

INTERNAL LIQUIDITY, CAPITAL STRUCTURE AND FIRM PROFITABILITY: A CASE FOR THE SOUTH AFRICAN LISTED REAL ESTATE INDUSTRY

by

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TABLE OF CONTENTS

0 – ABSTRACT.....	3
1 – INTRODUCTION.....	3
1.1 – Problem Statement.....	5
1.2 – Purpose of Study.....	6
1.3 – Overview of Methodology.....	7
1.4 – Outline of the Study.....	7
2 – BACKGROUND LITERATURE.....	8
2.1 – Internal Liquidity.....	8
2.2 – Capital Structure.....	11
2.2.1 – The pecking order hypothesis.....	12
2.2.2 – The market timing theory.....	13
2.2.3 – The tax bankruptcy trade-off theory.....	13
2.2.4 – The agency theory.....	14
2.2.5 – The stakeholder co-investment theory.....	14
2.2.6 - Modigliani and Miller Proposition I and II.....	15
2.3 – Firm Profitability.....	18
3 – DATA AND METHODOLOGY.....	20
3.1 – Adjustments to the Data.....	22
3.2 – Assumptions.....	23
4 – RESULTS.....	24
5 – CONCLUSION.....	29
6 – REFERENCES.....	30
7 – APPENDIX.....	33
7.1 – Regression Statistics.....	33
7.2 – Data.....	43

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ABSTRACT

This study analyses data for the top ten listed real-estate firms in South Africa to examine the relationships that exist between Internal Liquidity, Capital Structure and Firm Profitability. The ten firms under study represent 79% of the industry by market capitalisation. Other than in six unique cases out of the thirty regressions run, results show that there is little relationship between the variables. These six however, all fall within the test of Internal Liquidity on the firm's Capital Structure. Results indicate that the level of Internal Liquidity has explanatory power on the level of debt used by the listed real-estate firm. Interestingly, results also show that the market's perception of a listed real-estate firm is independent of its capital structure and its cash on hand. It is further implied that firms in South Africa with property as the majority asset, are under-gearred as a result. This study supports the stakeholder co-investment theory to explain the low average debt levels in South Africa.

1 - INTRODUCTION

A very common consideration by both firms and individuals manifests itself in the trade-off between liquidity and debt. Individuals often wonder what level of debt is sustainable for their livelihood relative to their income and similarly, a firm always spends a great amount of time deciding on what level of debt is best for the 'livelihood' of the firm going forward. This is an imperative process for anybody who has access to debt financing and can briefly be summarised into three-steps in no particular order: How much cash is available? How much debt can be raised with the available cash and how much debt is sustainable? What effect does this debt have on total value, both now and in the future?

This research examines exactly these considerations from the firm's perspective, more specifically the South African listed property firm. With some minor extrapolation, the same three steps can be seen as 'Internal Liquidity, Capital Structure and Firm Profitability'. Having a property portfolio, in the broadest sense, is heavily reliant on debt financing and the ability to raise debt capital. Real estate is labelled as a hard asset which is generally

expensive, illiquid and more geared towards long-term investors. That is to say, profit is largely generated in the long term and requires careful thinking in order to maximise this potential return. Property does however have short term profit in the form of cash flow which makes this a unique asset relative to most other hard assets.

“Liquidity refers to the speed and ease with which an asset can be converted to cash” – Firer, Ross, Westerfield and Jordan (2009). Cash in itself is also regarded as a liquid asset. The concept of opportunity cost presents the idea that there is indeed a trade off between holding cash and investing those funds towards opportunities which may increase a firm’s wealth. Internal liquidity is conventionally seen as reflecting investors’ degree of risk-aversion, which has been concretized in the recent sub-prime mortgage crisis that began in October 2007. Rather than a sign of a firm’s financial health, liquidity preference has, over the last 4 years, been viewed as a safety measure against potential threats to a firm’s profitability and indeed in some cases, livelihood.

In his famous work, ‘The General Theory of Employment, Interest and Money’, John Maynard Keynes presents a summary of the preference for liquidity: “[People value money for both] the transaction of current business and its use as a store of wealth”. This is a two-pronged statement; the latter part implies the risk aversion of market participants and the former part relates to increases in one’s wealth. In a capital market which functions in such a way that investment possibilities are widely present, the opportunity cost of liquidity can have negative effects on a firm’s competitive attributes and growth, and as such managing liquidity must be carefully considered.

The next part of this report examines the combination of debt and equity within a firm to look at the effects this has on the sustainability of the firm. Debt, as defined by the International Financial Reporting Standards (IFRS), is “a present obligation arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits”. Equity, as defined by IFRS, is simply “the difference between [a firm’s] assets and [its] liabilities”. The ratio or mixture of these two accounts is also known as the firm’s ‘capital structure’.

The discussion of optimal/correct capital structure is an ongoing debate, one which has provided few definitive solutions. Theories on capital structure tend towards the notion that the correct combination of debt and equity is one which maximises the value of a firm. This

however presents some difficulty in interpretation, in that firm value can be quantified in various ways. Economic Value Added, constant growth in cash flow, market value/book value, bargaining power, industry presence and so on, are some such terms which relate to performance measurement and potential from an external analysis perspective. The market value of a firm is a good indication of the firm's performance and standing in the market if one assumes efficient capital markets. In South Africa this is a reasonable assumption as the JSE/All Share Index is largely seen as the most efficient market in Africa. Thus measuring changes on a firm's share price is a reasonable indication of the firm's overall performance year on year.

Capital structure schools of thought have two main parents. Modigliani and Miller (1958) first presented the theory of capital structure irrelevance. They posit that no matter how one uses debt or equity funding, there is no effect on the firm's total value. On the other end of the capital structure spectrum we have Myers (1984). There are few academics who have written the quantity and quality of literature that Myers has explored on optimal capital structure. He believes that the tax deductible benefits of debt are favourable, cannot be ignored and should strategically be used to enhance growth within a firm. There are however many views on capital structure which fall in between Myers, and Modigliani and Miller. These will be discussed in section 2.

We are well aware of many variations of profitability ratios and liquidity ratios in finance which are widely used in financial statement analysis as measures of firm performance and sustainability (such as Return on Equity, Net Profit Margin, Acid Test, etc). The combination of both types of ratios proves a useful tool for market participants, particularly for those wishing to invest in a company. There are also available, many ratios that pertain to capital structure (such as Equity Multiplier, Debt-to-Assets, etc). This research will focus specifically on the Quick Ratio as a proxy for internal liquidity and the Debt-Equity Ratio as a proxy for capital structure; the reasons for this are discussed later.

1.1 – Problem Statement

The choice of capital structure, as mentioned previously, varies given many considerations. As with the real estate industry, leverage is favoured as the source of cash inflows is generally more predictable than with other industries. Even with the higher risk of default threatening the balance sheets of real-estate firms, this risk is counteracted by the industry's

higher average gross profit margin: Real Estate Activity has an average gross profit margin of 26.2% - (Statistics South Africa, 2010). Conversely, service firms which operate at their optimal levels of profitability at irregular periods within the financial year, tend to present more uncertainty of cash flows. Therefore, in the perfect world without risk of default and vacancy, *ceteris paribus*, the optimal debt level of a real-estate business would be near 100%. This would allow rent received to pay the interest rate burden and firms would purchase more property using maximum leverage. Of course this is unreasonable in our competitive, imperfect environment but one would expect the debt level of a listed property firm to be higher than that of other industries. The reality however, is that the average debt to asset level of the top ten listed real estate firms in South Africa is 35%. This sample of 10 firms represents the vast majority of the industry by market capitalisation (79%). The relationship between profit and debt levels is even more complicated when one is dealing with externalities such as competition, interest rates, limits set out by debt providers, and the market's perception on the firm in question (which drives the market price). There is thus some difficulty in understanding the reasons as to why in South Africa, we have such a low level of Debt-to-Assets in the listed property sector. My attempt is to examine possible reasons for this.

1.2 – Purpose of Study

More than my personal interest in Real-Estate and theories on capital structure, the question of this study is a relevant one that faces academics and market participants to this day. Firms will revisit their capital structure policies and liquidity limits. This is done either to increase profitability or to maintain certain growth levels. This fits well with the kind of thinking needed when building a property portfolio. As such this places particular focus on liquidity within real-estate firms for two reasons. Firstly, cash flows are somewhat predictable (after taking into account vacancy risk and default risk). Secondly, businesses of this nature have large asset bases and thus have high levels of collateral which provides them with unique bargaining power. This results in relatively better access to debt funds for real estate businesses than other business types.

The purpose of this dissertation is to examine relationships. Furthermore, to use the relevant tools for financial analysis and theories on capital structure as a basis, testing to see if South Africa is consistent with previous literature. Moreover I wish to examine the average capital

structure of listed real-estate firms within South Africa may be and if it is beneficial for firms to maintain a certain level of internal liquidity. At a minimum, I hope to deduce whether listed property firms in South Africa are justified in this low debt ratio or if they are indeed capable of growing their portfolios with little increased risk in relative terms. This research sets out to examine possible relationships that may exist between a firm's liquidity, its choice of capital structure and its subsequent effect on profitability to determine if there is a reason for the average debt-to-assets ratio of 35%. In essence this study sets out to determine whether or not South African real estate firms are over-gearred or under-gearred.

1.3 – Overview of Methodology

The research report sets out to examine relationships that may exist between the variables pointed out in the title (Capital Structure, Internal Liquidity, Firm Profitability) on a monthly basis for varying periods over the 10 year base period. The 10 year period includes the 2007 crisis as to account for adverse market conditions and uses the top ten listed property firms in South Africa as measured by market capitalisation. The reason is that these 10 firms dominate the market in size (79% of total) and are therefore an appropriate benchmark for the whole index. This will be done using regression to measure the relationships between all three factors in isolation, namely: Internal Liquidity, Capital Structure and Firm Performance. Certain assumptions are further made in order to aid the study. Linear growth is assumed. This is because internal liquidity is represented by the Quick Ratio and capital structure is represented by the Debt-to-Equity Ratio, and these figures are only available with financial statements. This is a problem because one cannot compare monthly data with annual data. This is consistent with listed property firms who assume linear growth annually and generally only value their portfolios annually or semi-annually. The regression can thus measure relationships between the variables at equivalent time periods.

Data has been collected electronically, mostly from McGregor BFA, and the ratios are collected from the financial statements on the Standard Bank Online Share Trading website.

1.4 – Outline of the Study

Background Literature, the next section, examines past literature on the importance of internal liquidity, the choices for capital structure and a few views on firm profitability. Capital structure receives the most attention as it is the core of this research report and there

is a tremendous amount of previous literature on capital structure theory. Section 3 discusses the methods used to test the variables for correlation, and includes the assumptions made and adjustments to the data that are necessary to run the regressions. Discussion of the data results is included in section 4 and it is an analysis of the figures obtained from running the tests. This is not a conclusion but rather an interpretation of the R^2 . The conclusion along with the ultimate results of the study is in section 5, with some of the detailed results placed in section 7 under appendixes.

2. - BACKGROUND LITERATURE

2.1 – Internal Liquidity

Liquidity is an elusive notion: “It is easier to recognise than to define”. This statement by Crockett (2008) perfectly categorises the task one faces when trying to describe a term which is so loose in its application. This report focuses specifically on internal liquidity, which can be interchanged with (among other concepts) cash, or assets which have the characteristics that make them easily tradable. That being said, Crockett describes this type of liquidity as the ease with which these shorter term assets can be converted to cash without the loss of value. The CFA Institute (2011) describes liquidity as the ability to meet short term obligations with the use of assets that are most readily convertible into cash.

Internal liquid funding is fundamentally important for the long term prospects of the corporate firm. For our purposes, cash management falls under the same consideration. Desai (2009) points out that this focus of reining in on corporate costs gives rise to the need for “timely, automated payments handling” and a scalable, flexible platform for controlling the relationship with firm debtors and creditors. Desai further suggests that being able to see one’s cash position in a comprehensive way makes the firm more dynamic and allows for faster reaction to market events.

Wang (2001) found that aggressive liquidity management enhances profitability and performance, and is usually associated with higher corporate firm value. Saleem and Ur Rehman (2011) state that liquidity management is fundamentally important for every organization and that a firm needs to place emphasis on the current portion of their long term debt. The International Financial Reporting Standards (IFRS, 2006) indicate that liquidity refers to the available cash for the near future after taking into account the financial

obligations corresponding to that period. The latter part of that sentence (“....financial obligations corresponding to that period”) is a direct result of the level of long term debt within a firm. This is the particular focus: At what level of debt can the projected cash flow handle the firm’s current cash obligations.

Nield (2006) critically analysed the likely changes in the liquidity management regime of large listed firms, post 2006. He found that there needed to be a significant increase in cash held, and his evidence supported that this was indeed the case at the time. The motivation for this need was the high level of debt financing within the issue under study. Interestingly, Nield labels the article ‘Changes in the Liquidity Management Regime’. This has vast implications, including the view that liquidity management needs to constantly be monitored in order to meet the current economic conditions in a way that is most beneficial to the firm.

Asch and Kaye (1987) describe the relationship between liquidity, solvency and cash management effectively with an example. While describing technical insolvency, they state that a firm may have sufficient assets to pay their current liabilities, but do not have enough time to convert those assets into cash. Here, solvency is adequate, liquidity is inadequate, and these conditions present the need for the efficient management of cash.

Understanding the benefits of liquidity to the firm is a difficult relationship to encapsulate, let alone quantify. There is indeed a trade off between liquidity and firm profitability, and to expound on this statement, Abuzar (2004) found that the effects of liquidity on profit were negative and even more profound given the size of the firm. This empirical study also found that the relationship is more evident in firms with high current/quick ratios and longer cash conversion cycles.

Campello, Giambona, Graham and Harvey (2010) found that the option to access liquidity from credit sources becomes less valuable when internal liquidity is abundant, given market conditions in financial crisis. Rather, sources of debt capital funding prefer to offer liquidity to firms who have collateralized assets and strong continual cash flow. Real estate is unique in this regard. To quote Gan (2006): “Real estate is an important source of collateral worldwide”. Gan finds in his study that there is a strong relationship between the loss of collateral value of assets and a decrease in the debt capacity of the firm. The real estate firm mainly uses net cash in four ways, namely: paying unitholders, holding it as a safeguard, paying back existing debt or increasing investment (through leverage) as the firm has a higher

propensity to gear and ultimately pay the finance costs. Assuming this, Gan's results imply something further by introducing firm investment activity: A positive relationship between internal liquidity and investment, and in the medium term, the ability to raise debt capital. This seems to introduce an indirect link between internal liquidity and the ability to raise debt capital under normal market conditions.

Kau and Sirmans (1985) examine a situation where debt capital is unavailable from a real estate perspective. They indicate the importance of leverage by providing a condition where firms who hold physical property or land as their major asset base, may lose out on lucrative investment opportunities as their expenditure is limited to their amount of capital saved. Being that cash flow is largely stronger for firms with real estate activity; providers of debt capital view these as lower risk.

Kau and Sirmans (1985) do point out, however, that under certain economic circumstances, institutions offering debt capital do not have the controlling position (such as in periods of high inflation and/or high short-term interest rates). The reason is that financial disintermediation puts more pressure on the provider of funds than it does on the borrowing entity. The firm with collateral assets can (unless facing financial difficulty) elect whether or not to enter into a new debt agreement, whereas the institution needs to provide funds to continue with normal business activity.

One can begin to see the linkage between internal liquidity preferences and both the choice for the correct ratio of debt to equity, and the ability to raise capital. Tracking back to the relationship between liquidity and growth, Titman and Wessels (1988) suggest that this trade off yields a negative relationship between long term debt levels and expected future growth. They also noted that this problem can however be eradicated by rather issuing short term debt and further suggest that there may be a positive relationship between short term debt and future growth.

This relationship becomes even more complicated when introducing the opportunity cost of holding cash. Firer, Ross, Westerfield and Jordan (2009) suggest that when a firm has a temporary cash surplus, it would be irresponsible not to strike the balance between investing in marketable securities and planning for near term expenditure.

Using real estate as the dominant asset in a firm, the choice of investment (in more real estate) or planning for future expenditure (by holding cash), Firms introduce a new consideration: Using a cash surplus to decide on whether it is more profitable to increase debt or equity.

2.2 – Capital Structure

As with any management decision, extensive thought and strategy is fundamental when deciding on capital structure. Capital structure, being the mix of equity and debt capital has a certain impact on a firm's value. "The firm is supposed to substitute debt for equity, or equity for debt, until the value of the firm is maximized" – (Myers, 1984). This is simply stated as:

$$V_{Firm} = MV_{Equity} + MV_{Debt} \quad (1.1)$$

Although eloquent in its brevity, this is far more complex than Myers suggests. One such complication arises when dealing with just debt capital, for example. Asch and Kaye (1987) correctly point out that there are a wide array of definitions and sources of loan capital, but the distinguishing factor is the aspect of control over the firm. Whilst there is no effective control when loan capital is issued, the risk of default carries with it the risk of loss of control. Considerations such as this make the theory of optimal leverage more complex.

Finance theory to date has been largely unable to present an optimal capital structure ratio for all firms, as this varies between industries, between countries, between cultures and will constantly change. Furthermore the choice of capital structure varies over time and across firms, as pointed out by Korajczyk and Levy (2003).

Ojah and Pillay (2009) analyse the effects of external public debt markets on the choice for capital structure within a firm. Their findings show that a strong public debt market indeed influences the firm's choice of leverage but that it does not apply equally to all firms. Ojah and Pillay suggest that some firms are better suited to public debt funding whereas others may be better suited to raising funds from private debt sources. Either way, the strength of the debt market in its entirety (both public and private) has a strong effect on the firm's choice of capital structure. Interestingly, the authors find strong evidence suggesting that the risk profile of the firm is significantly lower for firms issuing public debt. This has positive effects on the perception of the firm, and ultimately a higher valuation.

