Capital Structure and IPO Market Timing in the UK

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Abstract

This paper examines how market timing attempts by firms impact capital structure. Market timers are identified as issuers in the hot market as evidenced in the literature. We provide evidence of market timing in the UK equity market. Market timing is examined by looking at the IPO event. The main findings are that firms time their equity issues to exploit opportunities in favourable equity markets. The effect is however temporary in nature and doesn't influence leverage levels in the long run.

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1. Introduction

There are three main competing theories in the literature of capital structure. The first, the trade-off theory stipulates that observed capital structures are the result of firms trading off the benefits of leverage against the cost of introducing debt in to the capital mix. The focal point of this theory implies that in order to maximize firm value, each firm adjusts towards an optimal debt ratio. However the financing needs of the firm varies over time. Thus firms may not always be at the optimal levels. The managers will then weigh the benefits of being on target versus the cost of being off target. As a result, a firm's capital structure is formed by gradual movement towards its optimal debt ratio.

The Pecking Order theory on the other hand implies that firms do not have a target or optimal capital structure, but instead follow a pecking order of incremental financing choices that places retained earnings at the top of order which is followed by debt issues. Equity is only issued as a last resort. This happens when firms have reached their debt capacity and it is no longer viable to raise more capital via debt issues.

The third theory which is the Equity Market Timing Theory suggests that mangers are able to identify certain windows of opportunity during which equity issuance is less costly due to mispricing. In theory if managers are able to time the equity issues, the cost of equity would be relatively lower. Thus managers would be increasing the value of the firm by lowering the overall cost of capital of the firm. However, managers would be doing this at the expense of new shareholders and the benefit would be transferred to existing shareholders.

Starting from Shyam-Sunder and Myers (1999), there is a whole strand of literature that focuses on empirically testing the different theories that attempt to explain capital structure decisions[2]. These studies have provided support for each of these theories. The trade-off theory is found to be able to explain how taxes, bankruptcy costs, security issuance costs, and the investment opportunity set of a firm influence financing decisions. The pecking order on the hand is found to be able to provide a superior explanation for observed capital structure for changes in capital structure. This theory offers a wholly plausible explanation as to why debt ratios and profitability are negatively related and why markets react negatively to al new equity issues. This theory also sheds light on to the question why firms have higher levels of cash than common sense or the trade-off theory suggest.

Many previous studies before Barker and Wurgler (2002) have also indirectly tested the Market Timing theory[3]. They have found that certain factors influence security decisions such as past stock prices, interest rate conditions and time-varying adverse selection costs of equity issuance. Overall these studies have shown that there is evidence of equity market timing by managers. The Market Timing Theory put forth by Baker and Wurgler (2002) argues that managers time the securities they issue. Given this argument, when the market values of equities are high,

[2] See Marsh (1982), Chrinko and Singha (2000), Fama and French (2002), Baker and Wurgler (2002), Frank and Goyal (2003), Loof (2003), Lemmon and Zender (2004), Autore and Kovacs (2006), Alti (2006)

[3] See Taggart (1977), Marsh (1982), Jalilvand and Harris (1984), Asquith and Mullins (1986), Korajczyk, Lucas and McDonald (1992), Choe, Masulis and Nanda (1993), Rajan and Zingales (1995), Bayless and Chaplinsky (1996), Pagano, Panetta and Zingales (1998), , Hovakimian, Opler and Titman (2001).

relative to book and past market valuations, managers will tend to prefer equity over debt and vice versa. This is also indirectly implies that managers would repurchase equity when their valuations are low.

This theory also predicts that the market timing of equity issues has a long-lasting effect on capital structure. Baker and Wurgler (2002) find that firms with lower levels of leverage are those that issued equity capital when their market valuations are high while firms with higher levels of leverage issued equity capital when their market valuations were low. They used the market-to-book ratio as an indicator of valuation. Several different empirical studies using different approaches have tested this theory and generally found support for the market timing predictions[4]. They have found that managers issue equity when market valuations of firms are high and turn to debt otherwise. However, these studies are unable to reach a consensus on the long-term impact of market timing on firms' capital structure. They find that market timing doesn't have a long-term impact as opposed to Baker and Wurgler (2002) who find that the impact can last up to 10 years.

This paper examines equity market timing during the IPO event in the UK. Most of the studies in the literature as above are focused on the US market. This would provide a basis for comparison for this relatively new field of study with respect to capital structure and corporate finance as a whole. Although both markets are similar in their structure, previous comparative studies have found that debt levels in these two countries to be significantly different. Antoniou, Guney and Paudyal (2008) report that mean values for debt in US to be about 27% and the UK to be about 18%. The valuation levels measured by market-to-book ratios are however found to be relatively similar (1.8 versus 1.7). Alti & Sulaeman (2008) further show that firms only exhibit timing behaviour during periods of high stock returns if there are high levels of demands from institutional investors. Studies have shown that in the 1990s, about 50% of shares in the US are owned by individuals, double the percentage in the UK[5]. This would prompt a study on the impact of market timing on firms operating in the UK. This study also looks at the interaction of growth prospects and firms size with hot markets. This will capture the effect market timing has on firms with differing growth potential and also various sizes.

