Berhad
FCB	Fima Corporation Berhad
LCB	Larut Consolidated Berhad
MCB	MCB Holdings Berhad
PB	Pelangi Berhad
SDB	Selangor Dredging Berhad
TCB	Talam Corporation Berhad
LLB	Lion Land Berhad
BPB	Bolton Properties Berhad

Finance Companies

MBB	Malayan Banking Berhad
MBA	Malaysian British Assurance Berhad
K(M)B	Killinghall (Malaysia Berhad)
TPBB	The Pacific Bank Berhad
HLC	Hong Leong Credit
MBSB	Malaysian Building Society Berhad
MGIC	Malaysian General Investment Corporation Berhad
SBB	Southern Bank Berhad
MAA	Malaysian Assurance Alliance Berhad
PBB	Public Ban Bhd

Consumer Products Companies

CBMB	Carlsberg Brewery Malaysia Berhad
FFMB	Federal Flour Mills Berhad
GC(M)B	Gold Coin (Malaysia) Bhd
KFC	KFC Holdings (Malaysia) Bhd
MWE	MWE Holdings Bhd.
YHS	Yeo Hiap Seng (M) Bhd
OHB	Oriental Holdings Bhd.
UMW	UMW Holdings Bhd
A(M)B	Ajinomoto (M) Bhd
DNP	DNP Holdings Bhd
DBMI	Dutch Baby Milk Industries (M) Bhd.

APPENDIX B
RETURN ON EQUITY FOR 60 COMPANIES

	96	95	94	93	92	91	90	89	88	87	MEAN	SDV	CV	KURT
CBMB	0.28	0.27	0.27	0.24	0.26	0.26	0.24	0.22	0.15	0.12	0.23	0.05	0.23	0.95
FFMB	0.13	0.18	0.19	0.15	0.15	0.17	0.07	0.16	0.17	0.15	0.15	0.03	0.22	3.94
GC(M)B	0.12	0.12	0.11	0.11	0.12	0.12	0.10	0.12	0.10	0.12	0.11	0.01	0.07	-0.67
KFC	0.22	0.20	0.18	0.11	0.12	0.13	0.09	0.02	0.12	0.78	0.20	0.21	1.08	8.10
MWE	0.05	0.05	0.05	0.07	0.08	0.13	0.14	0.10	0.05	0.11	0.08	0.03	0.42	-1.30
OHB	0.24	0.17	0.18	0.15	0.16	0.21	0.29	0.19	0.11	0.06	0.18	0.06	0.37	0.60
YHB	0.12	0.13	0.09	0.09	0.18	0.08	0.07	0.11	0.09	0.08	0.10	0.03	0.31	2.51
DNP	0.03	0.03	0.06	0.06	0.05	0.10	0.05	0.09	0.17	0.22	0.09	0.06	0.73	1.24
DBMI	0.14	0.18	0.19	0.25	0.21	0.19	0.12	0.12	0.16	0.16	0.17	0.04	0.24	0.01
AMB	0.08	0.06	0.07	0.07	0.09	0.09	0.07	0.07	0.04	0.04	0.07	0.02	0.26	-0.34
ASB	0.07	0.07	0.03	0.02	0.13	-0.03	-0.05	-0.54	-0.30	-0.30	-0.09	0.22	-2.41	0.52
ACMB	0.16	0.17	0.15	0.13	0.16	0.15	0.20	0.04	0.08	-0.73	0.05	0.28	5.46	9.25
ESSO	0.14	0.21	0.28	0.28	0.20	0.34	0.29	0.26	0.22	0.17	0.24	0.06	0.26	-0.67
GUHB	0.05	0.08	0.09	-0.01	-0.10	-0.22	-0.18	-15.42	-0.78	-1.30	-1.78	4.81	-2.71	9.76
KS	0.11	0.07	0.16	0.15	0.16	0.10	0.07	0.07	0.07	0.06	0.10	0.04	0.40	-1.55
KJ	0.19	0.23	0.24	0.23	0.23	0.22	0.27	0.11	0.13	0.06	0.19	0.07	0.36	-0.19
MMST	0.13	0.15	0.13	0.12	0.08	0.11	0.11	0.15	0.12	0.08	0.12	0.02	0.21	-0.45
CC	0.11	0.10	0.10	0.14	0.13	0.17	0.15	0.13	0.13	0.14	0.13	0.02	0.17	-0.21
MCB	0.26	0.18	0.16	0.16	0.17	0.14	0.13	0.08	0.08	0.04	0.14	0.06	0.45	0.52
MOB	0.25	0.25	0.22	0.24	0.26	0.26	0.26	0.27	0.14	0.08	0.22	0.06	0.28	2.39
MBB	0.19	0.18	0.17	0.12	0.08	0.07	0.10	0.06	0.03	0.05	0.11	0.06	0.55	-1.39
TPBB	0.11	0.07	0.08	0.11	0.10	0.08	0.07	0.12	0.09	0.04	0.09	0.02	0.28	0.11
K(M)B	0.11	0.08	0.10	0.07	0.08	0.07	0.07	0.11	0.09	0.06	0.08	0.02	0.21	-1.21
MBSB	0.08	0.11	0.10	0.05	0.07	0.07	0.07	0.06	0.09	0.07	0.08	0.02	0.24	-0.20
MGIC	0.22	0.11	0.14	0.17	0.07	0.01	-0.01	0.06	0.03	0.06	0.09	0.07	0.85	-0.46
PBB	0.17	0.16	0.14	0.19	0.13	0.12	0.10	0.09	0.07	0.09	0.13	0.04	0.31	-1.06
SBB	0.16	0.12	0.19	0.16	0.16	0.15	0.13	0.15	0.11	0.06	0.14	0.04	0.26	1.76
MAA	0.25	0.26	0.22	0.16	0.03	0.05	0.05	0.02	-0.07	-0.07	0.09	0.12	1.38	-1.46
HLC	0.17	0.19	0.39	0.17	0.14	0.12	0.12	0.10	0.06	0.05	0.15	0.10	0.63	4.62
MBA	0.24	0.04	0.21	0.14	0.12	0.03	0.02	0.09	0.09	0.07	0.11	0.07	0.71	-0.30
AMDB	0.08	0.04	0.03	0.02	0.06	0.06	0.06	0.04	0.03	0.01	0.04	0.02	0.50	-0.70
APLB	0.03	0.03	0.03	0.04	0.04	0.04	-0.10	-0.09	-0.09	-0.02	-0.01	0.06	-6.76	-1.49
FCB	0.08	0.09	0.06	0.12	0.11	0.04	0.08	0.14	0.09	0.07	0.09	0.03	0.33	-0.04
LCB	0.17	0.09	0.10	0.08	-0.05	0.04	-0.02	-0.11	-0.13	-0.12	0.01	0.11	21.19	-1.45
MCB Hld.	0.08	0.05	0.03	0.01	0.02	-0.04	-0.12	-0.03	0.01	-0.02	0.00	0.06	-55.47	1.53
PB	0.16	0.15	0.12	0.09	0.10	0.03	0.07	0.05	0.04	0.04	0.09	0.05	0.55	-1.20
SDB	0.03	0.04	0.03	0.05	0.03	0.11	0.01	-0.05	-0.03	-0.06	0.02	0.05	3.19	0.06
TCB	0.42	0.11	0.06	0.08	0.10	0.04	-0.21	-0.24	-0.48	-5.92	-0.60	1.88	-3.12	9.54
LLB	0.12	0.10	0.16	0.11	0.15	0.06	-0.18	-1.32	-6.07	-7.10	-1.40	2.78	-1.99	1.38
BPB	0.10	0.10	0.08	0.07	0.08	0.06	0.04	0.02	0.01	0.01	0.06	0.03	0.61	-1.55
MEAN	0.15	0.13	0.13	0.12	0.11	0.10	0.07	-0.36	-0.12	-0.31	0.001			
SDV	0.08	0.07	0.08	0.07	0.07	0.09	0.12	2.46	0.98	1.47				
CV	0.56	0.53	0.60	0.58	0.66	0.96	1.68	-6.83	-7.88	-4.72				
KURT	1.80	-0.69	1.17	-0.18	1.11	3.01	0.54	39.06	37.10	16.48				
SKEW	1.03	0.46	0.90	0.39	-0.38	-0.38	-0.40	-6.22	-6.01	-4.10				