Strebulaev (2007) finds that in a dynamic economy a firm's leverage is not efficient and therefore the capital structure will differ from the optimum capital structure at any particular time. Strebulaev further indicates the difficulty of optimal capital structure by pointing out that firms will always be in different stages of their refinancing cycles and comparing firms is incredibly difficult if they are not all at "year zero". This complication attaches itself to the use of estimates for Required Rate of Return, Discount Factors etc.

Nevertheless there are many theories on capital structure and the reasons the firm would choose a certain ratio of debt to equity. There are a number of theories surrounding this topic. 5 common theories on the choice of capital structure are pointed out and used by Frank and Goyal (2003). These being:

2.2.1 - The pecking order hypothesis

This theory presents the view that firms prefer to finance their activities using retained earnings. If internal equity is not enough, then the use of external debt is preferred. External equity is a last resort as it is generally the most expensive type of funding. Shyam-Sunder and Myers (1999) support the pecking order theory through its comparison with static trade-off theories. Their results showed that according to the basic pecking order hypothesis, there was indeed explanatory power between the internal financial deficit of a firm on the use of external debt financing. Whereas the trade-off model argues that a firm adjusts gradually to an optimal debt ratio, Shyam-Sunder and Myers (1999) conclude that it has no statistical power. This leads to the finding that the pecking order hypothesis is streets ahead regarding raw explanatory power (R^2).

Shortly after this paper however, Chirinko and Singha (2000) report that Shyam-Sunder and Myers' (1999) results are misleading when using such "elegantly" simple tests. By using the same tests they conclude that neither the static trade-off model nor the pecking order hypothesis can be regarded as valid when evaluating plausible patterns in external financing and that one should include many more quantifiable determinants of capital structure in their testing.

Leary and Roberts (2010) attempt to address the concerns of these previous tests by expanding the model to incorporate factors typically used in other theories and find a sharp increase in predictive accuracy on debt and equity issuances. This supports the pecking order

hypothesis in “over 80% of observations (sic)”. They further conclude that information asymmetry is a weaker determinant of capital structure choice.

2.2.2 - The market timing theory

Firms try to time the financing of their activities using equity when it is cheap and debt when it is cheap. Unlike the pecking order theory which assumes semi-strong form efficiency in the market, the market timing theory does not use any assumption around market efficiency.

Strong supporters of this theory are Huang and Ritter (2004). They found, inconsistent with the pecking order theory, that equity offerings are common and consistent with certain periods in the business cycle (when equity is cheaper). They also find evidence contrary to the static trade-off theory in that firms adjust very slowly toward target debt. By estimating the relationship:

$$L_t = f(\text{Characteristics}_{t-1}, \text{Net Equity}_{t-1}, \text{Net Equity}_{t-k}, \text{Net Debt}_{t-1}, \text{Net Debt}_{t-k}, L_{t-k-1}) \quad (1.2)$$

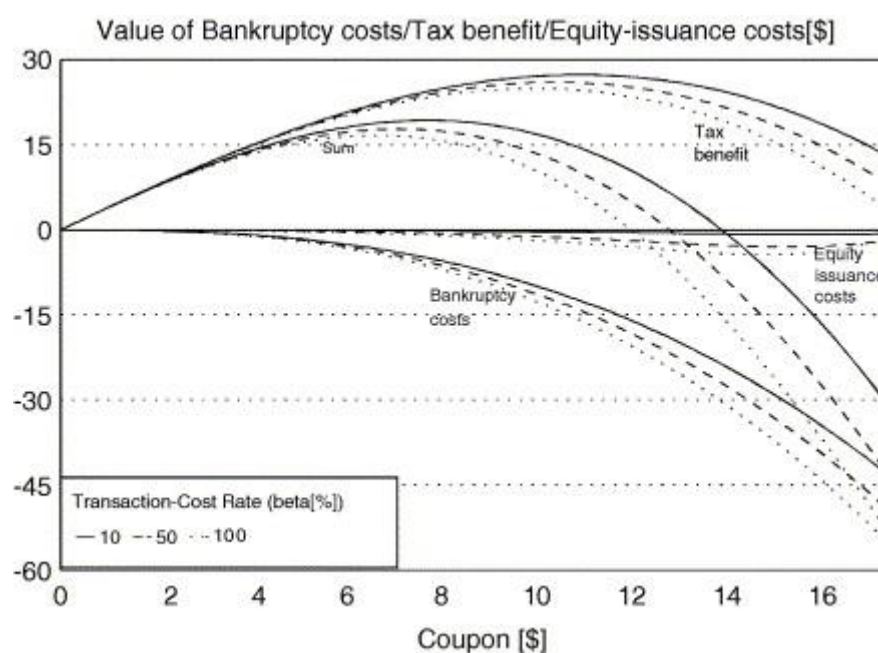
Huang and Ritter (2004) observe a lag on capital structure choice based on past issuances of debt or equity.

A firm is likely to issue equity when the market value of that equity exceeds its book value. This is proven by Baker and Wurgler (2002) who find that the “resulting effects on capital structure are very persistent”. They deduce that capital structure is strongly dependent on historical perceptions of the company’s value (market value) as their testing shows both statistical robustness and economic significance.

2.2.3 - The tax bankruptcy trade-off theory

Firms will decide on capital structure taking into account the trade-off between the tax benefits of debt and the potential cost of bankruptcy. As the name suggests, a firm chooses its capital structure taking into account the benefits of debt and the shortfalls of debt. Interestingly it assumes that equity is far too expensive and debt is preferred. This trade off can be seen graphically at the top of the next page in Figure 1.1:

Figure 1.1:



Courtesy of: <http://www.sciencedirect.com/science/article/pii/S0378426604001268>

2.2.4 - The agency theory

“Firm managers may be tempted to overspend their free cash flow, so high debt is useful to control this overspending impulse” – Frank and Goyal (2003). This increase in leverage increases “the chance of paying deadweight bankruptcy costs”. In essence, this introduces a notion that there may be a conflict of interest between the firm’s management and the firm’s sustainable growth. The result is that decisions made may not be beneficial to the firm, and a high level of debt is one way to control spending that is not productive to firm profitability. Agency conflicts also exist between debt holders and equity holders.

2.2.5 - The stakeholder co-investment theory

Frank and Goyal (2003) explain that firms will structure their debt relative to other firms (usually slightly lower) in order to keep the confidence of stakeholders in the business. This is to say that an industry standard is set and firms have a strict target debt ratio. The result is that from the investor’s perspective, the firm is compared to a standard and may be seen as either too aggressive or too conservative if their level of debt differs from that of the industry.

These all present valid theories, yet the market timing theory is particularly pertinent to the study of capital structure decisions on profit as it is specifically a profit motivated theory and this report examines the relationship between firm profit and capital structure. Myers (1984) articulates this as timing the cost of debt and equity in the market and choosing the method of funding which is cheaper at that particular stage. This is also defined similarly by Frank and Goyal (2003) and was empirically proven by Korajczyk and Levy (2003) but only in the case of unconstrained firms. This means that the market timing theory holds true for firms which are not financially limited (or at least have some degree of expenditure freedom).

Myers (1984) further tests different hypotheses and reaches a conclusion which seems controversial to common financial thought. After examining the Static Trade-off Hypothesis (which suggests the optimal debt ratio is a result of a trade off between the costs and benefits of debt capital, *ceteris paribus*), Myers finds this to be inconclusive. Whilst the Static Trade-off Hypothesis is well accepted, he discredits the theory as the R^2 is too low and thus implies no significant relationship. He later goes on to disprove the pecking order hypothesis with Lakshmi Shyam-Sunder (1999). Myers seems to be a strong initiate of the school of financial thought which constantly searches for an optimal capital structure.

Titman and Wessels (1988) believe that most capital structure theories find that the choice for debt and equity is dependent rather on the type of assets held by the firm. However, using an alternative to the pecking order theory as a basis, they conclude that past performance is a strong determinant of capital structure choice. Under this theory, retained earnings is the most preferable place from which to source funding. This relies heavily on a firm's past performance and it is not unreasonable to link this to age. Gwatidzo and Ojah (2009) empirically find that the age of the firm is negatively related to leverage (as is profitability). This supports the pecking order theory and contradicts Titman and Wessels. Gwatidzo and Ojah (2009) do find though, that leverage is positively related to asset tangibility and size of the firm, and thus provide significant evidence that firm-specific factors are consistent indicators of a firm's choice of capital structure.

2.2.6 – Modigliani and Miller Proposition I and II

The original Modigliani and Miller (1958) theory of capital structure irrelevance presented the idea that the value of the firm is independent of its choice for debt and equity. The simple 'Proposition I' is referred to as the "pie model" because no matter how the firm chooses its

finances, the value of the company will be the same. This is illustrated on the next page in Figure 1.2:

Figure 1.2

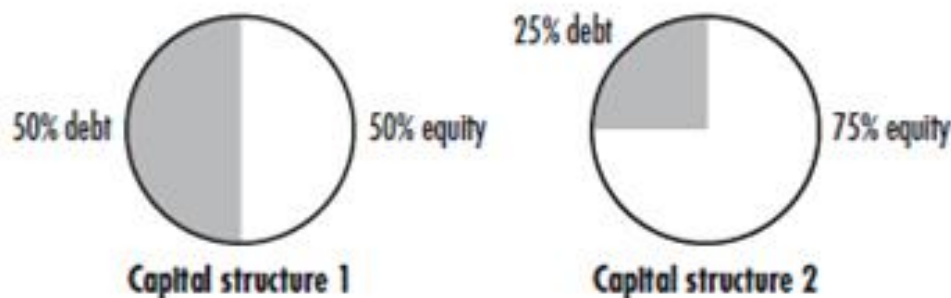


FIGURE 7.2 *Two Pie Models of the Firm*

Courtesy of: http://www.expertsmind.com/CMSImages/798_two%20pie%20model.png

This famous and groundbreaking theory further goes on to introduce Proposition II. This implies that in a world with taxes the value of a levered firm is greater than that of a similar firm that is unlevered by an amount equal to the corporate tax rate. This is exhibited through the Weighted Average Cost of Capital (WACC). WACC allows us to calculate a firm's cost of capital by weighing the cost of equity and the after tax cost of debt as follows:

$$WACC = (E/V * R_E) + (D/V * R_D * (1 - T_C)) \quad (1.3)$$

Where:

- E = Equity
- D = Debt
- V = Firm Value
- R_E = Cost of Equity
- $R_D * (1 - T_C)$ = After Tax Cost of Debt

This assumes that increasing debt implies a lower total cost of capital, and thus lower risk. As Rapp and Davidson (1995) point out however, the more debt a firm adds to its capital

structure and “the simultaneous cancelling out of decreased equity claims by increased debt claims”, so too does the risk of default increase substantially. The implication is that this increased risk (of potential bankruptcy) at least matches the relative return necessary to compensate that risk at some point, and in some cases may outweigh that return. This supports the findings of Campello, Giambona, Graham and Harvey (2010) and the literature provided by Firer, et al (2009).

Myers (1984) makes the statement about this theory, that “MMI made interest tax shields so valuable that we could not explain why all firms were not awash in debt” and that this had immense implications. To explain further, the benefits of interest tax shields provide a theory that disregards the value of financing operations through the use of equity. Myers thus suggests that if we follow this stream of thought, then firm value can be maximised when the highest level of debt capital is used. This is sensible in a perfect real estate world without default risk, vacancy risk, legal risk and commitments to shareholders and employees but is far too impractical for the complex nature of current financial markets. Nevertheless Franco Modigliani and Merton Miller have contributed tremendous amounts to the finance world through these theories (amongst many others).

Leland and Toft (1996) further find that capital structure is relevant, but rather than the type of debt, the maturity period of long term debt deserves particular attention. This is important because in the short term, firms cannot exploit the tax benefits of debt capital as well as they would in the long term. Leland and Toft further highlight the importance of taking into account Macaulay (1938) duration and extended measures in calculating the effects of debt.

Scott (1976) uniquely found that there is indeed an optimal capital structure that maximises firm value. His results conclude that the optimal level of debt within a firm is a function of the tax rate, the liquidation value of assets, the size of the firm and the expected future earnings. The reason this challenges the conventional Modigliani-Miller model is the assumptions under which Scott tested his model. Reasonably, Scott (1976) assumes that bankruptcy is possible and secondary markets for assets are imperfect. Whilst it is complex to test bankruptcy and optimal capital structure within a multi-period framework, Scott finds value in using comparative statics analysis and yields his results using this method. This piece further analyses the possibility of reorganisation as an alternative to bankruptcy, and accommodates testing firms that are highly regulated.

Shyam-Sunder and Myers (1999) make the point that “The theory of capital structure has been dominated by the search for optimal capital structure”, and this is true to a large extent. Yet Scott (1976) presents an idea which indeed holds validity, so the focus on optimal capital structure is not all for naught.

One major consideration is the level of debt at which the interest payments begin to have a negative effect on firm profit. Under the assumption that debt is the best form of capital, Muhanji and Ojah (2011) find that there needs to be a threshold level at which the firm needs to stop borrowing. This is in essence, the point at which the firm will have reached its optimal capital structure. Using ratio indicators, their findings of the threshold level of debt are approximately as follows:

External Debt / GDP – 80%

External Debt / Exports – 60%

Short Term Debt / Reserves – 80%

These figures were presented by Muhanji and Ojah (2011) in the context of Emerging Markets in Africa. The results are more prudent than previous suggestions by monetary authorities, but seem to be more reasonable levels of debt from both a country perspective, and a firm perspective.

To fully appreciate the effects of capital structure on profit or firm value, Baek (2011) deduces that the phase of the business cycle is the most important consideration. His results showed that during healthy macroeconomic conditions, the levered firm records higher profit and conversely, records lower profit during times of crisis. Dasgupta and Sengupta (2002) create a unique model further showing the positive correlation between leverage and firm profit through dynamic interaction.

2.3 – Firm Profitability

Firer, Ross, Westerfield and Jordan (2009) suggest that increasing firm value is essentially the same thing as increasing shareholder value and, as such, both quantitative measures are appropriate when determining effects of changing debt. A different approach can be found in the Liquidity Preference Theory; the theory that investors prefer liquid funds in the short

term. Brown and Reilly (2005) state that this preference for liquidity is an alternative reason for the term structure of interest rates. This implies a two-way relationship and is perhaps the reason for the difficult trade off between liquidity and sustainable growth. In other words liquidity affects interest rates under Brown and Reilly's finding, and interest rates affect available liquidity. Interest rates have a direct effect on companies who are highly levered.

Bernstein (1978) suggests that the firm valuation process should not exclude debt securities which can fluctuate in value due to interest rate changes or changes in credit standing.

To describe the link between internal liquidity and firm value further, Crockett (2008) states that a major break in the different views of financial thinking are made simpler by the "dynamic interaction between liquidity and solvency through the valuation process of securitised assets." Liquidity is found to be a function of the firm's asset value.

As previously mentioned cash is the particular firm valuation focus of this report; given that the strength of a firm's cash flow is the best source of bargaining power when raising debt capital. The CFA Institute (2011) regards the use of internal liquidity (amongst others) as a means for negotiating debt contracts and relieving pressure from high interest costs. This is a particularly important reason for holding cash and maintaining strong cash flow within a firm.

The relationship between cash (or liquidity), capital structure and firm profitability (firm valuation) should be somewhat clearer given the above literature. From a management view, these considerations must be taken into account as interlinked whilst making strategic decisions for a firm's potential growth and sustainability. Perhaps the most important link between liquidity and profitability is from an investment perspective. Deciding whether to hold cash or to invest liquid funds into future growth is an opportunity cost consideration which directly affects firm value in the medium to long-term.

3 - DATA AND METHODOLOGY

This study examines the performance of the top 10 listed property firms on the Johannesburg Securities Exchange (JSE). This is sorted by market capitalisation. The JSE is a value-weighted index consisting of mostly firms operating in South Africa, but not exclusively. Data has been collected from McGregor BFA and consists of monthly returns for 10 years under both normal market conditions and adverse market conditions (including the global credit crisis of 2008). The recessionary period under study is October 2007 – until December 2008 as this is the period in which the JSE All-Share Index began to experience recession and subsequently experienced the beginning of recovery. The data selection covers the 10 year period between 2002 and 2012. This is an important consideration, as it will allow us to examine the behaviour of the firms listed below when liquidity is both abundant and scarce. Note: Data is subject to availability of the most recent financial statements at the time of study. Vukile Ltd and Emira Ltd listed in 2004 and 2003 respectively.

The companies being examined, along with their respective weights within the listed property industry, are seen in Table 1.1:

Table 1.1

	Market Cap	Weights within industry
ACU	8 535 100 470.00	4.134%
CPL	17 114 403 871.00	8.289%
EMI	7 384 903 262.00	3.577%
FPT	10 057 439 320.00	4.871%
GRT	45 639 523 893.00	22.105%
HYP	17 825 057 551.00	8.634%
RDF	27 082 798 953.00	13.118%
RES	14 570 090 129.00	7.057%
SAC	8 058 197 322.00	3.903%
VKE	7 706 999 115.00	3.733%
	206 462 795 803.00	0.79

The data which will be used to describe the internal liquidity of the firm will be the Quick ratio. This is in essence the same as using the current ratio, as property firms do not have inventory. The capital structure will simply be the Debt to Equity ratio, and the firm performance will be indicated by the share price – This is appropriate according to Firer, Ross, Westerfield and Jordan (2009). Regression analysis will be conducted on these factors to measure their relationship. This can be expressed as:

$$R_t = f(\text{Internal Liquidity}_{t-1}, \text{Net Debt to Equity}_{t-1}) \quad (1.4)$$

$$R_t = f(\text{Net Debt to Equity}_{t-1}, \text{Market Price}_{t-1}) \quad (1.5)$$

$$R_t = f(\text{Internal Liquidity}_{t-1}, \text{Market Price}_{t-1}) \quad (1.6)$$

The industry average debt level is roughly 35%, but it is difficult to believe that this is the optimal debt ratio given the previous literature on capital structure. Optimal capital structure that contributes to increased returns is therefore expected to be somewhat higher. As a reminder, in order to convert the DE to the level of Debt/Assets, we use the simple equation:

$$\text{DE} / (1 + \text{DE}) \quad (1.7)$$

A regression analysis is an important tool used to understand or express the relationship between two or more variables. In our case only three tests of two variables each are being tested (as described above) a simple regression is sufficient. This is a numerical measure of the degree to which X and Y correspond. Regression can be seen as a best fitting line drawn through an XY plot of the two variables. Thus we can express this linear relationship between X and Y mathematically as:

$$Y = \alpha + \beta x + \varepsilon \quad (1.8)$$

The linear regression model will only be an approximation of the true relationship. How well this approximation fits the true values can be measured using the R^2 statistic. This measures the strength of the relationships between Internal Liquidity, Capital Structure and Firm Profitability. Intuitively the R^2 measures the proportion of the total variance of Y that can be explained by X. That is the extent to which high (low) values of Y are associated to high (low) values of X. Therefore this goodness of fit statistic, R^2 , provides us with a measure to evaluate the relationship between levels of debt, cash and its ultimate effect on the

performance of a property firm over the 10 year period under study. Clearly a higher R^2 will indicate a greater relationship and hopefully have some explanatory power.