There are several main findings and implications that can be drawn from this study. Firstly, firms evidently time equity issues in hot markets. This is found in the IPO sample .The pre-issue leverage levels for IPO firms are similar for hot and cold firms. Hot market IPO firms raise more equity than cold market firms. This is robust of growth opportunities as evidenced by significantly lower levels of investments and profitability. The decline in retained earnings and relatively similar level of dividends further support this notion. Furthermore, consistent with results in Alti (2006), hot market IPO firms undo timing attempts by increasing their leverage levels in the immediate two periods after going public. This effect is however less severe and cold market firms do reduce their leverage levels suggesting they may in fact have been timing the debt market. These further suggest that both hot and cold market firms converge around a similar level of target leverage. Although the results do not strongly discriminate the market timing view of irrational manager and rational investors, the evidence suggest that rational

[4] Korajczyk and Levy (2003), Alti (2006), Hovakimian (2006), Kayhan and Titman (2007), Elliot, Koeter-Kant and Warr (2007), Elliot, Koeter-Kant and Warr (2008), Huang and Ritter (2009).
[5] The Economist (1995)

managers may be able to identify windows of opportunities in the equity market due to irrational investors.

The remainder of this paper is organized as follows. Section 2 reviews the relevant literature. Section 3 provides a description of the data, variable definitions and the construct of the hot dummy. Section 4 empirically tests how hot markets affect equity issuance. Section 5 examines the how market timing attempts impact capital structure in the short run. Section 6 examines the impact in the long run. Section 7 tests whether companies reverse their timing attempts in subsequent years. Section 8 concludes.

2. Review of the literature

Market timing mechanisms are very critical in forming capital structure of firms as they drive the issuance decisions that managers take. This section will review the literature from several different aspects. Firstly, the practise of raising equity in patterns leads to hot capital markets. These patterns may be caused by misevaluations arising from irrational expectations from either the managers or the investors, Empirical studies have shown that hot capital markets affect firms in different ways which include deviation from optimal levels (if existing) of capital structure and also post-issue stock returns. Pagano, Panetta and Zingales (1998) focus on private firms in Italy and investigate why firms decide to go for IPOs. They find that the likelihood of an IPO is increasing in the firm's size and the industry's market-to-book ratio. According to the authors, companies appear to go public not to finance future investment and growth but to rebalance their accounts after high investment and growth.

Secondly, according to Baker and Wurgler (2002), capital structure is the aggregate outcome of firm's historical attempts at timing the market. This approach looks at capital structure from a market oriented pecking order where firms would raise capital based on cost of capital as dictated by prevailing market conditions. The authors find that market timing has a long-term and persistent effect on the capital structure of firms. On the other hand, contradictory evidence shows that market timing behaviour has only a short-term impact on firms' capital structures.

Thirdly, although attractive market conditions may cause firms to deviate from their original leverage ratios, the effect tends to be reversed and firms tend to rebalance their capital structure sooner or later. In this sense the market timing approach is similar to a modified version of the trade-off theory which incorporates a timing factor. The market timing theory of capital structure attempts to address the behavioural aspect of corporate finance and shed more light than the traditional approach. However, much remains to be explored in this area.

2.1 The hot issue market

The literature that looks at hot equity markets have generally focused on both IPOs and SEOs. The notion of 'hot market' was first discussed by Ibbotson and Jaffe (1975). The authors show the existence of hot markets where offering prices were higher than the average prima in the aftermarket. Further empirical evidence is provided by Ibbotson, Sindelar and Ritter (1994) where stock prices of firms that went public in hot markets underperformed for five years following the offerings. They also show that the earnings per share grow rapidly in years preceding the IPO but surprisingly decline during IPO period and for the subsequent years. This

underperformance was mainly from firms that went public during periods of heavy volume. Firms that went public in the lower volume years on the other hand didn't exhibit such levels of underperformance.

In a different study Choe, Masulis and Nanda (1993) look at the time-varying adverse selection costs of issuing equity. The authors state that during the expansionary phase of the business cycle, a larger number of firms issue shares. During these periods, equities make up a substantially larger proportion of external financing. According to the authors firms sell seasoned equity when they are faced with lower adverse selection costs due to more promising investments opportunities and there is less uncertainty about assets in place. Thus they predict that firm announcements about equity issues convey less adverse information about the values of equity in such periods. Their results support these predictions. It is also found that business cycle variables have significant explanatory power and interest rate variables are generally insignificant.