APPENDIX C

WEEKLY CLOSING PRICES IN 1996 FOR CONSUMER SECTOR

	CBMB	FFMB	GC(M)B	KFC	MWE	OHB	YHB	DNP	DBMI	AMB
5-Jan	12.30	6.15	6.75	11.90	2.72	13.00	6.10	2.05	14.40	6.20
12-Jan	12.40	6.20	6.70	13.70	2.80	12.80	6.70	2.29	14.00	6.55
19-Jan	12.30	6.05	6.75	12.50	3.12	12.90	6.60	2.14	15.00	6.60
26-Jan	12.80	6.05	6.60	12.00	3.94	12.90	6.30	2.07	14.50	6.30
2-Feb	12.90	5.90	6.60	12.20	3.80	12.90	6.15	2.15	14.80	6.10
9-Feb	13.60	6.00	6.35	12.90	3.48	12.90	5.90	2.12	14.60	6.00
16-Feb	12.40	6.30	6.45	13.90	3.44	12.60	6.00	2.17	14.60	6.10
23-Feb	13.50	6.30	6.55	13.80	3.55	12.70	6.10	2.14	14.40	6.00
1-Mar	14.10	6.30	6.80	13.60	3.40	12.80	6.00	2.12	14.40	6.10
8-Mar	15.20	6.30	6.25	13.20	3.28	12.90	6.20	2.09	15.20	6.00
15-Mar	14.50	6.25	7.15	12.70	3.12	12.90	5.80	1.99	15.00	6.00
22-Mar	15.60	6.20	7.10	13.40	3.20	13.70	6.40	1.99	15.00	6.40
29-Mar	16.10	6.25	8.75	13.40	3.06	13.90	6.65	1.94	16.00	7.50
5-Apr	16.00	6.80	9.05	13.70	3.10	13.90	7.75	2.05	16.30	7.10
12-Apr	16.40	6.80	9.10	13.60	3.20	14.10	7.55	2.05	17.50	1.40
19-Apr	16.70	6.85	9.05	13.70	3.26	14.80	7.25	2.10	18.00	7.70
26-Apr	17.00	6.75	9.40	14.80	3.18	14.80	7.30	3.15	27.75	9.35
3-May	17.00	6.60	9.15	15.00	3.30	15.00	7.60	2.15	23.00	8.65
10-May	16.80	6.65	8.55	14.50	3.06	14.60	7.05	2.06	21.40	8.00
17-May	16.50	6.55	8.30	14.40	2.92	15.10	6.90	2.03	21.20	7.25
24-May	16.00	6.55	8.25	14.30	2.80	14.70	6.55	2.00	20.20	7.20
7-Jun	15.60	6.60	7.70	14.20	2.62	14.80	6.40	2.01	18.70	6.70
14-Jun	16.70	6.60	7.50	13.90	2.52	15.40	6.00	1.83	18.10	6.50
21-Jun	16.60	6.60	8.10	13.80	2.78	16.00	6.65	1.93	20.60	7.50
28-Jun	17.00	6.65	7.50	13.50	2.87	16.30	6.25	1.84	19.60	7.00
5-Jul	17.10	6.60	7.85	13.50	2.72	16.00	6.60	1.82	19.80	6.95
12-Jul	17.00	6.55	8.10	13.50	2.90	16.30	6.95	2.88	20.50	7.65
19-Jul	17.60	6.55	7.90	15.50	2.24	16.60	6.95	1.87	19.50	7.20
26-Jul	17.20	6.45	7.55	14.70	2.55	17.20	6.70	1.70	19.20	6.85
2-Aug	17.30	6.40	7.55	15.00	2.51	17.30	6.00	1.70	18.80	6.80
9-Aug	17.00	6.40	7.60	15.00	2.49	17.20	6.40	1.69	19.00	7.20
16-Aug	16.50	6.35	7.65	16.00	2.60	19.20	7.00	1.73	19.00	7.35

23-Aug	16.50	6.30	8.60	16.40	2.55	20.20	7.00	1.71	20.20	7.30
30-Aug	17.00	6.20	8.80	16.00	2.49	20.10	6.90	1.69	20.20	7.50
6-Sep	17.10	6.25	9.15	16.70	2.47	20.10	6.85	1.67	20.00	7.05
13-Sep	17.10	6.20	9.20	16.70	2.51	20.00	6.90	1.70	20.00	7.20
20-Sep	17.30	6.25	8.90	10.20	2.63	19.80	6.90	1.75	20.00	7.20
27-Sep	17.50	6.25	9.65	11.00	2.62	19.90	7.00	2.26	19.70	7.60
4-Oct	17.50	6.05	9.35	10.90	2.55	21.50	6.95	2.07	20.00	7.35
11-Oct	17.20	6.05	9.40	10.80	2.64	15.00	6.85	1.94	19.40	7.50
18-Oct	18.50	5.95	9.50	10.20	2.76	17.00	6.85	1.91	19.80	7.80
25-Oct	17.50	5.95	9.10	10.60	2.95	16.60	6.85	1.98	19.90	7.50
1-Nov	17.50	6.35	8.90	10.00	2.70	17.10	6.80	2.00	19.20	7.70
8-Nov	18.00	6.35	8.75	10.90	2.63	16.70	6.80	1.97	19.20	7.45
15-Nov	18.20	6.25	8.70	11.00	2.67	17.10	6.80	1.95	19.50	1.35
22-Nov	18.40	6.00	8.85	11.50	2.70	17.30	6.85	2.21	19.50	7.50
29-Nov	18.50	6.25	9.45	11.20	2.82	17.80	6.75	2.14	19.30	7.20
6-Dec	18.50	6.20	8.50	10.40	2.65	16.40	6.40	2.06	18.00	6.60
13-Dec	19.10	6.25	8.70	9.95	2.52	16.30	6.35	2.00	18.60	6.90
20-Dec	18.90	6.30	8.65	10.70	2.43	16.30	6.40	1.96	18.80	7.30
27-Dec	18.60	6.45	8.65	9.85	2.57	16.40	6.40	1.98	18.40	6.85
Mean	16.36	6.34	8.15	13.07	2.87	15.88	6.65	2.02	18.43	6.84