Correlation can be used in this case as the study measures simple relationships. Regression also measures relationships between variables but generates results that are at least as accurate as simple correlation and in most cases, more accurate. To clarify, regression gives us similar results to simple correlation but in addition, includes information that cannot be given by running normal correlation tests. The R^2 will determine whether or not there is explanatory power between the variables. By looking at the significance of the estimated coefficients, R^2 can be seen as a measure of fit.

3.1 – Adjustments to the Data

In order for a regression to be reliable, a minimum of 32 observable points is needed. Using ratios presents us with a situation in which we can only attain the necessary figures from annual reports. A regression analysis needs one set of numbers to have a corresponding number at each period under consideration. This means the annual debt/equity ratios and quick ratios will need to be used to estimate monthly DE/Quick ratios. This assumption is however, reasonable. Property is only valued either semi-annually or annually which is in line with the nature of this type of asset.

Real Estate firms assume linear growth in their portfolios month on month when there are sales or acquisitions during the financial year. This is done because it is a difficult and lengthy process to value a property portfolio and is unreasonable to do on a constant basis.

To focus on one ratio being used: The Debt/Equity ratio from one year can be significantly different to the following year's Debt/Equity ratio if there are changes in the size of the portfolio. In line with the assumption of linear growth, these acquisitions and sales will be accounted for when adjusting to monthly ratios but will rather represent a 'smoothed' average between two financial year ends. The regression will account for these incremental changes whether they are higher (share price) or lower (debt-to-equity ratios).

In order to estimate monthly ratios of debt-to-equity, this model will use a simple arithmetic average between two annual points. That is to say, that growth will be averaged over the 12

months and cumulatively included in the most recent DE ratio until it corresponds to the following year's DE ratio. This can simply be expressed as:

$$\sum_{t=1}^{12} (DebtEquity(t) - DebtEquity(t - 1)) / 12 \quad (1.9)$$

The incremental differences will be taken into account to adjust the DE ratio for monthly changes. This is consistent with the share price data available monthly. The Quick ratio will be adjusted in a similar fashion to account for the internal liquidity of the firm. Similarly, this is estimated as:

$$\sum_{t=1}^{12} (QuickRatio(t) - QuickRatio(t - 1)) / 12 \quad (1.10)$$

Furthermore, the regressions will be run on the changes in the price level, the changes in the Debt-Equity ratios and the changes in the Quick ratios. This, as opposed to regressing the variables at their levels. They will yield the same results but using the changes will eliminate the need to test for stationarity within the data set.

3.2 - Assumptions

This research assumes a 95% confidence level which is reasonable for the regressions being run. It is also assumed that the markets in South Africa are efficient. The efficient markets assumption allows us to use financial theory from more developed countries in order to reach conclusions about relationships being examined. As stated above, we further assume linear growth month on month.

4 - RESULTS

Table 1.2

<i>*Explanatory Variable: Debt-to-Equity Ratio (Capital Structure)</i>				
<i>*Dependent Variable: Share Price (Firm Performance/Perception of Firm Performance)</i>				
Firm	Period under study	Year End	No. of Observations	R-Squared
<i>Acucap</i>	2003-2012	March	108	0.0296
<i>Capital Property</i>	2003-2011	December	96	0.0121
<i>Emira</i>	2004-2012	June	96	0.0018
<i>Fountainhead</i>	2003-2011	September	96	0.0001
<i>Growthpoint</i>	2003-2012	June	108	0.0125
<i>Hyprop</i>	2003-2011	December	96	0.0359
<i>Redefine</i>	2003-2012	August	108	0.0101
<i>Resilient</i>	2003-2011	December	96	0.0158
<i>SA Corporation</i>	2003-2011	December	96	0.0276
<i>Vukile</i>	2005-2012	March	84	0.0001

Table 1.2 shows the first set of results. This tested the impact of a firm's ratio of debt to equity against the performance of the firm in question and has yielded interesting results. As can be seen from the R^2 column, there is virtually no relationship between the variables and shows a lack of explanatory power. In pure support of Modigliani and Miller's (1958) theory of capital structure irrelevance, the share price is completely unaffected by the debt-equity structure chosen by the firm. Listed real estate companies tend to utilise equity financing

quite often for acquisitions, perhaps to maintain a certain target D/E ratio. This may explain that the change in capital structure on the share price has such a low R^2 . Nevertheless, the broadest definition of M&M seemingly holds true for one of two reasons:

- The tax benefits of debt financing are set off by the desire to use equity financing as there is an increased risk of debt sustainability (in support of the pecking order theory);
- Or the Modigliani and Miller (1958) theory is so popular in the academic world and at tertiary level that it is in fact a self fulfilling prophecy.

Table 1.3

<i>*Explanatory Variable: Quick Ratio (Internal Liquidity)</i>				
<i>*Dependent Variable: Share Price (Firm Performance/Perception of Firm Performance)</i>				
Firm	Period under study	Year End	No. of Observations	R-Squared
<i>Acucap</i>	2003-2012	March	108	0.0069
<i>Capital Property</i>	2003-2011	December	96	0.0114
<i>Emira</i>	2004-2012	June	96	0.0179
<i>Fountainhead</i>	2003-2011	September	96	0.0002
<i>Growthpoint</i>	2003-2012	June	108	0.0028
<i>Hyprop</i>	2003-2011	December	96	0.0027
<i>Redefine</i>	2003-2012	August	108	0.0002
<i>Resilient</i>	2003-2011	December	96	0.0016
<i>SA Corporation</i>	2003-2011	December	96	0.0820
<i>Vukile</i>	2005-2012	March	84	0.0007

Similar to the previous test, Table 1.3 shows us very low R^2 values. This indicates that the market value of listed property firms is independent of the level of cash, *ceteris paribus*. To be stated more simply, excess cash is seen neither as a good thing nor a bad thing and allows firms to choose their cash policy without having strong effects on the firm in the short-term.

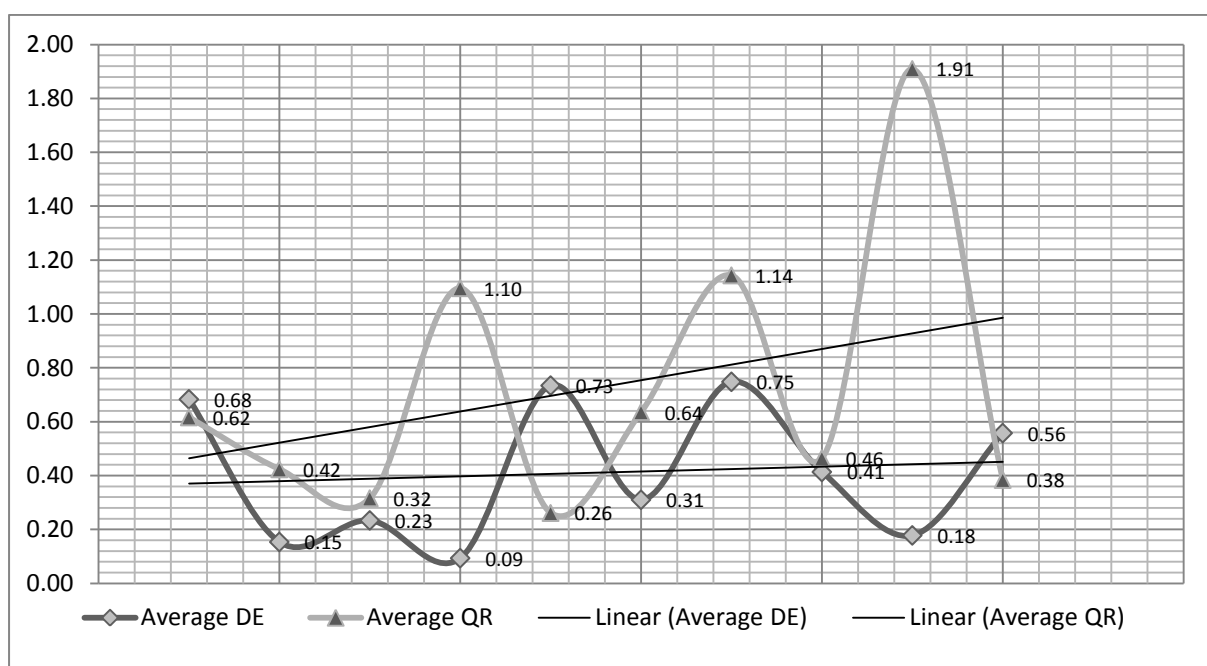
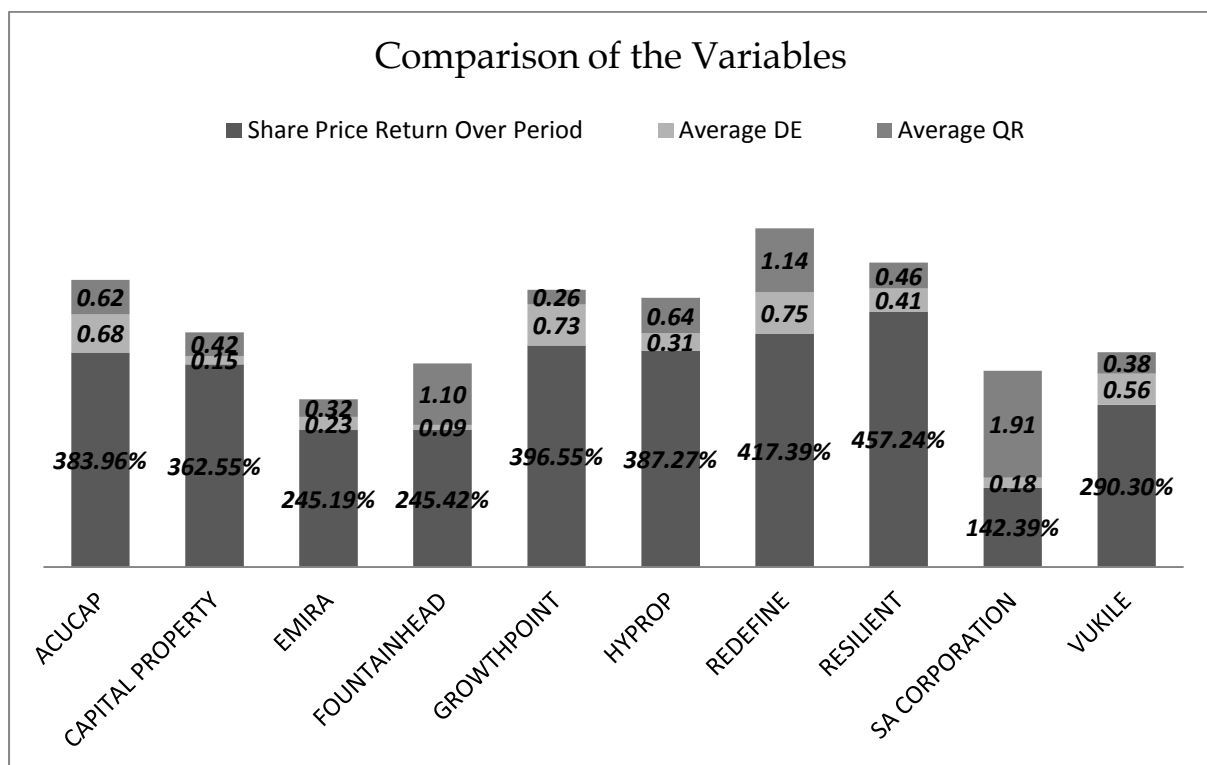
Table 1.4

<i>*Explanatory Variable: Quick Ratio (Internal Liquidity)</i>				
<i>*Dependent Variable: Debt-to-Equity Ratio (Capital Structure)</i>				
Firm	Period under study	Year End	No. of Observations	R-Squared
<i>Acucap</i>	2003-2012	March	108	0.0836
<i>Capital Property</i>	2003-2011	December	96	0.0093
<i>Emira</i>	2004-2012	June	96	0.0005
<i>Fountainhead</i>	2003-2011	September	96	0.8998
<i>Growthpoint</i>	2003-2012	June	108	0.0308
<i>Hyprop</i>	2003-2011	December	96	0.0975
<i>Redefine</i>	2003-2012	August	108	0.0032
<i>Resilient</i>	2003-2011	December	96	0.4827
<i>SA Corporation</i>	2003-2011	December	96	0.4575
<i>Vukile</i>	2005-2012	March	84	0.1949

Testing the quick ratio's effect on the capital structure of the firm shows quite a few positive relationships as seen in Table 1.4. There are, however three firms that show a strong positive relationship. Resilient and SA Corporation have R^2 figures of 0.4827 and 0.4575 respectively. These show that nearly 50% of the time, when they have excess cash, they will use it to increase the level of debt or decrease the amount of equity (which is unlikely). This shows a weak relationship but a relationship nonetheless.

Fountainhead Property yields very interesting results. With such a high R^2 statistic (0.8998), it is clear to see their policy of holding cash. It appears that over the last decade, any internal liquidity is almost immediately used to increase the debt equity ratio.

Overall, the tests have produced very few significant relationships but have introduced some interesting patterns and support for some of the most famous academic theorists.



5 - CONCLUSION

Results of this study show that there is little statistical relationship between internal liquidity and profit/market value and, interestingly, capital structure on a firm's value. Internal liquidity and capital structure, however, provides some statistical significance. Barring six cases, R^2 numbers are so low that they in fact strongly support all models and theories that promote capital structure irrelevance. The study shows that the independent variables used have little or no significance in determining changes in the market price of a listed property firm in the short-to-medium term. Perhaps this is because there are a number of reasons as to why a firm will choose its capital structure as well as numerous factors the market will consider when valuing firms of this sort.

Implications of this study are unique in the South African context. Firstly, after adjusting for the cash requirements to pay unitholder, significant amounts of cash is irrelevant and should in fact be used productively. This can be seen in the relationship on DE, where firms are likely to use excess cash on the capital structure. Secondly the industry average debt level of 35% is seemingly very low. This indicates that listed property firms in South Africa are misusing their debt capacity, or 'under-geared' if you will. This is further supported by the numbers. The lack of impact that the DE ratio has (in isolation) implies that more debt capital can be used *ceteris paribus* without affecting the market price of the company. This is surprising, as one would imagine the debt to equity level to be fundamental to the market's view of the company invested primarily in property. The only possible reason the debt average is so low for the industry under study is that firms have a target debt level and this industry level is within a certain band. This strongly supports the stakeholder co-investment theory.