Bayless and Chaplinsky (1996) look at whether there are windows of opportunity for seasoned equity issues. They directly link the decision to issue equity and the cost of issuing. In their model, the authors argue that if information costs are a significant deterrent to equity issue, periods of reduced information costs should be periods of relatively high issue volume. Hot periods are defined as high equity issue volume periods, and cold periods as the low volume periods. Based on this, they are able to show that the average price reaction in hot markets is significantly less negative while the price reaction in cold is significantly more negative than at other times. Their findings also show that lower price reaction in hot markets is economically important and is independent of the macroeconomic characteristics of hot and cold markets. Thus, their findings support the notion of windows of opportunity for equity issues that result at least partially from reduced levels of asymmetric information.

Loughran, Ritter and Rydqvist (1994) found that IPO volumes were significantly correlated to stock market valuations in major markets across the worlds. In another study in the US, Hovakimian, Opler and Titman (2001) found that SEO issues were also highly correlated with stock prices. In the UK, Marsh (1982) has documented a similar pattern where firms tend to issue equity when prices are high. Ritter (1984) found that timing of IPOs does matter for specific industries. Therefore based on these studies it can be argued that hot markets emerge because firms can go public at certain periods where there are higher price-earnings and market-to-book ratios. Logically this would lead to a period of high volume of equity issues. Rather than economic business cycles, this large increase in volumes may indeed be a result of firms attempting to time their equity issues. If indeed managers are able to take advantage of these situations, lower subsequent performance should be observed.

The literature has several different explanations for the reason behind this hot market occurrence and also how the hot and cold market firms may differ. Empirical studies look at the long-term performance of IPOs and models of decisions to go public or remain private and theoretical models look at under pricing as a signalling mechanism. According to long-term performance studies, hot market firms are lower quality and have lower stock returns than cold market firm (e.g. Loughran and Ritter (1995) and Field (1997)). Hot markets are viewed as a result of irrational investors who are overly bullish. This provides a "window of opportunity" for manager

to issue equity. Contrastingly, the signalling mechanism view of hot markets are when a greater number of high quality of firms choose to go public (e.g. Allen and Faulhaber (1989), Grinblatt and Hwang (1989) and Welch (1989)). These studies firms opt for hot markets because offer prices are less affected by adverse selection costs.

Several other studies focus on how hot markets are caused by shocks in productivity or advancements of technology (e.g. Maksimovic and Pichler (2001), Stoughton, Wong and Zechner (2001) and Benviste, Busaba and Wilhem (2002)). Their results show that hot markets consist mainly of small and risky firms from particular industries. These particular firms have growth potential although they may not be profitable in the subsequent years. Helwege and Liang (2004) on the other hand found that hot market firms didn't differ in terms of quality such as profitability, size and sales. They did however show that cold market IPO firms generally had lower levels of capital expenditures. The authors also found no difference in terms of long-run underperformance of hot and cold market firms. This indicates that hot markets occur because of greater investor optimism and are not driven by managerial behavioural aspect.

2.2 Capital structure rebalancing

There is a strong debate with regards to firms having a target capital structure and rebalance their leverage ratios after timing their equity issues and in subsequent years moving towards their original targets. Market timing theory provides two different implications of capital structure. In the original argument by Baker and Wurgler (2002) firms issue securities when they perceive them to be overvalued. Based on this framework, firms issue securities based on managers attempting to time the market, while the security issue choice is not influenced by previous issue activities. This study found that equity issuance in times of high market valuations has a persistent impact on capital structure. Thus, they argue, capital structure is the cumulate outcome of previous timing attempts by firms. Welch (2004) found that equity price shocks also have a long-lasting effect on capital structure. Welch iterates that firms do not rebalance their capital structure in response to shocks in market value in spite of active net issuing activity. Thus it can be said that stock returns are the primary driver of capital structure changes. The author however states that net issuing activity remain a mystery. These studies show that market timing attempts have a persistent effect on leverage ratios and firms do not rebalance towards and optimal capital structure.