APPENDIX D

WEEKLY CLOSING PRICES IN 1996 FOR FINANCE SECTOR

	MBB	TPBB	K(M)B	MBSB	MGIC	PBB	SBB	MAA	HLC	MBA
5-Jan	22.10	4.60	2.94	7.05	3.18	3.78	4.94	12.00	12.90	4.76
12-Jan	22.90	5.15	3.12	7.95	3.54	3.80	5.10	11.50	12.70	5.00
19-Jan	22.70	6.15	2.90	7.40	3.62	3.72	5.00	12.00	11.80	5.10
26-Jan	22.00	5.40	2.80	7.10	3.38	3.78	5.10	13.30	11.30	5.25
2-Feb	22.80	5.50	2.77	7.10	3.32	4.02	5.00	12.80	11.40	5.15
9-Feb	22.10	5.45	2.75	7.15	3.40	4.04	5.05	13.60	11.22	5.25
16-Feb	24.00	6.00	3.30	7.25	3.52	4.14	5.15	14.40	11.10	5.85
23-Feb	23.90	5.90	3.10	7.25	3.50	4.10	5.20	14.50	11.00	5.90
1-Mar	23.40	5.80	3.08	7.15	3.50	4.08	5.25	14.90	11.30	6.65
8-Mar	23.80	5.70	2.97	7.15	3.64	4.12	5.80	14.80	12.10	6.60
15-Mar	23.90	6.15	2.87	6.95	3.50	4.10	5.45	14.00	12.00	6.50
22-Mar	23.90	6.25	2.99	7.05	3.50	4.12	5.50	14.00	11.80	6.60
29-Mar	23.60	7.50	3.20	8.10	3.60	4.14	5.60	15.80	11.90	7.25
5-Apr	23.70	7.65	3.50	8.50	3.98	4.16	5.75	15.50	12.40	10.10
12-Apr	23.70	7.70	4.45	8.40	3.96	4.10	5.55	15.00	12.90	11.50
19-Apr	23.70	7.80	4.48	8.30	4.72	4.42	5.95	15.20	13.10	12.10
26-Apr	24.20	10.40	4.46	8.85	5.20	4.42	6.10	14.70	12.20	11.40
3-May	23.90	10.70	4.20	8.50	5.05	4.50	6.00	15.10	12.20	10.50
10-May	23.40	10.60	4.20	7.95	4.54	4.40	5.75	14.50	12.60	9.70
17-May	23.80	9.85	3.86	7.40	4.20	4.30	5.70	11.80	11.60	9.10
24-May	24.10	11.20	3.70	7.55	3.86	4.28	5.65	12.50	12.00	9.00
7-Jun	24.10	11.50	3.40	7.80	3.66	4.26	6.02	11.60	11.80	8.90
14-Jun	23.60	10.20	3.30	7.65	3.70	4.22	5.65	12.20	12.30	8.50
21-Jun	24.30	10.40	3.52	7.95	4.38	4.24	5.90	12.90	12.30	9.40
28-Jun	24.00	11.10	3.40	8.15	3.90	4.20	6.10	13.20	11.80	9.25
5-Jul	24.60	10.20	3.42	8.25	3.88	4.14	5.85	13.00	11.90	9.10
12-Jul	24.40	11.00	3.60	8.25	4.06	3.24	6.10	12.80	12.00	9.20
19-Jul	23.80	10.80	4.06	8.50	3.88	3.20	7.70	12.30	11.90	9.95
26-Jul	22.10	10.30	3.78	8.10	3.68	3.10	7.30	12.90	11.00	9.30
2-Aug	21.90	9.80	3.36	8.05	3.64	3.08	6.85	13.20	11.00	9.30
9-Aug	22.90	9.75	3.40	8.50	3.78	3.18	7.05	14.20	11.00	9.25

16-Aug	22.60	9.60	3.56	7.80	3.78	3.28	6.90	13.10	11.60	9.30
23-Aug	24.00	9.65	3.54	8.05	3.68	3.26	6.95	14.10	12.20	9.90
30-Aug	23.70	9.70	3.48	8.10	3.68	3.16	7.05	13.70	11.90	9.60
9-Jun	23.00	9.30	3.42	8.45	3.72	3.12	6.96	13.50	11.90	9.30
13-Sep	23.70	9.50	3.52	8.35	4.18	3.36	7.20	13.70	11.40	9.20
20-Sep	24.30	9.65	3.58	8.35	4.32	3.18	7.10	13.90	11.40	9.50
27-Sep	24.70	9.60	3.58	8.35	4.20	3.20	7.15	13.80	11.80	9.65
4-Oct	24.40	9.80	3.48	8.30	4.22	3.10	7.30	13.50	13.90	9.35
11-Oct	24.20	9.50	3.40	8.22	4.22	3.20	7.15	12.60	12.60	9.10
18-Oct	25.00	9.85	3.40	8.05	4.22	3.22	7.35	12.50	13.30	9.00
25-Oct	25.00	11.30	3.50	8.10	4.22	3.20	7.75	12.80	14.20	9.05
1-Nov	25.00	11.20	3.50	7.95	4.12	3.20	5.35	12.40	13.70	9.00
8-Nov	25.00	11.40	3.50	8.00	4.06	3.20	5.40	12.50	13.70	9.10
15-Nov	25.00	11.30	3.50	8.05	4.12	3.25	5.85	12.50	14.90	9.00
22-Nov	25.00	11.20	3.50	8.15	4.14	3.40	6.25	12.40	15.40	9.10
29-Nov	25.00	11.50	4.02	8.05	4.10	3.64	7.15	12.50	15.60	10.20
6-Dec	26.25	10.20	3.60	7.75	3.82	3.36	6.15	11.50	15.20	9.80
13-Dec	25.75	10.10	3.50	7.55	3.76	3.38	6.05	11.80	15.20	9.40
20-Dec	26.50	10.00	3.48	7.60	3.88	3.42	6.35	11.70	15.00	9.40
27-Dec	27.00	10.20	3.56	7.80	3.86	3.40	6.45	11.80	15.40	9.50
MEAN	23.97	9.04	3.48	7.89	3.91	3.70	6.14	13.26	12.53	8.61