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7 – APPENDIX

7.1 – Regression Statistics

ACUCAP

Price to DE										
SUMMARY OUTPUT										
Regression Statistics										
Multiple R	0.171986035									
R Square	0.029579196									
Adjusted R Square	0.020424283									
Standard Error	0.054372045									
Observations	108									
Price to QR										
SUMMARY OUTPUT										
Regression Statistics										
Multiple R	0.08308865									
R Square	0.006903724									
Adjusted R Square	-0.002465109									
Standard Error	0.055003623									
Observations	108									
DE to QR										
SUMMARY OUTPUT										
Regression Statistics										
Multiple R	0.289172508									
R Square	0.083620739									
Adjusted R Square	0.074975652									
Standard Error	0.089460253									
Observations	108									

		</								

CAPITAL PROPERTY

Price to DE											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.110143612										
R Square	0.012131615										
Adjusted R Square	0.001622377										
Standard Error	0.064211136										
Observations	96										
Price to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.106995957										
R Square	0.011448135										
Adjusted R Square	0.000931626										
Standard Error	0.064233346										
Observations	96										
DE to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.096295287										
R Square	0.009272782										
Adjusted R Square	-0.001266869										
Standard Error	0.055036306										
Observations	96										

EMIRA

Price to DE											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.042101552										
R Square	0.001772541										
Adjusted R Square	-0.0088469										
Standard Error	0.059154219										
Observations	96										
Price to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.133667985										
R Square	0.01786713										
Adjusted R Square	0.007418908										
Standard Error	0.058675404										
Observations	96										
DE to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.021389485										
R Square	0.00045751										
Adjusted R Square	-0.010175921										
Standard Error	0.013392588										
Observations	96										

FOUNTAINHEAD

Price to DE											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.007529191										
R Square	5.66887E-05										
Adjusted R Square	-0.010581006										
Standard Error	0.062632109										
Observations	96										
Price to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.01390965										
R Square	0.000193478										
Adjusted R Square	-0.010442761										
Standard Error	0.062627825										
Observations	96										
DE to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.948577114										
R Square	0.899798541										
Adjusted R Square	0.898732568										
Standard Error	0.013353466										
Observations	96										

GROWTHPOINT

Price to DE											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.111623										
R Square	0.01246										
Adjusted R Square	0.003143										
Standard Error	0.06018										
Observations	108										
Price to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.053086										
R Square	0.002818										
Adjusted R Square	-0.00659										
Standard Error	0.060473										
Observations	108										
DE to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.175489										
R Square	0.030796										
Adjusted R Square	0.021653										
Standard Error	0.022913										
Observations	108										

HYPROP

Price to DE											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.189561										
R Square	0.035933										
Adjusted R Square	0.025677										
Standard Error	0.060927										
Observations	96										
Price to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.051674										
R Square	0.00267										
Adjusted R Square	-0.00794										
Standard Error	0.061969										
Observations	96										
DE to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.312221										
R Square	0.097482										
Adjusted R Square	0.087881										
Standard Error	0.041522										
Observations	96										

REDEFINE

Price to DE											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.100424										
R Square	0.010085		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Adjusted R Square	0.000746	Intercept	0.013691493	0.006367787	2.150118	0.033819	0.001066736	0.02631625	0.001066736	0.02631625	
Standard Error	0.064131	X Variable	-0.212298106	0.204293637	-1.03918	0.301085	-0.617330099	0.192733887	-0.617330099	0.192733887	
Observations	108										
Price to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.01371										
R Square	0.000188		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Adjusted R Square	-0.00924	Intercept	0.015167647	0.006299793	2.407642	0.017783	0.002677696	0.027657598	0.002677696	0.027657598	
Standard Error	0.064451	X Variable	-0.015168711	0.107456503	-0.14116	0.88801	-0.228211673	0.19787425	-0.228211673	0.19787425	
Observations	108										
DE to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.057007										
R Square	0.00325		<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>	
Adjusted R Square	-0.00615	Intercept	-0.007381939	0.002975441	-2.48096	0.014675	-0.013281041	-0.001482837	-0.013281041	-0.001482837	
Standard Error	0.03044	X Variable	0.029836544	0.050752549	0.587883	0.557861	-0.070785319	0.130458407	-0.070785319	0.130458407	
Observations	108										

RESILIENT

Price to DE											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.125543										
R Square	0.015761										
Adjusted R Square	0.00529										
Standard Error	0.056855										
Observations	96										
Price to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.039842										
R Square	0.001587										
Adjusted R Square	-0.00903										
Standard Error	0.057263										
Observations	96										
DE to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.694742										
R Square	0.482667										
Adjusted R Square	0.477164										
Standard Error	0.038002										
Observations	96										

SA CORPORATION

Price to DE											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.166113										
R Square	0.027594										
Adjusted R Square	0.017249										
Standard Error	0.063087										
Observations	96										
Price to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.286426										
R Square	0.08204										
Adjusted R Square	0.072274										
Standard Error	0.061295										
Observations	96										
DE to QR											
SUMMARY OUTPUT											
<i>Regression Statistics</i>											
Multiple R	0.676406										
R Square	0.457525										
Adjusted R Square	0.451753										
Standard Error	0.076381										
Observations	96										

VUKILE

Price to DE										
SUMMARY OUTPUT										
Regression Statistics										
Multiple R	0.008462586									
R Square	7.16154E-05		Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Adjusted R Square	-0.012122633	Intercept	0.015054124	0.007812761	1.926864	0.05746	-0.000487946	0.030596194	-0.000487946	0.030596194
Standard Error	0.064396929	X Variable	0.034130208	0.445362208	0.076635	0.939101	-0.85183708	0.920097497	-0.85183708	0.920097497
Observations	84									
Price to QR										
SUMMARY OUTPUT										
Regression Statistics										
Multiple R	0.026087585									
R Square	0.000680562		Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Adjusted R Square	-0.01150626	Intercept	0.014904377	0.007040128	2.117061	0.037285	0.00089932	0.028909435	0.00089932	0.028909435
Standard Error	0.064377318	X Variable	0.025120988	0.106303626	0.236314	0.813779	-0.186350785	0.236592761	-0.186350785	0.236592761
Observations	84									
DE to QR										
SUMMARY OUTPUT										
Regression Statistics										
Multiple R	0.441502372									
R Square	0.194924344		Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Adjusted R Square	0.185106349	Intercept	-0.008140883	0.00156679	-5.1959	1.46E-06	-0.011257728	-0.005024037	-0.011257728	-0.005024037
Standard Error	0.014327263	X Variable	-0.105414424	0.023658021	-4.45576	2.62E-05	-0.152477764	-0.058351084	-0.152477764	-0.058351084
Observations	84									

7.2 – Data

ACUCAP

	LEVELS			CHANGES		
	Price	DE	QR	Price	DE	QR
30-Mar-12	4070	0.5600	0.3200	0.008674	-0.01031	0.018568
29-Feb-12	4035	0.5658	0.3142	0.00875	-0.0102	0.018919
31-Jan-12	4000	0.5717	0.3083	0.052632	-0.0101	0.019284
30-Dec-11	3800	0.5775	0.3025	-0.02314	-0.01	0.019663
30-Nov-11	3890	0.5833	0.2967	0.00413	-0.0099	0.020057
31-Oct-11	3874	0.5892	0.2908	-0.00667	-0.0098	0.020468
30-Sep-11	3900	0.5950	0.2850	0.045576	-0.00971	0.020896
31-Aug-11	3730	0.6008	0.2792	0.031812	-0.00962	0.021341
29-Jul-11	3615	0.6067	0.2733	0.01831	-0.00952	0.021807
30-Jun-11	3550	0.6125	0.2675	0.014286	-0.00943	0.022293
31-May-11	3500	0.6183	0.2617	-0.0411	-0.00935	0.022801
29-Apr-11	3650	0.6242	0.2558	0.061047	-0.00926	0.023333
31-Mar-11	3440	0.6300	0.2500	0.053599	-0.00395	-0.00332
28-Feb-11	3265	0.6325	0.2508	-0.03971	-0.00394	-0.00331
31-Jan-11	3400	0.6350	0.2517	-0.02857	-0.00392	-0.0033
31-Dec-10	3500	0.6375	0.2525	-0.04057	-0.00391	-0.00329
30-Nov-10	3648	0.6400	0.2533	-0.00599	-0.00389	-0.00328
29-Oct-10	3670	0.6425	0.2542	0.020011	-0.00388	-0.00327
30-Sep-10	3598	0.6450	0.2550	0.053587	-0.00386	-0.00326
31-Aug-10	3415	0.6475	0.2558	0.005891	-0.00385	-0.00325
30-Jul-10	3395	0.6500	0.2567	0.051409	-0.00383	-0.00324
30-Jun-10	3229	0.6525	0.2575	-0.02152	-0.00382	-0.00323
31-May-10	3300	0.6550	0.2583	-0.02941	-0.0038	-0.00322
30-Apr-10	3400	0.6575	0.2592	0.031866	-0.00379	-0.00321
31-Mar-10	3295	0.6600	0.2600	0.042392	-0.00876	0.012987
26-Feb-10	3161	0.6658	0.2567	0.036054	-0.00868	0.013158
29-Jan-10	3051	0.6717	0.2533	-0.01581	-0.00861	0.013333
31-Dec-09	3100	0.6775	0.2500	0.068597	-0.00854	0.013514
30-Nov-09	2901	0.6833	0.2467	-0.04099	-0.00846	0.013699
30-Oct-09	3025	0.6892	0.2433	0.008333	-0.00839	0.013889
30-Sep-09	3000	0.6950	0.2400	0	-0.00832	0.014085
31-Aug-09	3000	0.7008	0.2367	0.038062	-0.00825	0.014286
31-Jul-09	2890	0.7067	0.2333	0.092628	-0.00819	0.014493
30-Jun-09	2645	0.7125	0.2300	-0.06372	-0.00812	0.014706

29-May-09	2825	0.7183	0.2267	0	-0.00806	0.014925
30-Apr-09	2825	0.7242	0.2233	0.023551	-0.00799	0.015152
31-Mar-09	2760	0.7300	0.2200	0.041117	-0.0068	0.064516
27-Feb-09	2651	0.7350	0.2067	-0.04948	-0.00676	0.068966
30-Jan-09	2789	0.7400	0.1933	0.014182	-0.00671	0.074074
31-Dec-08	2750	0.7450	0.1800	0.1	-0.00667	0.08
28-Nov-08	2500	0.7500	0.1667	0.05042	-0.00662	0.086957
31-Oct-08	2380	0.7550	0.1533	-0.08391	-0.00658	0.095238
30-Sep-08	2598	0.7600	0.1400	-0.0306	-0.00654	0.105263
29-Aug-08	2680	0.7650	0.1267	0.081954	-0.00649	0.117647
31-Jul-08	2477	0.7700	0.1133	0.162911	-0.00645	0.133333
30-Jun-08	2130	0.7750	0.1000	-0.08387	-0.00641	0.153846
30-May-08	2325	0.7800	0.0867	-0.08824	-0.00637	0.181818
30-Apr-08	2550	0.7850	0.0733	-0.09414	-0.00633	0.222222
31-Mar-08	2815	0.7900	0.0600	-0.02931	0.045204	-0.29412
29-Feb-08	2900	0.7558	0.0850	-0.02324	0.047344	-0.22727
31-Jan-08	2969	0.7217	0.1100	-0.0859	0.049697	-0.18519
31-Dec-07	3248	0.6875	0.1350	0.031111	0.052296	-0.15625
30-Nov-07	3150	0.6533	0.1600	-0.08163	0.055182	-0.13514
31-Oct-07	3430	0.6192	0.1850	0.102894	0.058405	-0.11905
28-Sep-07	3110	0.5850	0.2100	0.036667	0.062027	-0.10638
31-Aug-07	3000	0.5508	0.2350	-0.03163	0.066129	-0.09615
31-Jul-07	3098	0.5167	0.2600	-0.00065	0.070812	-0.08772
29-Jun-07	3100	0.4825	0.2850	-0.08284	0.076208	-0.08065
31-May-07	3380	0.4483	0.3100	0.024242	0.082495	-0.07463
30-Apr-07	3300	0.4142	0.3350	0.045627	0.089912	-0.06944
30-Mar-07	3156	0.3800	0.3600	0.05906	-0.01512	0.038462
28-Feb-07	2980	0.3858	0.3467	0.017065	-0.01489	0.04
31-Jan-07	2930	0.3917	0.3333	0.087199	-0.01468	0.041667
29-Dec-06	2695	0.3975	0.3200	0.013158	-0.01446	0.043478
30-Nov-06	2660	0.4033	0.3067	0.053465	-0.01426	0.045455
31-Oct-06	2525	0.4092	0.2933	0.029772	-0.01406	0.047619
29-Sep-06	2452	0.4150	0.2800	0.021667	-0.01386	0.05
31-Aug-06	2400	0.4208	0.2667	0.090909	-0.01367	0.052632
31-Jul-06	2200	0.4267	0.2533	0	-0.01349	0.055556
30-Jun-06	2200	0.4325	0.2400	-0.19561	-0.01331	0.058824
31-May-06	2735	0.4383	0.2267	-0.03357	-0.01313	0.0625
28-Apr-06	2830	0.4442	0.2133	0.040441	-0.01296	0.066667
31-Mar-06	2720	0.4500	0.2000	0.058366	-0.03226	-0.38462
28-Feb-06	2570	0.4650	0.3250	0.070833	-0.03125	-0.27778
31-Jan-06	2400	0.4800	0.4500	0.043478	-0.0303	-0.21739

30-Dec-05	2300	0.4950	0.5750	0.043084	-0.02941	-0.17857
30-Nov-05	2205	0.5100	0.7000	-0.0413	-0.02857	-0.15152
31-Oct-05	2300	0.5250	0.8250	0	-0.02778	-0.13158
30-Sep-05	2300	0.5400	0.9500	0.045455	-0.02703	-0.11628
31-Aug-05	2200	0.5550	1.0750	0.105528	-0.02632	-0.10417
29-Jul-05	1990	0.5700	1.2000	0.041885	-0.02564	-0.09434
30-Jun-05	1910	0.5850	1.3250	0.026882	-0.025	-0.08621
31-May-05	1860	0.6000	1.4500	0.094118	-0.02439	-0.07937
29-Apr-05	1700	0.6150	1.5750	0.011905	-0.02381	-0.07353
31-Mar-05	1680	0.6300	1.7000	0.012048	-0.02953	-0.00488
28-Feb-05	1660	0.6492	1.7083	0.053299	-0.02868	-0.00485
31-Jan-05	1576	0.6683	1.7167	-0.01807	-0.02788	-0.00483
31-Dec-04	1605	0.6875	1.7250	0.028846	-0.02712	-0.00481
30-Nov-04	1560	0.7067	1.7333	0.114286	-0.02641	-0.00478
29-Oct-04	1400	0.7258	1.7417	0	-0.02573	-0.00476
30-Sep-04	1400	0.7450	1.7500	0.060606	-0.02508	-0.00474
31-Aug-04	1320	0.7642	1.7583	0.023256	-0.02447	-0.00472
30-Jul-04	1290	0.7833	1.7667	0.04878	-0.02388	-0.00469
30-Jun-04	1230	0.8025	1.7750	-0.0428	-0.02333	-0.00467
31-May-04	1285	0.8217	1.7833	-0.00772	-0.02279	-0.00465
30-Apr-04	1295	0.8408	1.7917	0.007782	-0.02229	-0.00463
31-Mar-04	1285	0.8600	1.8000	-0.01154	-0.02642	0.038961
27-Feb-04	1300	0.8833	1.7325	-0.01887	-0.02574	0.040541
30-Jan-04	1325	0.9067	1.6650	-0.05357	-0.02509	0.042254
31-Dec-03	1400	0.9300	1.5975	0.060606	-0.02448	0.044118
28-Nov-03	1320	0.9533	1.5300	0.050955	-0.02389	0.046154
31-Oct-03	1256	0.9767	1.4625	0.121429	-0.02333	0.048387
30-Sep-03	1120	1.0000	1.3950	-0.02183	-0.0228	0.050847
29-Aug-03	1145	1.0233	1.3275	0.013274	-0.02229	0.053571
31-Jul-03	1130	1.0467	1.2600	0.018018	-0.02181	0.056604
30-Jun-03	1110	1.0700	1.1925	0.057143	-0.02134	0.06
30-May-03	1050	1.0933	1.1250	-0.08297	-0.0209	0.06383
30-Apr-03	1145	1.1167	1.0575	0.080189	-0.02047	0.068182
31-Mar-03	1060	1.1400	0.9900			

CAPITAL PROPERTY

LEVELS			CHANGES		
Price	DE	QR	Price	DE	QR
881	0.16	0.08	0.008009	0.010526	0.078652
874	0.158333	0.074167	-0.01798	0.010638	0.085366
890	0.156667	0.068333	0.040936	0.010753	0.093333
855	0.155	0.0625	-0.01156	0.01087	0.102941
865	0.153333	0.056667	0.008159	0.010989	0.114754
858	0.151667	0.050833	0.041262	0.011111	0.12963
824	0.15	0.045	0.004878	0.011236	0.148936
820	0.148333	0.039167	0.001221	0.011364	0.175
819	0.146667	0.033333	0.030189	0.011494	0.212121
795	0.145	0.0275	0.012739	0.011628	0.269231
785	0.143333	0.021667	-0.03086	0.011765	0.368421
810	0.141667	0.015833	-0.0134	0.011905	0.583333
821	0.14	0.01	0.073203	-0.04545	-0.6129
765	0.146667	0.025833	-0.0716	-0.04348	-0.38
824	0.153333	0.041667	-0.00723	-0.04167	-0.27536
830	0.16	0.0575	0.053299	-0.04	-0.21591
788	0.166667	0.073333	-0.015	-0.03846	-0.17757
800	0.173333	0.089167	0.09589	-0.03704	-0.15079
730	0.18	0.105	0.042857	-0.03571	-0.13103
700	0.186667	0.120833	-0.02778	-0.03448	-0.11585
720	0.193333	0.136667	0	-0.03333	-0.10383
720	0.2	0.1525	0.035971	-0.03226	-0.09406
695	0.206667	0.168333	-0.00997	-0.03125	-0.08597
702	0.213333	0.184167	-0.01127	-0.0303	-0.07917
710	0.22	0.2	0.036496	0.011494	-0.03226
685	0.2175	0.206667	0.007353	0.011628	-0.03125
680	0.215	0.213333	0.016442	0.011765	-0.0303
669	0.2125	0.22	0.053543	0.011905	-0.02941
635	0.21	0.226667	-0.00781	0.012048	-0.02857
640	0.2075	0.233333	0.079258	0.012195	-0.02778
593	0.205	0.24	-0.01821	0.012346	-0.02703
604	0.2025	0.246667	-0.00984	0.0125	-0.02632
610	0.2	0.253333	0.06087	0.012658	-0.02564
575	0.1975	0.26	0.008772	0.012821	-0.025
570	0.195	0.266667	-0.01213	0.012987	-0.02439
577	0.1925	0.273333	-0.03025	0.013158	-0.02381
595	0.19	0.28	0.122642	0.050691	0.005988
530	0.180833	0.278333	0.111111	0.053398	0.006024
477	0.171667	0.276667	-0.08269	0.05641	0.006061
520	0.1625	0.275	-0.03704	0.059783	0.006098