The second view of market timing contradicts the above studies. Flannery and Rangan (2006) estimate a partial-adjustment model of firm leverage decisions and conclude that firms do have a target capital structure. They observe "targeting" behaviour as opposed to timing or pecking order considerations explain a significant change in leverage ratios. Leary and Roberts (2005) argue that the persistence observed by Baker and Wurgler (2002) is attributed to adjustment costs. Further evidence is provided by Alti (2006) who finds that after timing the decision to go public in hot markets, firms tend to issue more debt in subsequent two to three years. This results in a reversal of leverage ratios during the post-IPO period. Kayhan and Titman (2007) look at stock prices and financing deficits and find that these two elements have strong influences on capital structure changes. However, their effects are at least partially reversed. The authors show that although firms' history strongly influences their capital structure, firms tend to move towards a target debt ratio over a period of time. Hovakimian (2006) tests the persistence effect

and finds that firms time equity issues to periods of high market-to-book ratios but the effects are economically small and short-lived. This study also proves that the effect of timing of equity repurchases on leverage ratios is even weaker. However, the author finds that debt issues have a significant long-lasting effect on capital structure, but their timing is unlikely to induce a negative relation between market-to-book and leverage. Debt redemptions are also found to have a significant effect on leverage ratios.

3. Data

3.1 Data description and summary of statistics

This study will be looking at market timing from the IPO event. The data comprises of all firms that went public from the period of 1st January 1979 – 31st December 2008 in the UK that are available in the DataStream database including dead firms. Like several previous studies, IPO dates are assumed as the first month the share price becomes available on DataStream. The initial sample for IPO firms contained 3487 firms. The inclusion of data from the current credit crunch related crisis allows a better examination of market timing.

Variables definitions are based on the literature. Book leverage, (D/A) is defined as book debt divided by total assets. Market-to-book ratio (M/B) is the ratio of book value of total assets less book value of equity plus market value of equity to book value of total assets. Profitability (EBTIDA/A) is the earnings before interest, taxes and depreciation over total assets. SIZE is the logarithm of net sales in millions of 1979 pounds for the IPO data set. Tangibility of assets, PPE/A is defined as net plant, property and equipment over total assets. R&D/A is defined as research and development expenses scaled by total assets. In the regression analysis, RDD is a dummy variable which takes the value of one when R&D is missing in DataStream. INV/A is the capital expenditure divided by total assets. DIV/E is the cash dividends paid divided by the book equity. CASH/A refers to cash and short-term investments scaled by total assets. The net debt issues, d/A are the changes in book debt over total assets. The net equity issues, e/A, are the changes in book equity minus the change in retained earnings divided over total assets. ΔRE/A, the newly retained earnings is the change in retained earnings divide scaled by total assets.

Following the previous literature financial firms are dropped from the sample. To minimize the influence of outliers, observations with a market-to-book ratio of greater than 10.0, book leverage (D/A) greater than 100% and earnings before interest, taxes, and depreciation scaled by assets (EBITDA/A) greater than 100% are dropped. Firm-year observations for which d/A, e/A, ΔRE/A, EBTIDA/A, INV/A and DIV/E exceeding 100% in absolute value are also dropped from the sample. Firms where data from the pre-IPO year is not available are removed from the IPO sample.

The statistics of firm specific characteristics and financing activities for IPO firms are summarised in Table 1. The number of observations decreases due to probable bankruptcies or mergers and acquisitions. The analysis is done in IPO time where IPO year is the fiscal year the firm goes public and IPO + *k* is the *k*th fiscal year after the IPO. Clearly debt ratios decline during IPO year to levels lower than pre-IPO and increase to higher levels roughly about 2 years after the IPO year. Size increases with age for IPO firms. Market-to-book ratio also decreases

for IPO firms. Investment levels also display a decreasing trend for the sample. R&D expenses are also higher during equity issues and decline in subsequent years[6]. Profitability is lower during IPO year and increases in the following years[7]. Cash balances reduce over time after the IPO event. Tangibility and dividends are increasing over the period observed.

[Insert table 1 about here]

3.2 Defining hot markets

Hot markets are defined based on the issuance volumes for the total market in the given period. This is done to examine timing behaviour in equity markets. This study follows Alti (2006) and constructs a dummy variable based on the volume to define timing attempts by firms. For the IPO sample, monthly IPO volume is used. The period used for IPO firms is 1st January 1979 to 31st December 2008. The number of issues is smoothened using a 3 month moving average to iron out seasonal variations[8]. The UK economy grew by about 2.4%[9] per annum over the period, thus the moving average is further detrended at 0.2% per month. Hot (cold) months are then defined as the months where the IPO volume is above (below) the median across the given period. Figure 1 shows the detrended volume of IPO for the observed period and the horizontal line cutting across the figure is the median which is 7.19. The figure illustrates that there is a significant difference in terms of volume in hot and cold periods. In this study, the sample constitutes of 394 hot firms and 186 cold firms.