APPENDIX E

WEEKLY CLOSING PRICES IN 1996 FOR INDUSTRIAL PRODUCTS SECTOR

	ASB	ACMB	ESSO	GUHB	KS	KJ	MMST	CC	MCB	MOB
5-Jan	3.68	4.00	7.00	2.43	3.60	10.50	9.35	5.35	5.00	10.00
12-Jan	4.16	3.88	7.05	2.74	3.88	11.20	8.85	5.75	5.10	9.95
19-Jan	4.28	3.84	7.10	2.57	3.72	11.10	8.90	5.60	5.20	10.60
26-Jan	4.48	3.82	6.90	2.71	3.70	11.60	9.00	5.95	5.40	10.80
2-Feb	4.28	3.98	6.95	2.57	3.70	12.40	8.80	6.00	5.50	10.80
9-Feb	4.18	3.88	7.00	2.53	3.70	12.30	8.80	6.45	5.70	11.00
16-Feb	4.24	3.68	6.95	2.59	3.76	12.50	8.95	6.85	5.80	11.70
23-Feb	4.10	3.68	7.00	2.55	3.68	12.50	8.50	6.50	6.00	11.90
1-Mar	4.14	3.68	7.20	2.52	3.76	12.90	8.55	6.50	6.15	12.00
8-Mar	4.12	3.88	7.05	2.52	3.74	13.20	8.40	7.30	5.80	12.00
15-Mar	3.90	3.98	7.00	2.37	3.66	12.80	8.50	7.50	6.00	12.30
22-Mar	4.00	3.84	7.00	2.54	3.96	12.70	9.30	8.25	5.85	13.20
29-Mar	3.98	3.90	7.05	2.59	4.52	14.10	8.90	8.60	5.95	12.70
5-Apr	4.02	4.24	7.30	2.70	4.32	14.70	8.90	8.50	5.90	13.00
12-Apr	4.10	4.22	7.30	2.70	4.22	14.80	8.80	8.55	5.90	12.90
19-Apr	4.14	4.10	7.30	2.74	4.20	14.90	8.95	8.70	5.95	12.90
26-Apr	4.30	4.06	7.40	2.87	4.20	14.40	9.70	7.95	6.10	13.00
3-May	4.40	4.00	7.55	3.30	4.22	13.60	9.45	7.75	6.20	12.90
10-May	4.10	3.92	7.40	3.22	4.16	14.00	9.70	7.80	5.90	12.60
17-May	3.90	3.82	7.35	3.02	4.02	13.80	9.50	7.75	5.95	12.70
24-May	3.76	3.84	7.05	2.86	4.00	13.90	9.60	7.50	6.00	12.80
7-Jun	3.48	3.82	7.05	2.54	4.04	14.00	9.20	7.70	5.80	12.60
14-Jun	3.46	3.92	7.00	2.49	4.14	13.60	9.40	7.70	5.90	12.80
21-Jun	3.72	4.00	7.05	2.95	3.90	13.90	9.30	7.80	6.00	13.00
28-Jun	3.48	4.02	7.00	2.75	3.78	13.70	9.30	8.00	6.00	13.50
5-Jul	3.44	3.98	6.95	2.79	3.74	13.50	9.20	8.05	5.95	13.60
12-Jul	3.80	4.04	6.95	2.85	3.82	14.60	9.20	7.90	6.20	13.90
19-Jul	3.94	3.96	6.90	2.79	3.78	14.50	9.40	7.85	6.00	13.00
26-Jul	3.72	3.90	6.80	2.63	3.64	13.70	9.30	7.70	5.95	12.90
2-Aug	3.74	3.86	7.00	2.54	3.60	14.60	9.20	7.90	6.20	12.20
9-Aug	3.80	3.82	6.90	2.55	3.58	14.60	9.20	7.80	6.05	12.00

16-Aug	3.80	3.78	7.15	2.59	3.58	14.10	9.15	7.60	6.00	11.70
23-Aug	3.84	3.72	6.85	2.65	3.52	14.30	9.05	7.55	6.10	11.80
30-Aug	3.94	3.70	6.90	2.55	3.50	14.80	9.00	7.60	6.20	12.20
6-Sep	3.90	3.78	7.00	2.54	3.50	15.00	8.95	7.65	6.35	11.90
13-Sep	4.06	3.70	7.15	2.56	3.54	15.10	8.95	7.55	6.25	11.70
20-Sep	4.06	3.72	7.00	2.59	3.58	14.50	9.00	7.90	6.25	12.00
27-Sep	4.00	3.68	7.05	2.55	3.48	14.50	9.00	7.55	6.10	11.90
4-Oct	4.06	3.66	6.95	2.52	3.48	13.70	8.85	7.75	6.20	12.60
11-Oct	4.02	3.52	6.95	2.46	3.54	14.00	8.95	7.70	6.00	12.30
18-Oct	3.98	3.78	6.95	2.42	3.62	13.90	8.95	8.00	6.00	12.30
25-Oct	4.02	3.62	7.15	2.39	3.78	13.80	9.00	7.80	5.70	12.40
1-Nov	3.98	3.60	6.85	2.37	3.68	13.80	8.85	7.85	6.10	12.20
8-Nov	3.72	3.62	6.95	2.31	3.62	13.80	8.90	7.60	6.05	12.30
15-Nov	3.90	3.74	7.05	2.40	3.55	14.00	9.05	8.00	6.00	12.20
22-Nov	3.92	3.82	7.20	2.40	3.60	14.20	9.00	8.00	5.95	12.50
29-Nov	4.00	3.80	6.95	2.27	3.58	13.80	9.05	7.45	5.90	12.90
6-Dec	4.46	3.76	6.85	2.11	3.42	13.80	9.00	7.35	5.80	12.80
13-Dec	4.28	3.70	7.00	2.09	3.44	13.60	8.90	7.00	5.80	12.40
20-Dec	4.04	3.68	6.95	2.04	3.40	13.60	8.95	7.10	5.85	12.40
27-Dec	3.98	3.68	6.95	2.05	3.40	13.90	9.20	7.20	5.80	12.90
MEAN	3.98	3.84	7.05	2.58	3.76	13.66	9.06	7.48	5.92	12.29

APPENDIX F

WEEKLY CLOSING PRICES IN 1996 FOR PROPERTIES SECTOR

	AMDB	APLB	FCB	LCB	MCB Hld	PB	SDB	TCB	LLB	BPB
5-Jan	1.70	1.60	6.05	3.68	2.06	2.48	1.81	3.88	2.60	3.60
12-Jan	1.98	1.66	6.25	3.84	2.94	2.67	2.07	3.98	2.72	3.70
19-Jan	1.86	1.59	6.65	3.70	2.82	2.57	1.97	3.90	2.62	3.80
26-Jan	1.88	1.60	6.45	3.54	2.76	2.48	2.18	3.44	2.60	3.76
2-Feb	1.87	1.58	6.20	3.32	2.46	2.48	2.07	3.20	2.59	3.70
9-Feb	1.73	1.51	6.00	3.40	2.26	2.37	1.86	3.20	2.61	3.84
16-Feb	1.76	1.56	6.15	3.50	2.38	2.35	1.90	3.16	2.68	3.88
23-Feb	1.75	1.54	6.00	3.45	2.40	2.30	1.91	3.10	2.65	3.70
1-Mar	1.76	1.51	6.00	3.38	2.43	2.26	1.89	3.10	2.60	3.76
8-Mar	1.72	1.50	6.30	3.66	2.30	2.39	1.84	3.10	2.73	4.00
15-Mar	1.64	1.47	6.05	3.54	2.19	2.71	1.78	2.96	2.58	3.86
22-Mar	1.66	1.47	6.20	3.72	2.18	2.67	1.75	3.12	2.61	3.92
29-Mar	1.64	1.49	6.60	3.96	2.17	2.68	1.77	3.42	2.50	3.90
5-Apr	1.69	1.50	7.25	4.10	2.28	2.64	1.77	3.28	2.73	3.88
12-Apr	1.70	1.47	7.30	3.96	2.30	2.62	1.80	3.30	2.70	4.05
19-Apr	1.70	1.49	7.50	3.98	2.45	2.58	1.85	3.40	2.69	4.14
26-Apr	1.75	1.50	9.05	3.94	2.34	2.63	1.90	3.50	3.06	4.14
3-May	1.83	1.58	8.70	3.94	2.41	2.70	1.98	3.88	3.20	4.20
10-May	1.72	1.50	8.20	3.80	2.30	3.16	1.89	4.14	2.94	4.04
17-May	1.67	1.48	7.60	3.58	2.21	2.55	1.83	3.90	2.98	3.98
24-May	1.62	1.43	7.40	3.62	2.17	2.53	1.79	3.78	2.90	4.04
7-Jun	1.60	1.42	7.10	3.52	2.07	2.46	1.75	3.56	2.89	4.06
14-Jun	1.60	1.40	7.05	3.54	2.04	2.37	1.72	3.44	2.91	4.04
21-Jun	1.68	1.44	7.70	3.56	2.13	2.43	1.81	3.72	2.82	4.42
28-Jun	1.60	1.40	7.40	3.60	2.04	2.46	1.72	3.62	2.79	4.18
5-Jul	1.80	1.39	7.40	3.62	2.00	2.40	1.70	3.54	2.70	4.04
12-Jul	2.04	1.45	8.20	3.66	2.11	2.48	1.78	3.86	2.79	4.04
19-Jul	1.93	1.41	7.55	3.60	2.04	2.60	1.75	4.00	2.68	4.10
26-Jul	1.70	1.35	7.90	3.30	1.92	2.75	1.67	3.78	2.56	3.96
2-Aug	1.75	1.32	7.60	3.36	2.00	2.69	1.65	3.66	2.49	3.86
9-Aug	1.75	1.30	7.45	3.38	1.86	2.81	1.62	3.62	2.57	3.88