540	0.153333	0.273333	0.009346	0.063584	0.006135
535	0.144167	0.271667	0.244186	0.067901	0.006173
430	0.135	0.27	-0.07527	0.072848	0.006211
465	0.125833	0.268333	-0.08824	0.078571	0.00625
510	0.116667	0.266667	-0.02857	0.085271	0.006289
525	0.1075	0.265	-0.08696	0.09322	0.006329
575	0.098333	0.263333	0.055046	0.102804	0.006369
545	0.089167	0.261667	-0.09768	0.114583	0.00641
604	0.08	0.26	0.015126	-0.0495	-0.09302
595	0.084167	0.286667	-0.048	-0.04717	-0.08511
625	0.088333	0.313333	0.02459	-0.04505	-0.07843
610	0.0925	0.34	0.070175	-0.0431	-0.07273
570	0.096667	0.366667	0.027027	-0.04132	-0.0678
555	0.100833	0.393333	-0.0431	-0.03968	-0.06349
580	0.105	0.42	0.001727	-0.03817	-0.0597
579	0.109167	0.446667	-0.035	-0.03676	-0.05634
600	0.113333	0.473333	0.121495	-0.03546	-0.05333
535	0.1175	0.5	0	-0.03425	-0.05063
535	0.121667	0.526667	0.009434	-0.03311	-0.04819
530	0.125833	0.553333	0.106472	-0.03205	-0.04598
479	0.13	0.58	0.025696	0.04698	-0.01556
467	0.124167	0.589167	-0.03909	0.049296	-0.01532
486	0.118333	0.598333	0.143529	0.051852	-0.01509
425	0.1125	0.6075	-0.01163	0.054688	-0.01486
430	0.106667	0.616667	0.043689	0.057851	-0.01465
412	0.100833	0.625833	0.004878	0.061404	-0.01444
410	0.095	0.635	-0.18	0.065421	-0.01423
500	0.089167	0.644167	-0.08257	0.07	-0.01403
545	0.083333	0.653333	0.068627	0.075269	-0.01384
510	0.0775	0.6625	0.009901	0.081395	-0.01365
505	0.071667	0.671667	0.052083	0.088608	-0.01346
480	0.065833	0.680833	0.111111	0.097222	-0.01329
432	0.06	0.69	0.152	-0.16279	0.04943
375	0.071667	0.6575	-0.10714	-0.14	0.052
420	0.083333	0.625	0.05	-0.12281	0.054852
400	0.095	0.5925	0.002506	-0.10938	0.058036
399	0.106667	0.56	0.078378	-0.09859	0.061611
370	0.118333	0.5275	-0.01333	-0.08974	0.065657
375	0.13	0.495	0.041667	-0.08235	0.07027
360	0.141667	0.4625	0.107692	-0.07609	0.075581
325	0.153333	0.43	0.015625	-0.07071	0.081761
320	0.165	0.3975	-0.00621	-0.06604	0.089041
322	0.176667	0.365	0.042071	-0.06195	0.097744
309	0.188333	0.3325	-0.08036	-0.05833	0.108333

336	0.2	0.3	0.158621	0	-0.23567
290	0.2	0.3925	0.09434	0	-0.19072
265	0.2	0.485	0.003788	0	-0.16017
264	0.2	0.5775	0.019305	0	-0.13806
259	0.2	0.67	0.057143	0	-0.12131
245	0.2	0.7625	0.020833	0	-0.10819
240	0.2	0.855	0.061947	0	-0.09763
226	0.2	0.9475	-0.01739	0	-0.08894
230	0.2	1.04	0.040724	0	-0.08168
221	0.2	1.1325	-0.01778	0	-0.07551
225	0.2	1.225	-0.00442	0	-0.07021
226	0.2	1.3175	-0.06996	0	-0.0656
243	0.2	1.41			

EMIRA

LEVELS				CHANGES		
	Price	DE	QR	Price	DE	QR
29-Jun-12	1275	0.34	0.1	0.020817	0.027708	-0.04
31-May-12	1249	0.330833	0.104167	-0.0008	0.028497	-0.03846
30-Apr-12	1250	0.321667	0.108333	0.008065	0.029333	-0.03704
30-Mar-12	1240	0.3125	0.1125	-0.00561	0.03022	-0.03571
29-Feb-12	1247	0.303333	0.116667	-0.00637	0.031161	-0.03448
31-Jan-12	1255	0.294167	0.120833	0.054622	0.032164	-0.03333
30-Dec-11	1190	0.285	0.125	0.012766	0.033233	-0.03226
30-Nov-11	1175	0.275833	0.129167	-0.0361	0.034375	-0.03125
31-Oct-11	1219	0.266667	0.133333	0.044559	0.035599	-0.0303
30-Sep-11	1167	0.2575	0.1375	-0.0716	0.036913	-0.02941
31-Aug-11	1257	0.248333	0.141667	-0.05843	0.038328	-0.02857
29-Jul-11	1335	0.239167	0.145833	0.0015	0.039855	-0.02778
30-Jun-11	1333	0.23	0.15	-0.03195	-0.01429	0.028571
31-May-11	1377	0.233333	0.145833	0.043182	-0.01408	0.029412
29-Apr-11	1320	0.236667	0.141667	0.020882	-0.01389	0.030303
31-Mar-11	1293	0.24	0.1375	-0.02045	-0.0137	0.03125
28-Feb-11	1320	0.243333	0.133333	-0.0372	-0.01351	0.032258
31-Jan-11	1371	0.246667	0.129167	-0.00868	-0.01333	0.033333
31-Dec-10	1383	0.25	0.125	-0.01073	-0.01316	0.034483
30-Nov-10	1398	0.253333	0.120833	-0.00498	-0.01299	0.035714
29-Oct-10	1405	0.256667	0.116667	0.076628	-0.01282	0.037037
30-Sep-10	1305	0.26	0.1125	-0.02247	-0.01266	0.038462
31-Aug-10	1335	0.263333	0.108333	-0.01111	-0.0125	0.04
30-Jul-10	1350	0.266667	0.104167	0.085209	-0.01235	0.041667
30-Jun-10	1244	0.27	0.1	0.020509	0.009346	-0.08397

31-May-10	1219	0.2675	0.109167	0.007438	0.009434	-0.07746
30-Apr-10	1210	0.265	0.118333	0.025424	0.009524	-0.0719
31-Mar-10	1180	0.2625	0.1275	0.018119	0.009615	-0.06707
26-Feb-10	1159	0.26	0.136667	-0.01613	0.009709	-0.06286
29-Jan-10	1178	0.2575	0.145833	0.024348	0.009804	-0.05914
31-Dec-09	1150	0.255	0.155	0.013216	0.009901	-0.05584
30-Nov-09	1135	0.2525	0.164167	0.013393	0.01	-0.05288
30-Oct-09	1120	0.25	0.173333	0.020966	0.010101	-0.05023
30-Sep-09	1097	0.2475	0.1825	-0.03603	0.010204	-0.04783
31-Aug-09	1138	0.245	0.191667	0.044037	0.010309	-0.04564
31-Jul-09	1090	0.2425	0.200833	0.073892	0.010417	-0.04365
30-Jun-09	1015	0.24	0.21	0.015	0.010526	-0.13699
29-May-09	1000	0.2375	0.243333	-0.04306	0.010638	-0.12048
30-Apr-09	1045	0.235	0.276667	0.045	0.010753	-0.10753
31-Mar-09	1000	0.2325	0.31	-0.05213	0.01087	-0.09709
27-Feb-09	1055	0.23	0.343333	-0.00472	0.010989	-0.0885
30-Jan-09	1060	0.2275	0.376667	-0.00469	0.011111	-0.0813
31-Dec-08	1065	0.225	0.41	0.039024	0.011236	-0.07519
28-Nov-08	1025	0.2225	0.443333	0.045918	0.011364	-0.06993
31-Oct-08	980	0.22	0.476667	-0.01508	0.011494	-0.06536
30-Sep-08	995	0.2175	0.51	-0.06132	0.011628	-0.06135
29-Aug-08	1060	0.215	0.543333	0.115789	0.011765	-0.0578
31-Jul-08	950	0.2125	0.576667	0.159951	0.011905	-0.05464
30-Jun-08	819	0.21	0.61	-0.07037	0	-0.05548
30-May-08	881	0.21	0.645833	-0.06277	0	-0.05257
30-Apr-08	940	0.21	0.681667	-0.04569	0	-0.04994
31-Mar-08	985	0.21	0.7175	-0.1086	0	-0.04757
29-Feb-08	1105	0.21	0.753333	0.052381	0	-0.04541
31-Jan-08	1050	0.21	0.789167	-0.12718	0	-0.04343
31-Dec-07	1203	0.21	0.825	0.019492	0	-0.04163
30-Nov-07	1180	0.21	0.860833	-0.07378	0	-0.03996
31-Oct-07	1274	0.21	0.896667	0.049423	0	-0.03843
28-Sep-07	1214	0.21	0.9325	0.060262	0	-0.03701
31-Aug-07	1145	0.21	0.968333	0.026906	0	-0.03568
31-Jul-07	1115	0.21	1.004167	0.022936	0	-0.03446
29-Jun-07	1090	0.21	1.04	-0.00909	0.008	0.083333
31-May-07	1100	0.208333	0.96	-0.07563	0.008065	0.090909
30-Apr-07	1190	0.206667	0.88	0.09375	0.00813	0.1
30-Mar-07	1088	0.205	0.8	-0.01091	0.008197	0.111111
28-Feb-07	1100	0.203333	0.72	0.028037	0.008264	0.125
31-Jan-07	1070	0.201667	0.64	0.075377	0.008333	0.142857
29-Dec-06	995	0.2	0.56	0.020513	0.008403	0.166667
30-Nov-06	975	0.198333	0.48	-0.025	0.008475	0.2
31-Oct-06	1000	0.196667	0.4	0.086957	0.008547	0.25

29-Sep-06	920	0.195	0.32	-0.09804	0.008621	0.333333
31-Aug-06	1020	0.193333	0.24	0.188811	0.008696	0.5
31-Jul-06	858	0.191667	0.16	0.009412	0.008772	1
30-Jun-06	850	0.19	0.08	-0.20561	-0.00437	-0.17241
31-May-06	1070	0.190833	0.096667	-0.0065	-0.00435	-0.14706
28-Apr-06	1077	0.191667	0.113333	-0.0037	-0.00433	-0.12821
31-Mar-06	1081	0.1925	0.13	0.049515	-0.00431	-0.11364
28-Feb-06	1030	0.193333	0.146667	0.045685	-0.00429	-0.10204
31-Jan-06	985	0.194167	0.163333	0.094444	-0.00427	-0.09259
30-Dec-05	900	0.195	0.18	0.077844	-0.00426	-0.08475
30-Nov-05	835	0.195833	0.196667	0	-0.00424	-0.07813
31-Oct-05	835	0.196667	0.213333	0.030864	-0.00422	-0.07246
30-Sep-05	810	0.1975	0.23	-0.01818	-0.0042	-0.06757
31-Aug-05	825	0.198333	0.246667	0.1	-0.00418	-0.06329
29-Jul-05	750	0.199167	0.263333	0.041667	-0.00417	-0.05952
30-Jun-05	720	0.2	0.28	0.011236	-0.00415	0.002985
31-May-05	712	0.200833	0.279167	0.031884	-0.00413	0.002994
29-Apr-05	690	0.201667	0.278333	0.029851	-0.00412	0.003003
31-Mar-05	670	0.2025	0.2775	-0.03597	-0.0041	0.003012
28-Feb-05	695	0.203333	0.276667	0.045113	-0.00408	0.003021
31-Jan-05	665	0.204167	0.275833	0.015267	-0.00407	0.00303
31-Dec-04	655	0.205	0.275	0.091667	-0.00405	0.00304
30-Nov-04	600	0.205833	0.274167	0.142857	-0.00403	0.003049
29-Oct-04	525	0.206667	0.273333	0.019417	-0.00402	0.003058
30-Sep-04	515	0.2075	0.2725	-0.03738	-0.004	0.003067
31-Aug-04	535	0.208333	0.271667	0.013258	-0.00398	0.003077
30-Jul-04	528	0.209167	0.270833	0.015385	-0.00397	0.003086
30-Jun-04	520	0.21	0.27			

FOUNTAINHEAD

LEVELS				CHANGES		
	Price	DE	QR	Price	DE	QR
30-Sep-11	670	0.05	0.4	-0.00741	-0.17808	-0.11275
31-Aug-11	675	0.060833	0.450833	0.046512	-0.15116	-0.10133
29-Jul-11	645	0.071667	0.501667	0.001553	-0.13131	-0.09201
30-Jun-11	644	0.0825	0.5525	0.020602	-0.11607	-0.08425
31-May-11	631	0.093333	0.603333	-0.04394	-0.104	-0.07771
29-Apr-11	660	0.104167	0.654167	0.067961	-0.0942	-0.0721
31-Mar-11	618	0.115	0.705	-0.03438	-0.08609	-0.06725
28-Feb-11	640	0.125833	0.755833	-0.0184	-0.07927	-0.06302
31-Jan-11	652	0.136667	0.806667	-0.06857	-0.07345	-0.05928
31-Dec-10	700	0.1475	0.8575	0.041667	-0.06842	-0.05596

30-Nov-10	672	0.158333	0.908333	-0.01754	-0.06404	-0.053
29-Oct-10	684	0.169167	0.959167	-0.01156	-0.06019	-0.05033
30-Sep-10	692	0.18	1.01	0.020649	0.018868	0
31-Aug-10	678	0.176667	1.01	0.01194	0.019231	0
30-Jul-10	670	0.173333	1.01	0.075441	0.019608	0
30-Jun-10	623	0.17	1.01	-0.02504	0.02	0
31-May-10	639	0.166667	1.01	-0.03474	0.020408	0
30-Apr-10	662	0.163333	1.01	-0.02647	0.020833	0
31-Mar-10	680	0.16	1.01	0.033435	0.021277	0
26-Feb-10	658	0.156667	1.01	0.06129	0.021739	0
29-Jan-10	620	0.153333	1.01	-0.01587	0.022222	0
31-Dec-09	630	0.15	1.01	0.02439	0.022727	0
30-Nov-09	615	0.146667	1.01	-0.0315	0.023256	0
30-Oct-09	635	0.143333	1.01	0.019262	0.02381	0
30-Sep-09	623	0.14	1.01	0.013008	0.018182	0
31-Aug-09	615	0.1375	1.01	0.0477	0.018519	0
31-Jul-09	587	0.135	1.01	0.065336	0.018868	0
30-Jun-09	551	0.1325	1.01	0.001818	0.019231	0
29-May-09	550	0.13	1.01	-0.05983	0.019608	0
30-Apr-09	585	0.1275	1.01	0.035398	0.02	0
31-Mar-09	565	0.125	1.01	0.029144	0.020408	0
27-Feb-09	549	0.1225	1.01	-0.03345	0.020833	0
30-Jan-09	568	0.12	1.01	-0.00525	0.021277	0
31-Dec-08	571	0.1175	1.01	0.028829	0.021739	0
28-Nov-08	555	0.115	1.01	0.07767	0.022222	0
31-Oct-08	515	0.1125	1.01	-0.08036	0.022727	0
30-Sep-08	560	0.11	1.01	-0.05882	0.023256	-0.00165
29-Aug-08	595	0.1075	1.011667	0.11215	0.02381	-0.00164
31-Jul-08	535	0.105	1.013333	0.173246	0.02439	-0.00164
30-Jun-08	456	0.1025	1.015	-0.07692	0.025	-0.00164
30-May-08	494	0.1	1.016667	-0.121	0.025641	-0.00164
30-Apr-08	562	0.0975	1.018333	-0.07107	0.026316	-0.00163
31-Mar-08	605	0.095	1.02	0.025424	0.027027	-0.00163
29-Feb-08	590	0.0925	1.021667	0.017241	0.027778	-0.00163
31-Jan-08	580	0.09	1.023333	-0.14074	0.028571	-0.00163
31-Dec-07	675	0.0875	1.025	0	0.029412	-0.00162
30-Nov-07	675	0.085	1.026667	-0.07153	0.030303	-0.00162
31-Oct-07	727	0.0825	1.028333	0.077037	0.03125	-0.00162
28-Sep-07	675	0.08	1.03	0.054688	0.021277	0.00081
31-Aug-07	640	0.078333	1.029167	-0.01538	0.021739	0.00081
31-Jul-07	650	0.076667	1.028333	0	0.022222	0.000811
29-Jun-07	650	0.075	1.0275	-0.06205	0.022727	0.000812
31-May-07	693	0.073333	1.026667	-0.076	0.023256	0.000812
30-Apr-07	750	0.071667	1.025833	0.094891	0.02381	0.000813

30-Mar-07	685	0.07	1.025	0.070313	0.02439	0.000814
28-Feb-07	640	0.068333	1.024167	-0.02439	0.025	0.000814
31-Jan-07	656	0.066667	1.023333	0.07541	0.025641	0.000815
29-Dec-06	610	0.065	1.0225	0.033898	0.026316	0.000816
30-Nov-06	590	0.063333	1.021667	0.017241	0.027027	0.000816
31-Oct-06	580	0.061667	1.020833	0.124031	0.027778	0.000817
29-Sep-06	516	0.06	1.02	-0.02825	0	-0.00488
31-Aug-06	531	0.06	1.025	0.117895	0	-0.00485
31-Jul-06	475	0.06	1.03	-0.01042	0	-0.00483
30-Jun-06	480	0.06	1.035	-0.15493	0	-0.00481
31-May-06	568	0.06	1.04	-0.11938	0	-0.00478
28-Apr-06	645	0.06	1.045	-0.04444	0	-0.00476
31-Mar-06	675	0.06	1.05	0.097561	0	-0.00474
28-Feb-06	615	0.06	1.055	0.042373	0	-0.00472
31-Jan-06	590	0.06	1.06	0.078611	0	-0.00469
30-Dec-05	547	0.06	1.065	0.094	0	-0.00467
30-Nov-05	500	0.06	1.07	0.002004	0	-0.00465
31-Oct-05	499	0.06	1.075	-0.00598	0	-0.00463
30-Sep-05	502	0.06	1.08	0.030801	-0.0137	-0.01069
31-Aug-05	487	0.060833	1.091667	0.016701	-0.01351	-0.01057
29-Jul-05	479	0.061667	1.103333	0.039046	-0.01333	-0.01046
30-Jun-05	461	0.0625	1.115	-0.00647	-0.01316	-0.01036
31-May-05	464	0.063333	1.126667	0.084112	-0.01299	-0.01025
29-Apr-05	428	0.064167	1.138333	0.016627	-0.01282	-0.01014
31-Mar-05	421	0.065	1.15	-0.03218	-0.01266	-0.01004
28-Feb-05	435	0.065833	1.161667	0.071429	-0.0125	-0.00994
31-Jan-05	406	0.066667	1.173333	-0.01456	-0.01235	-0.00985
31-Dec-04	412	0.0675	1.185	0.045685	-0.0122	-0.00975
30-Nov-04	394	0.068333	1.196667	0.125714	-0.01205	-0.00966
29-Oct-04	350	0.069167	1.208333	0.014493	-0.0119	-0.00956
30-Sep-04	345	0.07	1.22	0.071429	-0.02326	-0.05548
31-Aug-04	322	0.071667	1.291667	0.03871	-0.02273	-0.05257
30-Jul-04	310	0.073333	1.363333	0.033333	-0.02222	-0.04994
30-Jun-04	300	0.075	1.435	0	-0.02174	-0.04757
31-May-04	300	0.076667	1.506667	-0.0566	-0.02128	-0.04541
30-Apr-04	318	0.078333	1.578333	0.056478	-0.02083	-0.04343
31-Mar-04	301	0.08	1.65	0.013468	-0.02041	-0.04163
27-Feb-04	297	0.081667	1.721667	-0.01	-0.02	-0.03996
30-Jan-04	300	0.083333	1.793333	-0.00332	-0.01961	-0.03843
31-Dec-03	301	0.085	1.865	0.059859	-0.01923	-0.03701
28-Nov-03	284	0.086667	1.936667	-0.09841	-0.01887	-0.03568
31-Oct-03	315	0.088333	2.008333	0.153846	-0.01852	-0.03446
30-Sep-03	273	0.09	2.08			