[Insert figure 1 about here]

4. How Market Timing Affects Equity Issuance

4.1 Hot market and timing attempts

Ibbotson and Jaffe (1975) found that there were hot and cold issue markets for IPO markets. The authors argue that such durations are usually accompanied by high number of offerings, severe underpricing or oversubscription of offerings. Several subsequent studies documented the occurrence of hot and cold equity market[10]. Empirical studies have shown that there are different plausible explanations for the hot and cold IPO market namely the changing business conditions (Pastor and Veronesi 2005) and investor sentiments (Ritter 1991). Ivanov and Lewis (2008) consider several different explanations and provide empirical evidence that time variation in business conditions and investor sentiments are important determinants of monthly issue activity. The authors also show that time variation in adverse selection costs does not significantly affect IPO volume. Henderson, Jegadeesh and Weisbach (2006) investigate world markets for raising

[6] Kim and Weisbach (2008) find evidence that incremental dollar from equity issues across 38 different countries are spent on capital expenditure and R&D.
[7] Jain and Kini (1994), Mikkelson, Partch and Shah (1997) and Alti (2006) document similar trends among IPO firms.
[8] This is done following previous studies e.g. Helwege and Liang (2004) and Alti (2006).
[9] Growth is at 1979 prices.
[10] See Ibbotson, Sindelar and Ritter (1988), Loughran, Ritter and Rydqvist (1994) and Alti (2006).

new capital and provide empirical evidence that market timing considerations are also important in SEO markets. Kim and Weisbach (2008) further argue that firms with a higher market-to-book ratio offer a higher fraction of secondary shares in SEOs than low market-to-book firms. Thus, market timing plays a critical role in equity issues.

The theory of market timing implies that firms would issue equity when managers believe when market conditions are relatively favourable. Alti (2006) argues that the hot dummy captures this implication of the market timing theory. Market timing would also imply that firms that issue equity when the market is more favourable would sell more equity and thus be able to raise more capital relative to when markets are unfavourable. This section will examine this notion of market timing. This study emulates Alti (2006) and identifies hot market firms as timers to avoid the concerns surrounding the use of market-to-book ratio (or M/B_{efwa})[11] as an indicator for market timers.

The amount of capital that is raised during equity issue is measured as Proceeds/A_t and is defined as proceeds from the sale of equities scaled by year-end total assets. The data is obtained from the London Stock Exchange and is matched with the earlier selected sample. The number of observations is reduced due data being unavailable. Panel A of table 2 shows the mean values of proceeds raised by hot and cold market firms for the IPO sample relative to their assets. Surprisingly hot firms raise relatively the same amount of capital as their cold market counterparts. The difference is not statistically significant. However, this estimate may be distorted since the amount is normalized by IPO year-end assets. This could be due to the additional capital raised mainly adds to assets. To examine this effect, the proceeds are then divided by total assets at the beginning of the IPO year (Proceeds/A_{t-1}). The market timing effect is evident in this measure where hot market firms raise more capital (114.54%) than cold market firms (86.86%). This difference is however not statistically significant.

[Insert table 2 about here]

The difference in amount of capital raised by hot and cold market firms may result from different characteristics of hot and cold market firms. To examine this difference the following regressions is run to control for firms specific determinants of equity issues:

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B_t} + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A_{t-1}} + \varepsilon_t \quad (1)$$

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B_t} + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A_{t-1}} + \beta_9 HOT * \frac{M}{B_t} + \beta_{10} HOT * Size_{t-1} + \varepsilon_t \quad (2)$$

where t is the IPO year. Emulating Alti (2006) the HOT dummy is intended to capture the equity market timing effect. The control variables used to identify the differences in between hot and cold market issuers are the market-to-book ratio, profitability size, tangibility, research and

[11] See Hennesy and Whited (2004), Leary and Roberts (2005) and Kayhan and Titman (2007) for criticism on the use of market-to-book ratio as an indicator for market timing.

development expenses and lagged book leverage[12]. RDD is a dummy variable which takes the value 1 if no research and development is reported in Datastream[13]. These regressions and all subsequent results reported in this study are done with industry dummies to control for heterogeneity in industry characteristics. All the independent variables are also lagged by one except for the market-to-book ratio.

The interaction term HOT*M/B_t and HOT*$Size_{t-1}$ is also included in the results. This is due to the notion that firms with different growth opportunities and sizes would behave differently with regards to market timing attempts[14]. Alti (2006) finds that the 'HOT' dummy is significantly and positively correlated with the amount of proceeds from IPOs scaled by asset size of issuing firms. Thus the author concludes that hot-market firms tend to issue more equity and thus raise more capital. Thus, a positive and significant relationship is expected between the 'HOT' dummy and the dependent variables (Proceeds/A_t and Proceeds/A_{t-1}). The coefficient for market-to-book is also expected to be positive. The coefficient of the lagged leverage on the other hand is expected to be negative. The first four columns in Panel B of table 2 reports the results for the regressions.