16-Aug	1.88	1.37	8.00	3.28	1.90	2.78	1.72	3.60	2.72	3.74
23-Aug	1.82	1.30	8.10	3.26	1.90	2.80	1.74	3.68	2.68	3.86
30-Aug	1.85	1.30	8.30	3.32	1.85	2.59	1.71	3.56	2.74	3.80
6-Sep	1.79	1.30	8.10	3.60	1.88	2.56	1.65	3.58	2.86	4.50
13-Sep	1.86	1.33	8.10	3.80	1.95	2.56	1.69	3.86	2.69	4.72
20-Sep	1.80	1.30	8.15	3.74	1.96	2.76	1.70	3.84	2.67	4.50
27-Sep	1.79	1.29	9.35	3.82	2.17	2.76	1.68	3.86	2.67	4.58
4-Oct	1.80	1.29	9.60	3.92	1.97	2.73	1.64	3.78	2.68	4.46
11-Oct	1.75	1.29	9.40	3.74	1.91	2.68	1.67	3.68	2.68	4.36
18-Oct	1.70	1.29	10.80	3.90	1.91	2.62	1.69	3.62	2.60	4.28
25-Oct	1.74	1.32	11.10	3.80	1.91	2.57	1.69	3.60	2.60	4.52
1-Nov	1.70	1.28	11.30	3.76	1.84	2.50	1.68	3.84	2.50	4.64
8-Nov	1.69	1.27	13.20	3.86	1.84	2.54	1.67	3.76	2.51	4.64
15-Nov	1.70	1.32	12.60	3.80	1.92	2.55	1.76	3.76	2.55	4.72
22-Nov	1.83	1.36	11.60	3.80	2.02	2.60	1.85	3.78	2.68	4.82
29-Nov	1.75	1.31	11.50	3.68	1.93	2.62	1.84	3.78	2.53	4.80
6-Dec	1.72	1.26	10.40	3.44	1.78	2.64	1.72	3.68	2.51	4.74
13-Dec	1.69	1.25	10.30	3.58	1.80	2.70	1.83	3.56	2.48	4.72
20-Dec	1.68	1.25	10.00	3.44	1.75	2.77	1.80	3.44	2.51	4.52
12-Dec	1.68	1.25	10.40	3.34	1.80	2.75	1.75	3.38	2.56	4.50
MEAN	1.75	1.41	8.23	3.64	2.12	2.60	1.79	3.59	2.68	4.15

APPENDIX G

WEEKLY CLOSING PRICES IN 1995 FOR CONSUMER SECTOR

	CBMB	FFMB	GC(M)B	KFC	MWE	OHB	YHB	DNP	DBMI	AMB
6-Jan	11.00	6.50	6.00	17.00	2.77	12.80	7.20	2.91	16.00	6.20
13-Jan	9.00	6.10	5.50	16.50	2.64	12.20	6.25	2.20	15.50	5.85
20-Jan	9.00	6.15	5.35	17.30	2.43	11.30	5.80	2.60	14.70	5.80
27-Jan	9.15	6.25	5.20	17.00	2.37	11.00	5.25	2.53	14.00	5.60
3-Feb	9.50	6.55	5.95	16.50	3.13	11.00	6.70	2.60	15.10	6.15
10-Feb	10.00	6.75	6.15	16.00	3.16	11.30	7.40	3.24	15.50	6.75
17-Feb	10.10	6.80	6.50	16.30	3.38	14.90	8.20	3.22	15.00	6.80
24-Feb	10.5	6.65	6.1	14.7	3.2	13.7	7.85	3.02	14.9	6.55
3-Mar	10.90	6.70	6.00	15.10	3.10	13.00	7.90	3.00	14.80	6.35
10-Mar	11.00	6.70	5.95	15.60	3.12	12.80	7.00	2.76	14.80	6.25
17-Mar	11.00	6.80	5.95	15.90	3.04	12.50	7.20	2.87	14.60	6.25
24-Mar	10.80	6.90	5.95	16.30	2.89	13.00	7.00	2.79	14.60	6.10
31-Mar	11.00	7.05	5.95	15.30	2.97	13.20	7.35	2.81	14.30	6.45
7-Apr	10.90	7.00	5.85	16.50	2.82	12.90	7.05	2.77	14.10	6.35
14-Apr	10.50	7.50	5.75	16.50	2.72	12.70	6.85	2.74	14.50	6.05
21-Apr	10.10	7.55	5.65	16.50	2.76	12.70	6.80	2.76	14.20	6.15
28-Apr	10.10	7.05	5.20	15.00	2.52	11.80	6.00	2.60	13.60	5.70
5-May	10.30	7.05	5.05	15.00	2.42	11.30	5.60	2.40	13.00	5.60
12-May	10.60	7.55	5.60	15.00	2.70	12.10	6.35	2.70	14.00	6.00
17-May	10.40	7.55	5.90	14.20	2.76	12.40	6.30	2.70	14.00	6.10
26-May	12.00	7.55	6.25	13.70	2.77	12.50	6.50	2.69	14.50	6.20
2-Jun	12.10	7.55	6.30	13.50	2.82	12.40	6.40	3.02	14.40	6.10
9-Jun	11.90	7.60	6.45	14.00	2.80	12.30	6.50	3.00	14.40	6.00
16-Jun	11.80	7.70	6.40	13.80	2.76	12.50	6.40	2.98	14.20	6.05
23-Jun	12.00	7.90	6.55	13.70	2.74	12.50	6.55	2.86	14.00	6.00
30-Jun	11.70	8.20	6.50	13.90	2.75	12.60	6.80	2.80	13.90	6.20
7-Jul	11.60	8.00	6.60	14.00	2.70	12.80	6.50	2.84	14.00	6.10
14-Jul	11.70	8.10	6.80	14.10	2.68	12.70	6.60	2.79	14.30	6.30
21-Jul	11.50	8.20	6.80	14.20	2.60	12.90	6.80	2.75	14.50	6.40
28-Jul	11.40	8.40	6.85	14.20	2.65	13.00	7.00	2.71	14.80	6.40
4-Aug	11.60	8.85	6.90	14.20	2.82	13.00	7.20	2.84	14.80	6.75