GROWTHPOINT

	LEVELS			CHANGES		
	Price	DE	QR	Price	DE	QR
29-Jun-12	2300	0.65	0.35	0.111111	0.005155	0.031941
31-May-12	2070	0.646667	0.339167	-0.01429	0.005181	0.032995
30-Apr-12	2100	0.643333	0.328333	0.05	0.005208	0.034121
30-Mar-12	2000	0.64	0.3175	-0.02676	0.005236	0.035326
29-Feb-12	2055	0.636667	0.306667	0.032663	0.005263	0.03662
31-Jan-12	1990	0.633333	0.295833	0.072776	0.005291	0.038012
30-Dec-11	1855	0.63	0.285	0.0087	0.005319	0.039514
30-Nov-11	1839	0.626667	0.274167	-0.00325	0.005348	0.041139
31-Oct-11	1845	0.623333	0.263333	0.040023	0.005376	0.042904
30-Sep-11	1774	0.62	0.2525	-0.07363	0.005405	0.044828
31-Aug-11	1915	0.616667	0.241667	0.040761	0.005435	0.046931
29-Jul-11	1840	0.613333	0.230833	0.004915	0.005464	0.049242
30-Jun-11	1831	0.61	0.22	0.011602	0.02521	-0.02583
31-May-11	1810	0.595	0.225833	-0.00659	0.025862	-0.02518
29-Apr-11	1822	0.58	0.231667	0.053788	0.026549	-0.02456
31-Mar-11	1729	0.565	0.2375	0.018857	0.027273	-0.02397
28-Feb-11	1697	0.55	0.243333	-0.01395	0.028037	-0.02341
31-Jan-11	1721	0.535	0.249167	-0.0611	0.028846	-0.02288
31-Dec-10	1833	0.52	0.255	0.047429	0.029703	-0.02236
30-Nov-10	1750	0.505	0.260833	0.008646	0.030612	-0.02188
29-Oct-10	1735	0.49	0.266667	0.011662	0.031579	-0.02141
30-Sep-10	1715	0.475	0.2725	0.017804	0.032609	-0.02096
31-Aug-10	1685	0.46	0.278333	0.01506	0.033708	-0.02053
30-Jul-10	1660	0.445	0.284167	0.069588	0.034884	-0.02011
30-Jun-10	1552	0.43	0.29	0.024422	-0.00193	-0.04132
31-May-10	1515	0.430833	0.3025	-0.0046	-0.00193	-0.03968
30-Apr-10	1522	0.431667	0.315	0.031864	-0.00193	-0.03817
31-Mar-10	1475	0.4325	0.3275	0.013746	-0.00192	-0.03676
26-Feb-10	1455	0.433333	0.34	0.06282	-0.00192	-0.03546
29-Jan-10	1369	0.434167	0.3525	-0.02144	-0.00192	-0.03425
31-Dec-09	1399	0.435	0.365	0.007199	-0.00191	-0.03311
30-Nov-09	1389	0.435833	0.3775	-0.00144	-0.00191	-0.03205
30-Oct-09	1391	0.436667	0.39	0.03037	-0.0019	-0.03106
30-Sep-09	1350	0.4375	0.4025	-0.02174	-0.0019	-0.03012
31-Aug-09	1380	0.438333	0.415	0.012472	-0.0019	-0.02924
31-Jul-09	1363	0.439167	0.4275	0.048462	-0.00189	-0.02841
30-Jun-09	1300	0.44	0.44	-0.03704	-0.00377	0.025243
29-May-09	1350	0.441667	0.429167	-0.04323	-0.00376	0.025896
30-Apr-09	1411	0.443333	0.418333	0.039794	-0.00375	0.026585
31-Mar-09	1357	0.445	0.4075	0.008922	-0.00373	0.027311

27-Feb-09	1345	0.446667	0.396667	-0.07305	-0.00372	0.028078
30-Jan-09	1451	0.448333	0.385833	-0.03267	-0.0037	0.028889
31-Dec-08	1500	0.45	0.375	-0.01316	-0.00369	0.029748
28-Nov-08	1520	0.451667	0.364167	0.169231	-0.00368	0.03066
31-Oct-08	1300	0.453333	0.353333	-0.05109	-0.00366	0.03163
30-Sep-08	1370	0.455	0.3425	-0.0519	-0.00365	0.032663
29-Aug-08	1445	0.456667	0.331667	0.094697	-0.00364	0.033766
31-Jul-08	1320	0.458333	0.320833	0.189189	-0.00362	0.034946
30-Jun-08	1110	0.46	0.31	-0.0834	-0.02646	-0.008
30-May-08	1211	0.4725	0.3125	-0.05391	-0.02577	-0.00794
30-Apr-08	1280	0.485	0.315	-0.06364	-0.02513	-0.00787
31-Mar-08	1367	0.4975	0.3175	-0.06177	-0.02451	-0.00781
29-Feb-08	1457	0.51	0.32	0.040714	-0.02392	-0.00775
31-Jan-08	1400	0.5225	0.3225	-0.10256	-0.02336	-0.00769
31-Dec-07	1560	0.535	0.325	-0.02743	-0.02283	-0.00763
30-Nov-07	1604	0.5475	0.3275	-0.02195	-0.02232	-0.00758
31-Oct-07	1640	0.56	0.33	0.012971	-0.02183	-0.00752
28-Sep-07	1619	0.5725	0.3325	0.047219	-0.02137	-0.00746
31-Aug-07	1546	0.585	0.335	-0.01841	-0.02092	-0.00741
31-Jul-07	1575	0.5975	0.3375	0.060606	-0.02049	-0.00735
29-Jun-07	1485	0.61	0.34	-0.03883	-0.0148	0.05974
31-May-07	1545	0.619167	0.320833	-0.0283	-0.01459	0.063536
30-Apr-07	1590	0.628333	0.301667	0.070707	-0.01438	0.067847
30-Mar-07	1485	0.6375	0.2825	0.010204	-0.01418	0.072785
28-Feb-07	1470	0.646667	0.263333	0.072993	-0.01398	0.078498
31-Jan-07	1370	0.655833	0.244167	0.109312	-0.01378	0.085185
29-Dec-06	1235	0.665	0.225	-0.02756	-0.0136	0.093117
30-Nov-06	1270	0.674167	0.205833	0.025848	-0.01341	0.102679
31-Oct-06	1238	0.683333	0.186667	0.13578	-0.01324	0.114428
29-Sep-06	1090	0.6925	0.1675	-0.04386	-0.01306	0.129213
31-Aug-06	1140	0.701667	0.148333	0.084681	-0.0129	0.148387
31-Jul-06	1051	0.710833	0.129167	-0.01867	-0.01273	0.174242
30-Jun-06	1071	0.72	0.11	-0.11488	-0.01144	-0.02222
31-May-06	1210	0.728333	0.1125	-0.08679	-0.01131	-0.02174
28-Apr-06	1325	0.736667	0.115	-0.02214	-0.01119	-0.02128
31-Mar-06	1355	0.745	0.1175	0.053655	-0.01106	-0.02083
28-Feb-06	1286	0.753333	0.12	0.087986	-0.01094	-0.02041
31-Jan-06	1182	0.761667	0.1225	0.074545	-0.01082	-0.02
30-Dec-05	1100	0.77	0.125	0.108871	-0.01071	-0.01961
30-Nov-05	992	0.778333	0.1275	0.00202	-0.01059	-0.01923
31-Oct-05	990	0.786667	0.13	-0.01	-0.01048	-0.01887
30-Sep-05	1000	0.795	0.1325	-0.0099	-0.01037	-0.01852
31-Aug-05	1010	0.803333	0.135	0.074468	-0.01027	-0.01818
29-Jul-05	940	0.811667	0.1375	0.037528	-0.01016	-0.01786
30-Jun-05	906	0.82	0.14	0.041379	-0.00203	-0.04545

31-May-05	870	0.821667	0.146667	0.023529	-0.00202	-0.04348
29-Apr-05	850	0.823333	0.153333	0.030303	-0.00202	-0.04167
31-Mar-05	825	0.825	0.16	-0.05063	-0.00202	-0.04
28-Feb-05	869	0.826667	0.166667	0.08625	-0.00201	-0.03846
31-Jan-05	800	0.828333	0.173333	0.032258	-0.00201	-0.03704
31-Dec-04	775	0.83	0.18	0.01043	-0.002	-0.03571
30-Nov-04	767	0.831667	0.186667	0.23114	-0.002	-0.03448
29-Oct-04	623	0.833333	0.193333	0.004839	-0.002	-0.03333
30-Sep-04	620	0.835	0.2	-0.04321	-0.00199	-0.03226
31-Aug-04	648	0.836667	0.206667	0.045161	-0.00199	-0.03125
30-Jul-04	620	0.838333	0.213333	0.033333	-0.00198	-0.0303
30-Jun-04	600	0.84	0.22	-0.01639	-0.08364	0.011494
31-May-04	610	0.916667	0.2175	0	-0.07718	0.011628
30-Apr-04	610	0.993333	0.215	0.051724	-0.07165	0.011765
31-Mar-04	580	1.07	0.2125	-0.072	-0.06686	0.011905
27-Feb-04	625	1.146667	0.21	0.02459	-0.06267	0.012048
30-Jan-04	610	1.223333	0.2075	-0.01294	-0.05897	0.012195
31-Dec-03	618	1.3	0.205	0.028286	-0.05569	0.012346
28-Nov-03	601	1.376667	0.2025	-0.05799	-0.05275	0.0125
31-Oct-03	638	1.453333	0.2	0.164234	-0.05011	0.012658
30-Sep-03	548	1.53	0.1975	-0.00364	-0.04772	0.012821
29-Aug-03	550	1.606667	0.195	-0.06463	-0.04554	0.012987
31-Jul-03	588	1.683333	0.1925	0.013793	-0.04356	0.013158
30-Jun-03	580	1.76	0.19			

HYPROP

LEVELS				CHANGES		
	Price	DE	QR	Price	DE	QR
30-Dec-11	5325	0.45	0.16	0.032978	0.052632	-0.07692
30-Nov-11	5155	0.4275	0.173333	-0.0312	0.055556	-0.07143
31-Oct-11	5321	0.405	0.186667	-0.01463	0.058824	-0.06667
30-Sep-11	5400	0.3825	0.2	-0.04846	0.0625	-0.0625
31-Aug-11	5675	0.36	0.213333	0.041284	0.066667	-0.05882
29-Jul-11	5450	0.3375	0.226667	0	0.071429	-0.05556
30-Jun-11	5450	0.315	0.24	0.028302	0.076923	-0.05263
31-May-11	5300	0.2925	0.253333	0	0.083333	-0.05
29-Apr-11	5300	0.27	0.266667	-0.00637	0.090909	-0.04762
31-Mar-11	5334	0.2475	0.28	-0.01587	0.1	-0.04545
28-Feb-11	5420	0.225	0.293333	-0.00569	0.111111	-0.04348
31-Jan-11	5451	0.2025	0.306667	-0.04368	0.125	-0.04167
31-Dec-10	5700	0.18	0.32	0	-0.00461	-0.07246
30-Nov-10	5700	0.180833	0.345	0.050691	-0.00459	-0.06757

29-Oct-10	5425	0.181667	0.37	0.015918	-0.00457	-0.06329
30-Sep-10	5340	0.1825	0.395	-0.00891	-0.00455	-0.05952
31-Aug-10	5388	0.183333	0.42	0.036353	-0.00452	-0.05618
30-Jul-10	5199	0.184167	0.445	0.040008	-0.0045	-0.05319
30-Jun-10	4999	0.185	0.47	0.009695	-0.00448	-0.05051
31-May-10	4951	0.185833	0.495	-0.04788	-0.00446	-0.04808
30-Apr-10	5200	0.186667	0.52	0.042084	-0.00444	-0.04587
31-Mar-10	4990	0.1875	0.545	-0.0018	-0.00442	-0.04386
26-Feb-10	4999	0.188333	0.57	0.089582	-0.00441	-0.04202
29-Jan-10	4588	0.189167	0.595	0.000654	-0.00439	-0.04032
31-Dec-09	4585	0.19	0.62	0.048	0.027027	0.037657
30-Nov-09	4375	0.185	0.5975	-0.03846	0.027778	0.03913
30-Oct-09	4550	0.18	0.575	0.07565	0.028571	0.040724
30-Sep-09	4230	0.175	0.5525	-0.03864	0.029412	0.042453
31-Aug-09	4400	0.17	0.53	0.084011	0.030303	0.044335
31-Jul-09	4059	0.165	0.5075	0.052918	0.03125	0.046392
30-Jun-09	3855	0.16	0.485	0.007843	0.032258	0.048649
29-May-09	3825	0.155	0.4625	-0.08929	0.033333	0.051136
30-Apr-09	4200	0.15	0.44	0.076647	0.034483	0.053892
31-Mar-09	3901	0.145	0.4175	-0.00738	0.035714	0.056962
27-Feb-09	3930	0.14	0.395	-0.03226	0.037037	0.060403
30-Jan-09	4061	0.135	0.3725	-0.0331	0.038462	0.064286
31-Dec-08	4200	0.13	0.35	0.063291	0.006452	-0.26957
28-Nov-08	3950	0.129167	0.479167	0.112676	0.006494	-0.21233
31-Oct-08	3550	0.128333	0.608333	-0.09898	0.006536	-0.17514
30-Sep-08	3940	0.1275	0.7375	-0.04369	0.006579	-0.14904
29-Aug-08	4120	0.126667	0.866667	0.119565	0.006623	-0.12971
31-Jul-08	3680	0.125833	0.995833	0.173844	0.006667	-0.11481
30-Jun-08	3135	0.125	1.125	-0.11566	0.006711	-0.10299
30-May-08	3545	0.124167	1.254167	-0.05467	0.006757	-0.09337
30-Apr-08	3750	0.123333	1.383333	-0.06832	0.006803	-0.0854
31-Mar-08	4025	0.1225	1.5125	-0.05516	0.006849	-0.07868
29-Feb-08	4260	0.121667	1.641667	0.071698	0.006897	-0.07294
31-Jan-08	3975	0.120833	1.770833	-0.11667	0.006944	-0.06798
31-Dec-07	4500	0.12	1.9	-0.05263	-0.06494	0.074458
30-Nov-07	4750	0.128333	1.768333	-0.0021	-0.06098	0.080448
31-Oct-07	4760	0.136667	1.636667	0.023656	-0.05747	0.087486
28-Sep-07	4650	0.145	1.505	0.048005	-0.05435	0.095874
31-Aug-07	4437	0.153333	1.373333	0.02	-0.05155	0.10604
31-Jul-07	4350	0.161667	1.241667	-0.00798	-0.04902	0.118619
29-Jun-07	4385	0.17	1.11	-0.06702	-0.04673	0.134583
31-May-07	4700	0.178333	0.978333	-0.03093	-0.04464	0.155512
30-Apr-07	4850	0.186667	0.846667	0.085011	-0.04274	0.184149
30-Mar-07	4470	0.195	0.715	0.014756	-0.04098	0.225714