For IPO firms, the hot dummy has a surprising negative correlation with proceeds divided by year-end total assets. This results is however not statistically significant. The second column shows the expanded model which includes the interaction term. This results show that hot market firms that have higher growth opportunities has a positive correlation with proceeds. Thus for hot market firms, a one unit increase in growth opportunities would result in 5.79% increase in amount of proceeds divided by year-end assets. The second interaction term also has a positive coefficient. Thus, for hot market firms, one percent increase in size would lead to a 7.26% increase in proceeds relative to assets.

The impact of market timing is evident when proceeds are divided by total assets from the beginning of the year. The coefficient is 31.57. Although the result is not statistically significant it is economically significant given the large coefficient. Therefore, firms that go public in a hot market (firms that time the market) would be able to raise 31.57% more capital than cold market firms. The interaction between the hot dummy and market-to-book ratio also has a positive coefficient. This would mean that for hot market firms, a one unit increase in growth opportunities would result in 8.62% increase in proceeds raised. The second interaction term is however negative. This would mean a one unit increase in size would result in a 2.96% decrease in proceeds from IPO event.

The market-to-book ratio in the first column has a coefficient of 21.04 which is significant at 1% and indicates that firms with more growth opportunities tend to raise more capital. A similarly large positive coefficient with a significant relationship is observed in the third column. Size also has a positive coefficient of 5.40 and is significant at 5%. This would mean that larger firms raise more capital during the IPO event. Profitability on the other hand has a negative and significant

[12] This is based on Rajan and Zingales (1995) and Titman and Wessels (1988) where these variables are identified as the main determinants of issuance.
[13] This is similar to Baker and Wurgler (2002) and Alti (2006)
[14] All the variables that are interacted are checked for multi-colinearity and results are robust of VIF and tolerance levels. The regressions do not violate OLS assumptions.

relationship with proceeds. Thus, profitable firms tend to raise less capital from the IPO event. This would suggest that they face less demand for external form of financing or may choose an alternative choice of financing.

The last two columns in table 2 reports the net debt issued for hot and cold market firms. For IPO firms, Panel A shows that on average hot market firms issue 0.21% less net debt than cold market firms. This difference is however not statistically significant.. Panel B shows the results for the multiple regressions. Surprisingly, for IPO firms, the hot market effect is positive. This effect is however not statistically significant and the coefficient is quite small. The interaction term between growth and the hot dummy is also positive. It suggests that hot market firms with greater growth opportunities would also issue more debt. This result is however not statistically significant. A similar positive but insignificant coefficient is obtained for the second interaction term.

The market-to-book ratio for IPO firms has a negative correlation with net debt issued which is statistically significant at 1%. This would be in line with the results in the first column where firms with more growth potential would raise more capital during the IPO. Size has a negative coefficient which further validates the result in the first column. Tangibility and lagged leverage are both statistically significant and have the expected signs.

4.2 Difference in quality of hot market and cold market firms

The literature suggests that the reasons firms issue more equity could be due to other than market timing considerations. The first possibility would be that firms are attempting to lower their leverage ratios as their prior ratios may be too high. This is examined in the first column in table 3 in Panel A that shows the mean levels of leverage of hot market firms in the IPO sample have lower levels of leverage than their cold market counterparts (t-value of difference is 1.72). Panel B shows the results of regression of the book leverage at beginning of the year of IPO firms with the hot market dummy and similar control variables with an exception of the market-to-book ratio. The coefficient is surprisingly positive but is insignificant. The next column shows the expanded model. The interaction between the hot dummy and size also yields in a positive coefficient although insignificant as well.

[Insert table 3 about here]

The second possibility that is suggested in the literature is that firms would issue equity to finance growth[15]. Thus, hot market firms may raise more capital through equity as they may have more growth opportunities relative to cold market firms. Panel A of the third column in table 3 shows that the mean investment levels for hot market firms are lower than cold market firms by 1.85% (t-value of difference is 2.07). The significantly lower levels of investment persist throughout the subsequent two years from IPO year. The regression results in the third column of Panel B show that the hot dummy is negatively correlated to investment levels on IPO year. This result is however not statistically significant. The next column however shows that the negative correlation is offset by an increase in growth opportunities and size for hot market firms.

[15] Kim and Weisbach (2008) show firms spend substantial amounts of proceeds from equity issues on R&D and capital expenditure

The results in table 3 show that there is a strong and significant relationship between the market-to-book ratio and growth opportunities. Alti (2006) also obtains similar results and suggests that this may highlight the weakness in using the market-to-book ratio as a measure for market timing. The relationship obtained between the market-to-book ratio and equity issues may in fact be due to growth opportunities that trigger higher levels of equity issues.