11-Aug	11.60	8.60	7.15	13.90	2.74	12.90	7.05	2.89	14.70	7.05
17-Aug	11.50	8.20	7.10	13.90	2.72	12.80	7.00	2.72	14.50	6.90
25-Aug	11.50	8.00	7.25	13.90	2.63	12.70	6.60	2.63	14.50	6.80
1-Sep	11.40	8.00	6.90	13.50	2.66	12.70	6.75	2.62	14.40	6.75
8-Sep	11.60	8.05	6.50	13.00	2.56	12.30	6.50	2.52	14.00	6.50
15-Sep	11.80	7.85	6.25	12.70	2.48	12.50	6.20	2.44	14.00	6.25
22-Sep	11.60	7.95	6.40	13.00	2.46	13.00	6.15	2.46	14.10	6.20
29-Sep	11.60	7.80	6.30	13.50	2.40	12.60	5.95	2.38	14.00	6.10
6-Oct	11.60	8.00	6.40	12.70	2.29	12.20	5.60	2.32	14.30	5.95
13-Oct	11.70	7.95	5.90	12.90	2.20	12.50	5.30	2.25	14.30	5.60
20-Oct	11.50	8.20	6.00	13.00	2.65	11.90	5.35	2.23	14.00	5.65
27-Oct	11.70	8.25	6.05	12.50	2.62	11.60	5.30	2.17	14.00	5.55
3-Nov	11.80	8.25	5.95	12.80	2.22	11.20	4.92	1.96	13.60	5.30
10-Nov	11.50	8.25	5.85	12.80	2.30	10.90	4.84	1.96	13.60	5.25
17-Nov	11.60	8.00	5.60	12.80	2.20	11.00	4.70	1.97	13.60	5.10
24-Nov	11.60	8.00	5.85	12.90	2.34	11.40	5.10	2.05	13.90	5.55
1-Dec	11.60	7.95	6.15	12.10	2.37	12.70	5.40	2.15	13.70	5.40
8-Dec	11.80	8.00	6.20	12.30	2.41	12.60	5.60	2.19	14.20	5.65
15-Dec	12.40	6.60	6.15	12.30	2.35	12.80	5.85	2.05	13.80	5.90
22-Dec	12.30	6.35	6.00	12.00	2.29	12.90	5.65	1.93	14.00	5.55
29-Dec	11.90	5.95	6.15	11.80	2.27	12.90	5.30	1.88	14.00	5.55
MEAN	11.17	7.49	6.15	14.27	2.66	12.42	6.35	2.58	14.31	6.08

APPENDIX H

WEEKLY CLOSING PRICES IN 1995 FOR FINANCE SECTOR

	MBB	TPBB	K(M)B	MBSB	MGIC	PBB	SBB	MAA	HLC	MBA
6-Jan	15.20	4.10	3.20	5.75	3.80	3.80	4.60	6.90	12.10	4.80
13-Jan	14.20	3.88	3.08	5.25	3.46	3.60	4.38	6.60	9.60	4.50
20-Jan	14.70	3.80	3.50	5.30	3.22	3.48	4.30	6.70	9.55	4.50
27-Jan	14.80	3.84	3.46	4.88	3.04	4.00	4.48	6.60	9.45	4.10
3-Feb	15.80	3.96	3.68	5.20	3.34	3.82	4.52	6.80	10.20	4.10
10-Feb	16.00	4.16	3.96	5.60	4.10	3.86	4.80	7.45	11.80	4.60
17-Feb	16.80	4.14	4.00	5.70	4.20	3.86	4.74	7.45	11.70	4.90
24-Feb	16.80	3.80	3.62	5.50	3.80	3.62	4.60	7.45	10.80	4.80
3-Mar	16.80	3.82	3.60	5.40	3.50	3.60	4.60	7.30	10.70	4.90
10-Mar	16.80	3.88	3.62	5.15	3.48	3.60	4.62	7.10	10.80	4.90
17-Mar	16.40	4.00	3.56	5.30	3.56	3.68	4.62	7.40	10.90	4.62
24-Mar	15.80	3.92	3.42	5.15	3.50	3.52	4.60	8.05	10.00	4.52
31-Mar	17.10	4.00	3.98	5.50	3.54	3.60	4.68	8.30	10.80	4.64
7-Apr	16.20	3.98	3.68	5.55	3.48	3.52	4.60	7.75	10.20	4.50
14-Apr	16.80	3.84	3.42	5.55	3.42	3.48	4.58	8.20	10.30	4.58
21-Apr	17.20	3.88	3.52	5.00	3.44	3.46	4.42	8.30	9.20	4.52
28-Apr	16.90	3.74	3.40	5.00	3.60	3.30	4.38	8.05	9.00	4.34
5-May	17.40	3.78	3.24	5.15	3.10	3.26	4.26	8.10	9.20	4.12
12-May	19.10	4.04	3.60	5.20	3.42	3.52	4.44	9.00	11.20	4.50
17-May	19.00	4.10	3.50	5.20	3.40	3.62	4.50	9.00	12.20	4.40
26-May	19.10	4.14	3.44	5.12	3.36	3.78	4.68	8.70	13.20	4.30
2-Jun	19.00	4.12	3.42	5.10	3.36	3.80	4.70	8.50	12.90	4.30
9-Jun	19.10	4.18	3.50	5.10	3.30	3.78	4.50	8.40	12.80	4.40
16-Jun	18.90	4.20	3.48	5.00	3.32	3.80	4.60	8.55	12.80	4.50
23-Jun	19.20	4.40	3.42	5.00	3.28	3.82	4.62	8.60	12.70	4.55
30-Jun	19.50	4.50	3.46	4.90	3.30	3.86	4.70	8.90	12.50	4.40
7-Jul	20.00	4.60	3.50	5.20	3.32	3.90	4.92	9.20	12.50	4.60
14-Jul	20.60	4.64	3.55	5.50	3.44	3.86	5.05	9.40	12.70	4.54
21-Jul	20.40	4.70	3.60	6.10	3.46	3.90	5.35	9.35	12.60	4.60