28-Feb-07	4405	0.203333	0.583333	0.036471	-0.03937	0.291513
31-Jan-07	4250	0.211667	0.451667	0.103896	-0.03788	0.411458
29-Dec-06	3850	0.22	0.32	0.054795	-0.02222	-0.05185
30-Nov-06	3650	0.225	0.3375	0.065693	-0.02174	-0.0493
31-Oct-06	3425	0.23	0.355	0.047401	-0.02128	-0.04698
29-Sep-06	3270	0.235	0.3725	-0.00909	-0.02083	-0.04487
31-Aug-06	3300	0.24	0.39	0.114865	-0.02041	-0.04294
31-Jul-06	2960	0.245	0.4075	0.02069	-0.02	-0.04118
30-Jun-06	2900	0.25	0.425	-0.17379	-0.01961	-0.03955
31-May-06	3510	0.255	0.4425	-0.06674	-0.01923	-0.03804
28-Apr-06	3761	0.26	0.46	0.016486	-0.01887	-0.03665
31-Mar-06	3700	0.265	0.4775	0.042254	-0.01852	-0.03535
28-Feb-06	3550	0.27	0.495	0.075758	-0.01818	-0.03415
31-Jan-06	3300	0.275	0.5125	0.103679	-0.01786	-0.03302
30-Dec-05	2990	0.28	0.53	0.087273	-0.03448	-0.04217
30-Nov-05	2750	0.29	0.553333	-0.00109	-0.03333	-0.04046
31-Oct-05	2753	0.3	0.576667	0.027239	-0.03226	-0.03889
30-Sep-05	2680	0.31	0.6	0.013233	-0.03125	-0.03743
31-Aug-05	2645	0.32	0.623333	0.088477	-0.0303	-0.03608
29-Jul-05	2430	0.33	0.646667	0.056522	-0.02941	-0.03483
30-Jun-05	2300	0.34	0.67	-0.02954	-0.02857	-0.03365
31-May-05	2370	0.35	0.693333	0.016295	-0.02778	-0.03256
29-Apr-05	2332	0.36	0.716667	0.06484	-0.02703	-0.03153
31-Mar-05	2190	0.37	0.74	0.004587	-0.02632	-0.03057
28-Feb-05	2180	0.38	0.763333	0.147368	-0.02564	-0.02966
31-Jan-05	1900	0.39	0.786667	-0.03797	-0.025	-0.02881
31-Dec-04	1975	0.4	0.81	0.097222	-0.08046	0.010395
30-Nov-04	1800	0.435	0.801667	0.065089	-0.07447	0.010504
29-Oct-04	1690	0.47	0.793333	0.024242	-0.06931	0.010616
30-Sep-04	1650	0.505	0.785	0.064516	-0.06481	0.01073
31-Aug-04	1550	0.54	0.776667	0.018397	-0.06087	0.010846
30-Jul-04	1522	0.575	0.768333	0.035374	-0.05738	0.010965
30-Jun-04	1470	0.61	0.76	0.044776	-0.05426	0.011086
31-May-04	1407	0.645	0.751667	-0.062	-0.05147	0.011211
30-Apr-04	1500	0.68	0.743333	0.071429	-0.04895	0.011338
31-Mar-04	1400	0.715	0.735	0.01083	-0.04667	0.011468
27-Feb-04	1385	0.75	0.726667	0.108	-0.04459	0.011601
30-Jan-04	1250	0.785	0.718333	-0.09091	-0.04268	0.011737
31-Dec-03	1375	0.82	0.71			

REDEFINE

LEVELS				CHANGES		
	Price	DE	QR	Price	DE	QR
31-Aug-12	960	0.62	0.33	0.043478	-0.01847	-0.01247
31-Jul-12	920	0.631667	0.334167	0.073512	-0.01813	-0.01232
29-Jun-12	857	0.643333	0.338333	0.045122	-0.01781	-0.01217
31-May-12	820	0.655	0.3425	-0.00606	-0.0175	-0.01202
30-Apr-12	825	0.666667	0.346667	0.033835	-0.0172	-0.01188
30-Mar-12	798	0.678333	0.350833	0.016561	-0.01691	-0.01174
29-Feb-12	785	0.69	0.355	0.028834	-0.01663	-0.0116
31-Jan-12	763	0.701667	0.359167	0.031081	-0.01636	-0.01147
30-Dec-11	740	0.713333	0.363333	-0.03268	-0.01609	-0.01134
30-Nov-11	765	0.725	0.3675	-0.04969	-0.01584	-0.01121
31-Oct-11	805	0.736667	0.371667	0.00625	-0.01559	-0.01109
30-Sep-11	800	0.748333	0.375833	-0.03614	-0.01535	-0.01096
31-Aug-11	830	0.76	0.38	0.025958	0.030508	-0.02355
29-Jul-11	809	0.7375	0.389167	0.030573	0.031469	-0.02301
30-Jun-11	785	0.715	0.398333	0.008997	0.032491	-0.02249
31-May-11	778	0.6925	0.4075	-0.00639	0.033582	-0.022
29-Apr-11	783	0.67	0.416667	0.044	0.034749	-0.02153
31-Mar-11	750	0.6475	0.425833	0.020408	0.036	-0.02107
28-Feb-11	735	0.625	0.435	-0.03543	0.037344	-0.02064
31-Jan-11	762	0.6025	0.444167	-0.04631	0.038793	-0.02022
31-Dec-10	799	0.58	0.453333	0.030968	0.040359	-0.01982
30-Nov-10	775	0.5575	0.4625	-0.05141	0.042056	-0.01943
29-Oct-10	817	0.535	0.471667	0.008642	0.043902	-0.01906
30-Sep-10	810	0.5125	0.480833	0.013767	0.045918	-0.01871
31-Aug-10	799	0.49	0.49	0.044444	0.031579	-0.06667
30-Jul-10	765	0.475	0.525	0.0625	0.032609	-0.0625
30-Jun-10	720	0.46	0.56	-0.00826	0.033708	-0.05882
31-May-10	726	0.445	0.595	-0.07868	0.034884	-0.05556
30-Apr-10	788	0.43	0.63	0.007673	0.036145	-0.05263
31-Mar-10	782	0.415	0.665	0.031662	0.0375	-0.05
26-Feb-10	758	0.4	0.7	0.058659	0.038961	-0.04762
29-Jan-10	716	0.385	0.735	0.001399	0.040541	-0.04545
31-Dec-09	715	0.37	0.77	0.009887	0.042254	-0.04348
30-Nov-09	708	0.355	0.805	-0.01667	0.044118	-0.04167
30-Oct-09	720	0.34	0.84	0	0.046154	-0.04
30-Sep-09	720	0.325	0.875	-0.01235	0.048387	-0.03846
31-Aug-09	729	0.31	0.91	-0.01619	-0.07232	-0.06587
31-Jul-09	741	0.334167	0.974167	0.14	-0.06744	-0.0618
30-Jun-09	650	0.358333	1.038333	-0.03704	-0.06318	-0.0582

29-May-09	675	0.3825	1.1025	-0.05594	-0.05943	-0.055
30-Apr-09	715	0.406667	1.166667	0.094946	-0.05609	-0.05213
31-Mar-09	653	0.430833	1.230833	-0.03545	-0.05311	-0.04955
27-Feb-09	677	0.455	1.295	-0.00441	-0.05043	-0.04721
30-Jan-09	680	0.479167	1.359167	0.088	-0.04801	-0.04508
31-Dec-08	625	0.503333	1.423333	0.061121	-0.04581	-0.04314
28-Nov-08	589	0.5275	1.4875	0.024348	-0.04381	-0.04135
31-Oct-08	575	0.551667	1.551667	-0.07258	-0.04197	-0.03971
30-Sep-08	620	0.575833	1.615833	-0.10145	-0.04028	-0.03819
29-Aug-08	690	0.6	1.68	0.121951	0.004184	-0.00836
31-Jul-08	615	0.5975	1.694167	0.184971	0.004202	-0.00829
30-Jun-08	519	0.595	1.708333	-0.07321	0.004219	-0.00822
30-May-08	560	0.5925	1.7225	-0.08197	0.004237	-0.00816
30-Apr-08	610	0.59	1.736667	-0.10294	0.004255	-0.00809
31-Mar-08	680	0.5875	1.750833	-0.04895	0.004274	-0.00803
29-Feb-08	715	0.585	1.765	0.024355	0.004292	-0.00796
31-Jan-08	698	0.5825	1.779167	-0.10513	0.00431	-0.0079
31-Dec-07	780	0.58	1.793333	-0.02743	0.004329	-0.00784
30-Nov-07	802	0.5775	1.8075	-0.04182	0.004348	-0.00778
31-Oct-07	837	0.575	1.821667	0.032059	0.004367	-0.00772
28-Sep-07	811	0.5725	1.835833	0.095946	0.004386	-0.00766
31-Aug-07	740	0.57	1.85	-0.02632	-0.02979	0.038354
31-Jul-07	760	0.5875	1.781667	0.027027	-0.02893	0.039883
29-Jun-07	740	0.605	1.713333	-0.02632	-0.02811	0.04154
31-May-07	760	0.6225	1.645	-0.08434	-0.02734	0.04334
30-Apr-07	830	0.64	1.576667	0.114094	-0.02662	0.045304
30-Mar-07	745	0.6575	1.508333	0.006757	-0.02593	0.047454
28-Feb-07	740	0.675	1.44	0.02069	-0.02527	0.049818
31-Jan-07	725	0.6925	1.371667	0.043165	-0.02465	0.05243
29-Dec-06	695	0.71	1.303333	0.087637	-0.02405	0.055331
30-Nov-06	639	0.7275	1.235	0.07395	-0.02349	0.058571
31-Oct-06	595	0.745	1.166667	0.11215	-0.02295	0.062215
29-Sep-06	535	0.7625	1.098333	-0.02727	-0.02244	0.066343
31-Aug-06	550	0.78	1.03	0.148225	0.005371	0.030859
31-Jul-06	479	0.775833	0.999167	-0.08762	0.0054	0.031842
30-Jun-06	525	0.771667	0.968333	-0.09483	0.005429	0.032889
31-May-06	580	0.7675	0.9375	-0.1145	0.005459	0.034007
28-Apr-06	655	0.763333	0.906667	-0.02239	0.005488	0.035205
31-Mar-06	670	0.759167	0.875833	0.082391	0.005519	0.036489
28-Feb-06	619	0.755	0.845	0.042088	0.005549	0.037871
31-Jan-06	594	0.750833	0.814167	0.033043	0.00558	0.039362
30-Dec-05	575	0.746667	0.783333	0.15	0.005612	0.040975
30-Nov-05	500	0.7425	0.7525	-0.06542	0.005643	0.042725
31-Oct-05	535	0.738333	0.721667	0.114583	0.005675	0.044632

30-Sep-05	480	0.734167	0.690833	0.090909	0.005708	0.046717
31-Aug-05	440	0.73	0.66	0.030445	-0.04262	-0.21893
29-Jul-05	427	0.7625	0.845	0.054321	-0.04088	-0.17961
30-Jun-05	405	0.795	1.03	0.08	-0.03927	-0.15226
31-May-05	375	0.8275	1.215	0.033058	-0.03779	-0.13214
29-Apr-05	363	0.86	1.4	0.134375	-0.03641	-0.11672
31-Mar-05	320	0.8925	1.585	-0.03904	-0.03514	-0.10452
28-Feb-05	333	0.925	1.77	0.074194	-0.03394	-0.09463
31-Jan-05	310	0.9575	1.955	-0.06061	-0.03283	-0.08645
31-Dec-04	330	0.99	2.14	0.054313	-0.03178	-0.07957
30-Nov-04	313	1.0225	2.325	0.068259	-0.03081	-0.07371
29-Oct-04	293	1.055	2.51	0.02807	-0.02989	-0.06865
30-Sep-04	285	1.0875	2.695	0.017857	-0.02902	-0.06424
31-Aug-04	280	1.12	2.88	0.064639	-0.0275	0.050456
30-Jul-04	263	1.151667	2.741667	0	-0.02676	0.053137
30-Jun-04	263	1.183333	2.603333	0.035433	-0.02606	0.056119
31-May-04	254	1.215	2.465	0.016	-0.0254	0.059456
30-Apr-04	250	1.246667	2.326667	-0.0566	-0.02477	0.063214
31-Mar-04	265	1.278333	2.188333	0.043307	-0.02417	0.06748
27-Feb-04	254	1.31	2.05	-0.0696	-0.0236	0.072363
30-Jan-04	273	1.341667	1.911667	-0.09	-0.02306	0.078008
31-Dec-03	300	1.373333	1.773333	0.090909	-0.02254	0.084608
28-Nov-03	275	1.405	1.635	0.022305	-0.02204	0.092428
31-Oct-03	269	1.436667	1.496667	0.120833	-0.02157	0.10184
30-Sep-03	240	1.468333	1.358333	0.043478	-0.02111	0.113388
29-Aug-03	230	1.5	1.22			

RESILIENT

LEVELS				CHANGES		
	Price	DE	QR	Price	DE	QR
30-Dec-11	3475	0.51	0.03	0.032076	0.018303	-0.21739
30-Nov-11	3367	0.5008333	0.038333	-0.00678	0.018644	-0.17857
31-Oct-11	3390	0.4916667	0.046667	0.039877	0.018998	-0.15152
30-Sep-11	3260	0.4825	0.055	-0.00184	0.019366	-0.13158
31-Aug-11	3266	0.4733333	0.063333	-0.0088	0.019749	-0.11628
29-Jul-11	3295	0.4641667	0.071667	0.049363	0.020147	-0.10417
30-Jun-11	3140	0.455	0.08	0.006733	0.020561	-0.09434
31-May-11	3119	0.4458333	0.088333	0.001927	0.020992	-0.08621
29-Apr-11	3113	0.4366667	0.096667	0.037667	0.021442	-0.07937
31-Mar-11	3000	0.4275	0.105	0.019022	0.021912	-0.07353
28-Feb-11	2944	0.4183333	0.113333	-0.05942	0.022403	-0.06849
31-Jan-11	3130	0.4091667	0.121667	-0.03544	0.022917	-0.0641

31-Dec-10	3245	0.4	0.13	0.004644	-0.00208	-0.12849
30-Nov-10	3230	0.4008333	0.149167	0.023772	-0.00207	-0.11386
29-Oct-10	3155	0.4016667	0.168333	0.007987	-0.00207	-0.10222
30-Sep-10	3130	0.4025	0.1875	0.043333	-0.00207	-0.09274
31-Aug-10	3000	0.4033333	0.206667	0.030928	-0.00206	-0.08487
30-Jul-10	2910	0.4041667	0.225833	0.039286	-0.00206	-0.07823
30-Jun-10	2800	0.405	0.245	0.003584	-0.00205	-0.07256
31-May-10	2790	0.4058333	0.264167	-0.01064	-0.00205	-0.06765
30-Apr-10	2820	0.4066667	0.283333	0.039823	-0.00204	-0.06336
31-Mar-10	2712	0.4075	0.3025	0.023396	-0.00204	-0.05959
26-Feb-10	2650	0.4083333	0.321667	0.015326	-0.00204	-0.05623
29-Jan-10	2610	0.4091667	0.340833	0.003846	-0.00203	-0.05324
31-Dec-09	2600	0.41	0.36	0.017613	0.010267	0.014085
30-Nov-09	2555	0.4058333	0.355	0.011881	0.010373	0.014286
30-Oct-09	2525	0.4016667	0.35	0.01	0.010482	0.014493
30-Sep-09	2500	0.3975	0.345	0.046025	0.010593	0.014706
31-Aug-09	2390	0.3933333	0.34	0.002517	0.010707	0.014925
31-Jul-09	2384	0.3891667	0.335	0.041048	0.010823	0.015152
30-Jun-09	2290	0.385	0.33	0.008811	0.010941	0.015385
29-May-09	2270	0.3808333	0.325	-0.01304	0.011062	0.015625
30-Apr-09	2300	0.3766667	0.32	0	0.011186	0.015873
31-Mar-09	2300	0.3725	0.315	-0.04127	0.011312	0.016129
27-Feb-09	2399	0.3683333	0.31	0.043043	0.011442	0.016393
30-Jan-09	2300	0.3641667	0.305	-0.04167	0.011574	0.016667
31-Dec-08	2400	0.36	0.3	0.078652	0.031026	-0.00277
28-Nov-08	2225	0.3491667	0.300833	0.098765	0.03202	-0.00276
31-Oct-08	2025	0.3383333	0.301667	-0.05814	0.033079	-0.00275
30-Sep-08	2150	0.3275	0.3025	-0.03371	0.034211	-0.00275
29-Aug-08	2225	0.3166667	0.303333	0.060029	0.035422	-0.00274
31-Jul-08	2099	0.3058333	0.304167	0.192614	0.036723	-0.00273
30-Jun-08	1760	0.295	0.305	-0.07853	0.038123	-0.00272
30-May-08	1910	0.2841667	0.305833	-0.045	0.039634	-0.00272
30-Apr-08	2000	0.2733333	0.306667	-0.04762	0.04127	-0.00271
31-Mar-08	2100	0.2625	0.3075	-0.13758	0.043046	-0.0027
29-Feb-08	2435	0.2516667	0.308333	-0.02209	0.044983	-0.0027
31-Jan-08	2490	0.2408333	0.309167	-0.07778	0.047101	-0.00269
31-Dec-07	2700	0.23	0.31	0.018868	-0.01075	-0.01326
30-Nov-07	2650	0.2325	0.314167	-0.02574	-0.01064	-0.01309
31-Oct-07	2720	0.235	0.318333	0.057132	-0.01053	-0.01292
28-Sep-07	2573	0.2375	0.3225	0.113853	-0.01042	-0.01276
31-Aug-07	2310	0.24	0.326667	-0.05906	-0.01031	-0.01259
31-Jul-07	2455	0.2425	0.330833	-0.01406	-0.0102	-0.01244
29-Jun-07	2490	0.245	0.335	-0.004	-0.0101	-0.01229
31-May-07	2500	0.2475	0.339167	0.033058	-0.01	-0.01214