Market timing considerations may prompt less profitable firms to issue equity when the market is more favourable as they may find it difficult to raise capital in the equity market in less favourable conditions. The next ten columns in table 3 validate this notion. Panel A of shows that the average profitability of hot market firms is less than half of cold market firms. The difference is statistically significant well beyond the IPO year. The regression results show that the hot dummy is negatively correlated to profitability. This relationship is significant at 5%[16]. The next column shows that the negative correlation is even evident for hot market firms with high levels of growth opportunities. The interaction with size however is positive and suggests that an increase in size reduces the negative correlation. The negative correlation between the hot dummy and profitability persists for the subsequent years.

The amount of dividends that firms pay out during IPO year is relatively similar for hot and cold market firms. However, IPO year is the only year where mean levels of dividends paid is higher for hot market firms. In the subsequent two years, cold market firms issue more dividend than hot market firms. This difference of mean values is significant in the second year after IPO year. The hot market dummy has a positive but insignificant coefficient during IPO year. The coefficient remains positive for the first year after IPO but is negative for the second year after IPO. The interaction of the hot dummy with market-to-book term also has a positive coefficient that is statistically significant at 10%. Thus, hot market firms with higher growth opportunities pay higher levels of dividends during IPO year. This interaction term remains positive for the subsequent two years. The second interaction term also has a positive coefficient that is statistically significant at 5%. Larger hot market firms would therefore issue higher levels of dividend. The coefficient for this term increases in the first year after the IPO year and remains statistically significant.

To sum up this section, issuance volume does indicate market timing attempts by firms. Firms that go public in hot markets tend to raise more proceeds than their cold market counterparts. Prior levels of leverage do not seem to cause this hot market effect. The additional amount of equity issued is also not accounted for by an increase amount of external amount of financing needed by hot market firms in subsequent years. Hot market firms tend to have inferior levels of performance and also lower levels of need for external financing as justified by their lower levels of investments. This suggests that they are exploiting windows of opportunities to raise equity capital. Thus, market timing considerations rather than financing or investing needs seems to drive equity issues among IPO firms.

[16] Alti (2006) highlights that the lower levels of profitability for hot market firms is due in part to their larger asset base at the end of IPO year

5. The impact of market timing on capital structure in the short-run

The earlier section of the paper showed that hot market influences firm's decision making with regards to equity issues. Thus, market timing theory would predict that leverage ratios would be lower for hot market firms during IPO event. This section will show the impact of such timing attempts on firms' capital structure and further dissect the impact with regards to changes in the balance sheet.

The first aspect that will be examined is the change in leverage levels from pre-issue year to issue year. The mean values of the change are reported in the first column of Panel A in Table 4. Clearly both hot and cold market firms have reduced leverage levels in the IPO year. However, on average the reduction is 0.88% greater for hot market firms. The difference is however not significant statistically. To probe further into this change, the change in leverage is modelled with the hot dummy and other determinants that control for change in leverage in the following forms:

$$\frac{D}{A_t} - \frac{D}{A_{t-1}} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B_t} + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD + \beta_8 \frac{D}{A_{t-1}} + \varepsilon_t \quad (3)$$

$$\frac{D}{A_t} - \frac{D}{A_{t-1}} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B_t} + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD + \beta_8 \frac{D}{A_{t-1}} + \beta_9 HOT * \frac{M}{B_t} + \beta_{10} HOT * Size_{t-1} + \varepsilon_t \quad (4)$$

Panel B in Table 4 reports the results. The hot dummy has a negative correlation with the change in leverage. Although the result is not statistically significant, it may be economically significant as the reduction in leverage is 1.08%. The next column shows results for the expanded model. Both interaction terms yield in positive coefficients. This suggests that increase in size and growth opportunities reduces the decrease in leverage for hot market firms.

[Insert table 4 about here]

The change in leverage can be further decomposed as follows:[17]

$$\frac{D}{A_t} - \frac{D}{A_{t-1}} = -\frac{e}{A_t} + \frac{E}{A_{t-1}} \times \frac{(\Delta Cash + \Delta Other\ Assets)}{A}_t - \frac{\Delta RE}{A}_t \quad (5)$$

The four components in the decomposition are used as dependent variable in the models as expressed in 3 and 4. The first term is the negative net equity issued in year *t*. This differs from Proceeds/A_t as it includes other forms of equity issues and repurchases (including through mergers and employee stock options). If firms were issuing equity to retire debt, then the change would be unity. However, if firms utilise equity issues to add to assets than this would lead to a relationship that is less than one. The second term is intended to capture the increase in assets. The literature suggests that firms issue equity to finance projects and also build up cash reserves

[17] This decomposition is similar to Baker and Wurgler (2002) and Alti (2006)

that could utilised in later years[18]. The last term is the change in retained earnings. Newly obtained retained earnings would add to equity and in turn lead to a reduction in debt ratios.