28-Jul	20.80	4.72	3.60	6.50	3.34	3.92	5.65	9.55	12.60	4.80
4-Aug	21.00	5.05	3.66	7.10	3.52	3.98	5.70	9.45	12.60	4.88
11-Aug	20.20	5.10	3.74	6.80	3.52	3.92	5.25	9.55	12.90	4.86
17-Aug	20.80	5.00	3.56	6.80	3.50	3.90	5.35	9.60	12.20	4.80
25-Aug	21.10	4.94	3.34	6.80	3.26	3.86	5.50	9.85	12.00	4.74
1-Sep	20.20	4.96	3.12	6.65	3.26	3.80	5.35	9.80	11.80	4.70
8-Sep	20.20	5.25	3.10	6.50	3.15	3.68	5.20	9.80	11.50	4.50
15-Sep	20.50	5.55	2.96	6.40	3.02	3.66	5.20	9.60	11.40	4.46
22-Sep	21.00	5.30	2.99	6.85	3.02	3.60	5.25	10.90	11.90	4.52
29-Sep	20.30	5.20	3.70	6.80	2.98	3.52	5.10	11.00	12.00	4.50
6-Oct	20.20	5.25	3.10	6.75	2.98	3.46	5.00	10.40	11.10	4.40
13-Oct	20.00	5.20	2.99	6.50	2.90	3.40	4.94	10.30	10.90	4.40
20-Oct	19.70	5.30	2.90	6.75	2.82	3.40	4.94	10.30	11.10	4.38
27-Oct	20.70	3.62	2.78	6.70	2.83	3.44	5.00	10.60	11.10	4.40
3-Nov	19.10	3.56	2.47	6.35	2.61	3.38	5.00	9.20	10.30	4.32
10-Nov	18.10	3.50	2.24	6.15	2.56	3.38	4.94	8.90	9.45	4.40
17-Nov	18.20	3.46	2.28	5.90	2.38	3.28	4.74	8.90	9.15	4.34
24-Nov	19.40	3.54	2.40	6.00	2.52	3.38	4.84	9.60	9.60	4.36
1-Dec	20.90	3.62	2.50	6.05	2.65	3.60	4.86	10.40	10.40	4.50
8-Dec	21.40	3.72	2.62	6.10	2.76	3.52	4.82	10.20	11.00	4.62
15-Dec	21.60	3.80	2.63	6.15	2.89	3.56	4.76	10.60	12.20	4.54
13-Dec	21.80	4.04	2.54	6.15	2.79	3.58	4.72	11.10	12.80	4.54
29-Dec	21.40	4.42	2.60	6.20	2.88	3.56	4.72	11.50	12.60	4.60
MEAN	18.73	4.27	3.27	5.81	3.24	3.64	4.82	8.91	11.29	4.53

APPENDIX I

WEEKLY CLOSING PRICES IN 1995 FOR INDUSTRIAL PRODUCTS SECTOR

	ASB	ACMB	ESSO	GUHB	KS	KJ	MMST	CC	MCB	MOB
6-Jan	5.40	3.30	7.25	3.32	4.24	8.75	7.00	8.50	4.28	7.10
13-Jan	5.05	3.12	7.35	3.06	4.50	8.40	6.85	7.85	4.10	6.95
20-Jan	4.82	3.14	7.25	2.85	4.34	7.85	6.90	8.05	3.88	7.05
27-Jan	4.38	3.00	7.00	2.72	4.10	7.70	6.85	8.00	3.80	6.95
3-Feb	4.76	3.00	7.20	2.93	4.38	7.85	6.90	8.45	3.90	7.00
10-Feb	5.10	3.12	7.20	3.56	4.80	8.95	7.35	9.20	3.96	7.20
17-Feb	5.95	3.14	7.30	3.88	4.80	8.85	7.70	9.25	4.00	7.65
24-Feb	5.65	3.08	7.15	3.56	4.80	8.50	7.80	9.20	3.96	7.65
3-Mar	5.20	3.02	7.20	3.42	4.78	8.20	7.50	9.60	3.86	7.70
10-Mar	4.80	3.02	7.10	3.16	4.84	8.10	7.30	9.90	3.78	7.70
17-Mar	4.70	3.08	7.25	3.22	5.30	8.05	7.00	10.30	3.90	7.55
24-Mar	4.60	3.12	7.25	3.14	5.15	8.80	7.00	9.90	3.92	7.85
31-Mar	4.74	3.26	7.15	3.18	5.30	9.25	7.65	9.60	3.90	7.75
7-Apr	4.86	3.02	6.95	3.12	5.15	8.95	7.50	9.90	3.90	7.60
14-Apr	4.80	3.10	7.10	3.06	5.10	8.90	7.65	9.70	3.86	7.60
21-Apr	4.76	3.10	7.10	3.14	5.10	8.65	8.00	9.35	3.88	7.70
28-Apr	4.36	2.84	7.05	2.90	4.88	8.55	7.80	9.10	3.90	7.80
5-May	3.94	2.96	7.05	2.69	4.80	8.80	7.80	9.15	3.88	7.85
12-May	4.34	3.50	7.15	3.04	5.00	8.90	8.20	9.70	4.00	8.50
17-May	4.42	3.70	7.05	3.02	4.98	9.30	8.50	9.80	3.96	8.70
26-May	4.46	3.80	7.00	3.00	5.00	10.20	8.95	10.30	3.88	9.15
2-Jun	4.32	3.84	6.90	3.20	4.96	10.00	8.85	10.10	3.78	9.10
9-Jun	4.20	3.88	7.00	3.00	4.80	9.80	8.98	9.80	3.88	9.00
16-Jun	4.10	3.76	6.95	2.98	4.92	10.10	9.10	8.20	3.90	8.90
23-Jun	4.12	3.78	7.05	3.00	4.95	10.00	9.10	7.60	4.10	9.00
30-Jun	4.10	3.82	7.10	2.96	5.05	10.10	9.00	7.20	4.12	9.15
7-Jul	3.98	3.86	7.20	2.90	5.10	10.20	9.15	6.80	4.34	9.00
14-Jul	4.00	3.92	7.15	2.90	5.15	10.20	9.20	6.20	4.52	9.10
21-Jul	4.08	3.92	7.25	2.95	5.25	10.30	9.15	5.80	4.60	9.25

28-Jul	4.14	3.98	7.35	2.95	5.35	10.30	9.35	5.10	4.66	9.30
4-Aug	4.26	4.18	7.40	3.06	5.45	10.30	9.80	5.45	4.76	9.60
11-Aug	4.20	4.12	7.50	3.00	5.55	10.60	10.00	5.50	4.66	9.60
17-Aug	4.10	4.00	7.50	2.90	5.35	10.80	9.50	5.45	4.58	9.50
25-Aug	4.02	3.90	7.30	2.84	5.25	10.80	9.10	5.40	4.54	9.45
1-Sep	4.00	3.90	7.20	2.84	5.55	10.20	9.15	5.30	4.58	9.30
8-Sep	3.88	4.00	7.15	2.72	5.45	10.30	9.50	5.30	4.56	9.20
15-Sep	3.72	4.02	7.15	2.65	5.35	10.40	9.70	5.30	4.54	9.50
22-Sep	3.82	4.00	7.20	2.73	5.30	10.20	9.75	5.30	4.58	9.40
29-Sep	3.68	3.98	6.95	2.64	5.50	10.70	9.70	5.10	4.60	9.60
6-Oct	3.52	3.94	6.80	2.50	5.30	10.40	9.80	4.98	4.50	9.50
13-Oct	3.28	3.94	6.70	2.42	5.15	9.75	9.90	4.62	4.38	9.35
20-Oct	3.22	3.98	6.75	2.41	5.10	10.20	9.95	4.76	4.40	9.50
27-Oct	3.18	3.94	6.70	2.40	5.15	10.10	9.80	5.10	4.38	9.40
3-Nov	2.99	3.86	6.65	2.20	5.00	9.95	9.80	4.86	4.40	8.95
10-Nov	2.89	3.86	6.70	2.06	4.98	9.70	9.75	4.86	4.34	9.05
17-Nov	2.84	3.78	6.50	1.98	5.00	10.00	9.65	4.68	4.28	9.05
24-Nov	3.10	3.78	6.50	2.09	3.46	9.95	9.70	4.78	4.40	9.05
1-Dec	3.34	3.96	6.85	2.20	3.44	10.30	9.70	4.92	4.78	9.50
8-Dec	3.56	3.96	6.75	2.30	0.46	10.00	9.65	5.10	4.50	9.15
15-Dec	3.48	3.80	6.70	2.23	4.42	10.10	9.60	5.05	4.60	9.65
22-Dec	3.22	3.72	6.95	2.18	3.40	10.40	9.50	5.05	4.82	9.60
29-Dec	3.14	3.76	6.70	2.15	3.40	10.50	9.45	5.05	4.84	9.60
MEAN	4.15	3.61	7.05	2.83	4.81	9.58	8.70	7.18	4.24	8.64