30-Apr-07	2420	0.25	0.343333	0.075078	-0.0099	-0.01199
30-Mar-07	2251	0.2525	0.3475	0.037327	-0.0098	-0.01185
28-Feb-07	2170	0.255	0.351667	0.028436	-0.00971	-0.01171
31-Jan-07	2110	0.2575	0.355833	0.087629	-0.00962	-0.01157
29-Dec-06	1940	0.26	0.36	0.031915	0.043478	0.046005
30-Nov-06	1880	0.2491667	0.344167	0.093023	0.045455	0.048223
31-Oct-06	1720	0.2383333	0.328333	0.075	0.047619	0.050667
29-Sep-06	1600	0.2275	0.3125	-0.04363	0.05	0.053371
31-Aug-06	1673	0.2166667	0.296667	0.097049	0.052632	0.05638
31-Jul-06	1525	0.2058333	0.280833	-0.05864	0.055556	0.059748
30-Jun-06	1620	0.195	0.265	-0.1383	0.058824	0.063545
31-May-06	1880	0.1841667	0.249167	-0.04326	0.0625	0.067857
28-Apr-06	1965	0.1733333	0.233333	0.028796	0.066667	0.072797
31-Mar-06	1910	0.1625	0.2175	0.171779	0.071429	0.078512
28-Feb-06	1630	0.1516667	0.201667	0.124138	0.076923	0.085202
31-Jan-06	1450	0.1408333	0.185833	0.035714	0.083333	0.093137
30-Dec-05	1400	0.13	0.17	0.076923	-0.21608	-0.2892
30-Nov-05	1300	0.1658333	0.239167	-0.01515	-0.17769	-0.22432
31-Oct-05	1320	0.2016667	0.308333	0.03125	-0.15088	-0.18322
30-Sep-05	1280	0.2375	0.3775	0.04918	-0.1311	-0.15485
31-Aug-05	1220	0.2733333	0.446667	0.077739	-0.1159	-0.13409
29-Jul-05	1132	0.3091667	0.515833	0.029091	-0.10386	-0.11823
30-Jun-05	1100	0.345	0.585	0.052632	-0.09409	-0.10573
31-May-05	1045	0.3808333	0.654167	0.046046	-0.086	-0.09562
29-Apr-05	999	0.4166667	0.723333	0.019388	-0.07919	-0.08728
31-Mar-05	980	0.4525	0.7925	-0.02	-0.07338	-0.08027
28-Feb-05	1000	0.4883333	0.861667	0.052632	-0.06836	-0.07431
31-Jan-05	950	0.5241667	0.930833	-0.03553	-0.06399	-0.06917
31-Dec-04	985	0.56	1	0.179641	-0.04274	-0.04153
30-Nov-04	835	0.585	1.043333	0.077419	-0.04098	-0.03988
29-Oct-04	775	0.61	1.086667	0.019737	-0.03937	-0.03835
30-Sep-04	760	0.635	1.13	0	-0.03788	-0.03693
31-Aug-04	760	0.66	1.173333	0.027027	-0.0365	-0.03562
30-Jul-04	740	0.685	1.216667	0.02069	-0.03521	-0.03439
30-Jun-04	725	0.71	1.26	0.035714	-0.03401	-0.03325
31-May-04	700	0.735	1.303333	-0.01408	-0.03289	-0.03218
30-Apr-04	710	0.76	1.346667	0.014286	-0.03185	-0.03118
31-Mar-04	700	0.785	1.39	0.001431	-0.03086	-0.03023
27-Feb-04	699	0.81	1.433333	0.013043	-0.02994	-0.02935
30-Jan-04	690	0.835	1.476667	-0.09211	-0.02907	-0.02851
31-Dec-03	760	0.86	1.52			

SA CORPORATION

	LEVELS			CHANGES		
	Price	DE	QR	Price	DE	QR
30-Dec-11	346	0.25	1.26	0.048485	0.003344	-0.04726
30-Nov-11	330	0.249167	1.3225	0	0.003356	-0.04513
31-Oct-11	330	0.248333	1.385	0.015385	0.003367	-0.04318
30-Sep-11	325	0.2475	1.4475	-0.04412	0.003378	-0.04139
31-Aug-11	340	0.246667	1.51	0.00295	0.00339	-0.03975
29-Jul-11	339	0.245833	1.5725	0.021084	0.003401	-0.03823
30-Jun-11	332	0.245	1.635	0.015291	0.003413	-0.03682
31-May-11	327	0.244167	1.6975	-0.00909	0.003425	-0.03551
29-Apr-11	330	0.243333	1.76	0.03125	0.003436	-0.03429
31-Mar-11	320	0.2425	1.8225	0.012658	0.003448	-0.03316
28-Feb-11	316	0.241667	1.885	0.029316	0.00346	-0.03209
31-Jan-11	307	0.240833	1.9475	-0.03155	0.003472	-0.03109
31-Dec-10	317	0.24	2.01	-0.00314	-0.00346	-0.09832
30-Nov-10	318	0.240833	2.229167	0.009524	-0.00345	-0.08952
29-Oct-10	315	0.241667	2.448333	0.019417	-0.00344	-0.08216
30-Sep-10	309	0.2425	2.6675	-0.00643	-0.00342	-0.07592
31-Aug-10	311	0.243333	2.886667	0	-0.00341	-0.07057
30-Jul-10	311	0.244167	3.105833	0.072414	-0.0034	-0.06591
30-Jun-10	290	0.245	3.325	0.028369	-0.00339	-0.06184
31-May-10	282	0.245833	3.544167	-0.02759	-0.00338	-0.05824
30-Apr-10	290	0.246667	3.763333	0.035714	-0.00337	-0.05503
31-Mar-10	280	0.2475	3.9825	0.007194	-0.00336	-0.05216
26-Feb-10	278	0.248333	4.201667	0.010909	-0.00334	-0.04958
29-Jan-10	275	0.249167	4.420833	0.05364	-0.00333	-0.04723
31-Dec-09	261	0.25	4.64	0.003846	0.006711	-0.01416
30-Nov-09	260	0.248333	4.706667	-0.00383	0.006757	-0.01397
30-Oct-09	261	0.246667	4.773333	0.074074	0.006803	-0.01377
30-Sep-09	243	0.245	4.84	-0.05814	0.006849	-0.01359
31-Aug-09	258	0.243333	4.906667	-0.01527	0.006897	-0.0134
31-Jul-09	262	0.241667	4.973333	0.035573	0.006944	-0.01323
30-Jun-09	253	0.24	5.04	-0.00784	0.006993	-0.01305
29-May-09	255	0.238333	5.106667	0.02	0.007042	-0.01289
30-Apr-09	250	0.236667	5.173333	0.041667	0.007092	-0.01272
31-Mar-09	240	0.235	5.24	-0.03226	0.007143	-0.01256
27-Feb-09	248	0.233333	5.306667	-0.07463	0.007194	-0.01241
30-Jan-09	268	0.231667	5.373333	0.030769	0.007246	-0.01225
31-Dec-08	260	0.23	5.44	0.061224	0.057471	0.080437
28-Nov-08	245	0.2175	5.035	0.088889	0.060976	0.087473
31-Oct-08	225	0.205	4.63	-0.04255	0.064935	0.095858
30-Sep-08	235	0.1925	4.225	-0.11321	0.069444	0.106021

29-Aug-08	265	0.18	3.82	-0.08304	0.074627	0.118594
31-Jul-08	289	0.1675	3.415	0.17004	0.080645	0.134551
30-Jun-08	247	0.155	3.01	-0.11786	0.087719	0.15547
30-May-08	280	0.1425	2.605	-0.01754	0.096154	0.184091
30-Apr-08	285	0.13	2.2	-0.06557	0.106383	0.225627
31-Mar-08	305	0.1175	1.795	-0.12857	0.119048	0.291367
29-Feb-08	350	0.105	1.39	0.032448	0.135135	0.411168
31-Jan-08	339	0.0925	0.985	-0.1525	0.15625	0.698276
31-Dec-07	400	0.08	0.58	0.007557	-0.16522	-0.09728
30-Nov-07	397	0.095833	0.6425	-0.05476	-0.14179	-0.08865
31-Oct-07	420	0.111667	0.705	0.052632	-0.12418	-0.08143
28-Sep-07	399	0.1275	0.7675	0.028351	-0.11047	-0.0753
31-Aug-07	388	0.143333	0.83	-0.00257	-0.09948	-0.07003
31-Jul-07	389	0.159167	0.8925	-0.00256	-0.09048	-0.06545
29-Jun-07	390	0.175	0.955	0.023622	-0.08297	-0.06143
31-May-07	381	0.190833	1.0175	-0.17532	-0.07661	-0.05787
30-Apr-07	462	0.206667	1.08	0.1	-0.07116	-0.0547
30-Mar-07	420	0.2225	1.1425	0.037037	-0.06643	-0.05187
28-Feb-07	405	0.238333	1.205	0.015038	-0.0623	-0.04931
31-Jan-07	399	0.254167	1.2675	0.173529	-0.05864	-0.04699
29-Dec-06	340	0.27	1.33	-0.00875	0.028571	0.023733
30-Nov-06	343	0.2625	1.299167	0.03003	0.029412	0.02431
31-Oct-06	333	0.255	1.268333	0.095395	0.030303	0.024916
29-Sep-06	304	0.2475	1.2375	-0.05	0.03125	0.025552
31-Aug-06	320	0.24	1.206667	0.142857	0.032258	0.026223
31-Jul-06	280	0.2325	1.175833	-0.09677	0.033333	0.026929
30-Jun-06	310	0.225	1.145	-0.13165	0.034483	0.027674
31-May-06	357	0.2175	1.114167	-0.02989	0.035714	0.028462
28-Apr-06	368	0.21	1.083333	-0.04416	0.037037	0.029295
31-Mar-06	385	0.2025	1.0525	0.115942	0.038462	0.030179
28-Feb-06	345	0.195	1.021667	0.029851	0.04	0.031119
31-Jan-06	335	0.1875	0.990833	0.018237	0.041667	0.032118
30-Dec-05	329	0.18	0.96	0.093023	0.043478	0.015873
30-Nov-05	301	0.1725	0.945	-0.08788	0.045455	0.016129
31-Oct-05	330	0.165	0.93	0.015385	0.047619	0.016393
30-Sep-05	325	0.1575	0.915	0.045016	0.05	0.016667
31-Aug-05	311	0.15	0.9	0.068729	0.052632	0.016949
29-Jul-05	291	0.1425	0.885	-0.01356	0.055556	0.017241
30-Jun-05	295	0.135	0.87	0.057348	0.058824	0.017544
31-May-05	279	0.1275	0.855	0.033333	0.0625	0.017857
29-Apr-05	270	0.12	0.84	0.007463	0.066667	0.018182
31-Mar-05	268	0.1125	0.825	-0.07586	0.071429	0.018519
28-Feb-05	290	0.105	0.81	0.006944	0.076923	0.018868
31-Jan-05	288	0.0975	0.795	0.066667	0.083333	0.019231
31-Dec-04	270	0.09	0.78	0.038462	0.08	0.068493

30-Nov-04	260	0.083333	0.73	0.106383	0.086957	0.073529
29-Oct-04	235	0.076667	0.68	-0.01674	0.095238	0.079365
30-Sep-04	239	0.07	0.63	-0.02449	0.105263	0.086207
31-Aug-04	245	0.063333	0.58	0.088889	0.117647	0.09434
30-Jul-04	225	0.056667	0.53	0.022727	0.133333	0.104167
30-Jun-04	220	0.05	0.48	0.004566	0.153846	0.116279
31-May-04	219	0.043333	0.43	0.013889	0.181818	0.131579
30-Apr-04	216	0.036667	0.38	-0.0137	0.222222	0.151515
31-Mar-04	219	0.03	0.33	-0.03097	0.285714	0.178571
27-Feb-04	226	0.023333	0.28	0.018018	0.4	0.217391
30-Jan-04	222	0.016667	0.23	-0.08642	0.666667	0.277778
31-Dec-03	243	0.01	0.18			

VUKILE

LEVELS				CHANGES		
	Price	DE	QR	Price	DE	QR
30-Mar-12	1527	0.43	0.16	-0.00326	-0.0096	-0.13901
29-Feb-12	1532	0.434167	0.185833	-0.00195	-0.00951	-0.12205
31-Jan-12	1535	0.438333	0.211667	0.047782	-0.00942	-0.10877
30-Dec-11	1465	0.4425	0.2375	0.01314	-0.00933	-0.0981
30-Nov-11	1446	0.446667	0.263333	-0.00959	-0.00924	-0.08934
31-Oct-11	1460	0.450833	0.289167	0.017422	-0.00916	-0.08201
30-Sep-11	1435	0.455	0.315	0.010563	-0.00907	-0.07579
31-Aug-11	1420	0.459167	0.340833	-0.00491	-0.00899	-0.07045
29-Jul-11	1427	0.463333	0.366667	0.00493	-0.00891	-0.06582
30-Jun-11	1420	0.4675	0.3925	-0.03467	-0.00883	-0.06175
31-May-11	1471	0.471667	0.418333	0.035915	-0.00876	-0.05816
29-Apr-11	1420	0.475833	0.444167	-0.00211	-0.00868	-0.05496
31-Mar-11	1423	0.48	0.47	0.042491	0.005236	0.025455
28-Feb-11	1365	0.4775	0.458333	-0.01444	0.005263	0.026119
31-Jan-11	1385	0.475	0.446667	-0.05137	0.005291	0.02682
31-Dec-10	1460	0.4725	0.435	0.003436	0.005319	0.027559
30-Nov-10	1455	0.47	0.423333	0	0.005348	0.02834
29-Oct-10	1455	0.4675	0.411667	0.039286	0.005376	0.029167
30-Sep-10	1400	0.465	0.4	0.044776	0.005405	0.030043
31-Aug-10	1340	0.4625	0.388333	0.035549	0.005435	0.030973
30-Jul-10	1294	0.46	0.376667	0.043548	0.005464	0.031963
30-Jun-10	1240	0.4575	0.365	0.016393	0.005495	0.033019
31-May-10	1220	0.455	0.353333	0.010771	0.005525	0.034146
30-Apr-10	1207	0.4525	0.341667	0.010042	0.005556	0.035354
31-Mar-10	1195	0.45	0.33	0.076577	-0.00552	-0.00503
26-Feb-10	1110	0.4525	0.331667	0.07767	-0.00549	-0.005

29-Jan-10	1030	0.455	0.333333	-0.0463	-0.00546	-0.00498
31-Dec-09	1080	0.4575	0.335	-0.01818	-0.00543	-0.00495
30-Nov-09	1100	0.46	0.336667	0.023256	-0.00541	-0.00493
30-Oct-09	1075	0.4625	0.338333	-0.01013	-0.00538	-0.0049
30-Sep-09	1086	0.465	0.34	0.054369	-0.00535	-0.00488
31-Aug-09	1030	0.4675	0.341667	0.117137	-0.00532	-0.00485
31-Jul-09	922	0.47	0.343333	0.084706	-0.00529	-0.00483
30-Jun-09	850	0.4725	0.345	-0.11458	-0.00526	-0.00481
29-May-09	960	0.475	0.346667	0.032258	-0.00524	-0.00478
30-Apr-09	930	0.4775	0.348333	0.01197	-0.00521	-0.00476
31-Mar-09	919	0.48	0.35	0.113939	0.003484	0.012048
27-Feb-09	825	0.478333	0.345833	-0.0884	0.003497	0.012195
30-Jan-09	905	0.476667	0.341667	-0.01093	0.003509	0.012346
31-Dec-08	915	0.475	0.3375	0	0.003521	0.0125
28-Nov-08	915	0.473333	0.333333	0.005495	0.003534	0.012658
31-Oct-08	910	0.471667	0.329167	-0.04211	0.003546	0.012821
30-Sep-08	950	0.47	0.325	-0.00105	0.003559	0.012987
29-Aug-08	951	0.468333	0.320833	0.028108	0.003571	0.013158
31-Jul-08	925	0.466667	0.316667	0.15625	0.003584	0.013333
30-Jun-08	800	0.465	0.3125	-0.10112	0.003597	0.013514
30-May-08	890	0.463333	0.308333	-0.05319	0.00361	0.013699
30-Apr-08	940	0.461667	0.304167	-0.06561	0.003623	0.013889
31-Mar-08	1006	0.46	0.3	-0.0419	-0.00541	-0.14489
29-Feb-08	1050	0.4625	0.350833	0.060606	-0.00538	-0.12656
31-Jan-08	990	0.465	0.401667	-0.06339	-0.00535	-0.11234
31-Dec-07	1057	0.4675	0.4525	-0.12645	-0.00532	-0.10099
30-Nov-07	1210	0.47	0.503333	-0.04874	-0.00529	-0.09173
31-Oct-07	1272	0.4725	0.554167	0.06	-0.00526	-0.08402
28-Sep-07	1200	0.475	0.605	0.090909	-0.00524	-0.07751
31-Aug-07	1100	0.4775	0.655833	-0.01786	-0.00521	-0.07193
31-Jul-07	1120	0.48	0.706667	-0.00885	-0.00518	-0.06711
29-Jun-07	1130	0.4825	0.7575	-0.03419	-0.00515	-0.06289
31-May-07	1170	0.485	0.808333	0	-0.00513	-0.05917
30-Apr-07	1170	0.4875	0.859167	0.086351	-0.0051	-0.05586
30-Mar-07	1077	0.49	0.91	-0.01644	-0.05618	0.062257
28-Feb-07	1095	0.519167	0.856667	0.057971	-0.05319	0.06639
31-Jan-07	1035	0.548333	0.803333	0.089474	-0.05051	0.071111
29-Dec-06	950	0.5775	0.75	-0.05	-0.04808	0.076555
30-Nov-06	1000	0.606667	0.696667	0.104972	-0.04587	0.082902
31-Oct-06	905	0.635833	0.643333	0.082536	-0.04386	0.090395
29-Sep-06	836	0.665	0.59	-0.03353	-0.04202	0.099379
31-Aug-06	865	0.694167	0.536667	0.165768	-0.04032	0.110345
31-Jul-06	742	0.723333	0.483333	-0.03007	-0.03876	0.124031
30-Jun-06	765	0.7525	0.43	-0.20313	-0.03731	0.141593

31-May-06	960	0.781667	0.376667	-0.02538	-0.03597	0.164948
28-Apr-06	985	0.810833	0.323333	-0.00203	-0.03472	0.197531
31-Mar-06	987	0.84	0.27	0.147674	0.000993	-0.00308
28-Feb-06	860	0.839167	0.270833	0.037394	0.000994	-0.00307
31-Jan-06	829	0.838333	0.271667	0.145028	0.000995	-0.00306
30-Dec-05	724	0.8375	0.2725	0.02695	0.000996	-0.00305
30-Nov-05	705	0.836667	0.273333	0.021739	0.000997	-0.00304
31-Oct-05	690	0.835833	0.274167	0.022222	0.000998	-0.00303
30-Sep-05	675	0.835	0.275	0.038462	0.000999	-0.00302
31-Aug-05	650	0.834167	0.275833	0.012461	0.001	-0.00301
29-Jul-05	642	0.833333	0.276667	0.110727	0.001001	-0.003
30-Jun-05	578	0.8325	0.2775	-0.02857	0.001002	-0.00299
31-May-05	595	0.831667	0.278333	0.034783	0.001003	-0.00299
29-Apr-05	575	0.830833	0.279167	0.093156	0.001004	-0.00298
31-Mar-05	526	0.83	0.28			