APPENDIX J

WEEKLY CLOSING PRICES IN 1995 FOR PROPERTIES SECTOR

	AMDB	APLB	FCB	LCB	CB HI	PB	SDB	TCB	LLB	BPB
6-Jan	1.98	1.79	5.85	3.62	2.03	3.04	2.02	4.00	2.84	3.42
13-Jan	1.81	1.69	5.50	3.26	1.91	2.97	1.89	3.66	2.60	3.12
20-Jan	1.63	1.55	5.40	2.99	1.68	2.89	1.67	3.50	2.56	2.82
27-Jan	1.50	1.42	5.35	2.67	1.63	2.75	1.59	3.06	2.60	2.46
3-Feb	1.76	1.62	5.50	2.88	1.85	2.88	1.90	3.60	2.75	2.68
10-Feb	2.13	1.95	5.25	3.62	2.28	3.24	2.32	4.02	2.90	4.48
17-Feb	2.11	1.92	6.45	3.80	2.33	3.20	2.43	4.12	2.90	3.12
24-Feb	2.01	1.85	6.00	3.50	2.12	2.94	2.25	3.86	2.90	3.40
3-Mar	2.00	!.82	5.90	2.98	2.00	2.98	2.25	3.78	2.45	3.30
10-Mar	1.82	1.71	5.80	2.58	1.95	3.02	2.05	3.66	2.58	3.08
17-Mar	1.85	1.74	5.75	3.52	2.02	3.14	2.11	4.26	2.98	3.12
4-Mar	1.83	1.68	5.55	3.46	1.92	3.12	2.02	4.16	2.92	3.30
31-Mar	1.80	1.70	5.70	3.32	1.93	3.12	2.04	4.02	3.08	3.36
7-Apr	1.84	1.70	5.80	3.66	1.95	3.04	2.06	4.06	3.14	3.24
14-Apr	1.78	1.64	5.65	3.80	1.83	3.02	1.98	3.02	2.86	2.99
21-Apr	1.80	1.59	5.50	3.74	1.88	3.12	2.00	4.24	2.97	2.99
28-Apr	1.62	1.47	5.30	3.48	1.70	2.99	1.80	3.94	2.85	3.00
5-May	1.55	1.44	5.40	3.26	1.65	2.88	1.69	3.72	2.70	2.74
12-May	1.78	1.65	5.60	3.54	1.88	3.08	1.95	3.98	2.93	2.98
17-May	1.74	1.60	5.40	3.55	1.90	3.00	1.95	3.80	2.90	3.00
26-May	1.72	1.59	5.60	3.92	1.85	3.06	1.91	3.90	3.00	3.02
2-Jun	1.77	1.54	5.85	3.90	1.88	3.02	1.90	4.00	2.98	3.10
9-Jun	1.70	1.55	6.00	3.86	1.92	3.00	1.94	3.96	2.92	3.00
16-Jun	1.63	1.62	6.30	3.76	1.90	3.00	1.90	4.02	2.96	3.06
23-Jun	1.67	1.60	6.10	3.80	1.92	2.98	1.89	3.96	2.98	3.30
30-Jun	1.70	1.64	6.00	4.20	1.88	2.95	1.89	3.98	2.94	3.28
7-Jul	1.72	1.59	5.80	4.10	1.90	2.96	1.92	3.89	2.94	3.38
14-Jul	1.65	1.62	5.50	4.28	1.93	3.02	1.95	3.90	2.86	3.46
21-Jul	1.70	1.63	5.90	4.46	1.95	3.14	1.96	3.98	2.86	3.67

28-Jul	1.79	1.61	6.00	4.52	1.95	3.26	1.91	4.04	2.84	3.80
4-Aug	1.89	1.69	6.15	4.78	2.10	3.38	2.07	4.16	2.95	3.90
11-Aug	1.83	1.67	6.10	4.70	1.98	3.50	2.00	4.32	3.00	3.88
17-Aug	1.72	1.65	6.00	4.32	1.86	3.30	2.00	4.14	2.98	4.06
25-Aug	1.67	1.52	6.05	4.08	1.77	3.20	1.80	4.02	2.97	4.08
1-Sep	1.67	1.55	6.10	4.38	1.81	3.20	1.79	4.20	2.93	3.94
8-Sep	1.66	1.45	5.95	4.28	1.79	3.15	1.80	4.28	2.95	3.86
15-Sep	1.63	1.49	5.55	4.18	1.73	3.08	1.76	4.34	2.96	3.80
22-Sep	1.66	1.50	5.60	4.10	1.78	3.14	1.76	4.18	2.87	3.70
29-Sep	1.61	1.46	5.40	3.80	1.69	2.96	1.75	3.94	3.02	3.80
6-Oct	1.55	1.42	5.25	3.54	1.66	2.81	1.68	3.88	2.85	3.84
13-Oct	1.49	1.42	5.05	3.34	1.58	2.73	1.58	3.86	2.79	3.46
20-Oct	1.52	1.39	5.15	3.48	1.55	2.55	1.54	3.94	2.95	3.44
27-Oct	1.44	1.39	5.30	3.42	1.54	2.64	1.56	3.80	2.90	3.40
3-Nov	1.36	1.28	4.96	3.26	1.41	2.42	1.41	3.70	2.76	3.30
10-Nov	1.33	1.33	4.60	3.16	1.34	1.97	1.35	3.30	2.64	3.00
17-Nov	1.28	1.31	4.62	3.28	1.30	2.04	1.33	3.22	2.48	3.00
24-Nov	1.40	1.46	4.98	3.64	1.43	2.17	1.44	3.38	2.47	3.24
1-Dec	1.46	1.48	4.94	3.52	1.55	2.15	1.51	3.52	2.71	3.42
8-Dec	1.60	1.57	5.15	3.50	1.74	2.24	1.72	3.50	2.80	3.68
15-Dec	1.56	1.54	5.60	3.50	1.64	2.30	1.70	3.50	2.75	3.58
22-Dec	1.55	1.50	6.25	3.42	1.59	2.26	1.63	3.40	2.60	3.40
29-Dec	1.59	1.40	6.00	3.50	1.63	2.46	1.68	3.50	2.52	3.48
MEAN	1.69	1.57	5.62	3.68	1.81	2.89	1.85	3.85	2.84	3.36