In the third column of Panel A in table 4 shows that on average, hot market firms issued 4.18% more equity than cold market firms in the IPO year[19]. This difference is statistically significant. Panel B shows the regression results after controlling for other determinants. The hot dummy has a positive 1.23 coefficient. The interaction between the hot market dummy and the market-to-book ratio gives a negative coefficient and suggests that growth opportunities reduce the positive correlation. The next interaction term shows that size increases the positive correlation.

Both hot and cold market firms have an average increase in cash during IPO year. However, the increase for hot market firms is more than double that of cold market firms. The difference is also significant. The regression results in Panel B of table 4 show that the hot market effect on the change in cash is 2.36% and the coefficient is significant. The next column shows that the increase in cash is however lower for hot market firms with higher growth opportunities. Firm size also has a similar coefficient. The average change in long-term assets for hot market firms is lower for IPO firms. Although the difference is not significant, it is consistent with the values observed in section 4.2. Panel B shows that the hot market effect coefficient is negative 3.10. The next column shows that the negative correlation is higher for firms with higher market-to-book ratios. An increase in size however reduces the negative relationship.

The last term in the decomposition is the change in retained earnings. Panel A in Table 4 shows that on the average hot market IPO firms had a reduction in retained earnings. Cold market firms on the other hand had a slight increase in retained earnings. The results in Panel B indicate that newly added retained earnings are 1.14% lower for hot market firms. The next column shows that one unit increase in growth opportunities for hot market firms' further lowers retained earnings by 1.22%. This effect is statistically significant at 10%. An increase in size however reduces the decrease in retained earnings for hot market firms.

The results reveal that during hot markets, IPO firms issue more equity and less debt. Alti (2006) argues that part of the hot market effect on leverage is further masked by higher retained earning that cold market firms generate. In the IPO market, hot and cold market firms differ in the increase of long-term assets. Cold market firms tend to invest more in long-term assets. The difference is however not statistically significant. The additional equity that hot market firms issue generally results in a build-up of cash levels. Thus, it is evident that hot market firms are timing the equity market to tap windows of opportunities and raise more capital than their financing needs would dictate.

The last two columns in Table 4 examine the book leverage during the issue year. For IPO firms, hot market firms have on average 3.33% lower levels of leverage than cold market firms. This difference is statistically significant. This is estimated as:

$$\frac{D}{A_t} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B_t} + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD + \beta_8 \frac{D}{A_{t-1}} + \varepsilon_t \quad (6)$$

[18] Emulating Alti (2006), the dependent variables $\Delta Cash/A_t$ and $\Delta Other\ Assets/A_t$ are not multiplied by $(E/A)_{t-1}$.
[19] This result further supports the findings in section 4.1.

$$\frac{D}{A_t} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B_t} + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD + \beta_8 \frac{D}{A_{t-1}} + \beta_8 HOT * \frac{M}{B_t} + \beta_9 HOT * Size_{t-1} + \varepsilon_t \quad (7)$$

Alti (2006) iterates that the coefficient for the hot dummy would be zero if hot and cold market firms did not differ in the levels they deviated from their target leverage. The final two columns in Panel B of table 4 present the results of the coefficients. The coefficient is negative although insignificant. The next column shows that increase in growth opportunities would result in a larger negative coefficient. Size however reduces the negative correlation.

6. The impact of market timing in the long-run

The earlier section examined how market timing attempts shapes the capital structure of firms. The results show that hot market IPO firms reduced leverage levels to a greater extent than cold market firms even though their pre-issue levels were similar. This resulted in hot market IPO firms having lower levels of leverage at the end of issue year. However the level they deviated from their target leverage was not significantly affected.

Thus, the next question this paper will examine is whether the difference is evident in subsequent years. To analyze this difference the change in leverage with regards to pre-issue levels are examined as:

$$\frac{D}{A_t} - \frac{D}{A_{PRE-IPO/PRE-SEO}} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B_{t-1}} + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD + \beta_8 \frac{D}{A_{t-1}} + \varepsilon_t \quad (8)$$

$$\frac{D}{A_t} - \frac{D}{A_{PRE-IPO/PRE-SEO}} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B_{t-1}} + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD + \beta_8 \frac{D}{A_{Pre-IPO/SEO}} + \beta_9 HOT * \frac{M}{B_t} + \beta_{10} HOT * Size_{t-1} + \varepsilon_t \quad (9)$$

The theory of market timing implies that timing attempts have a long-term effect on capital structure. If this holds, the difference in current leverage levels and pre-issue levels should be reflected in the hot dummy in subsequent years. Table 5 shows the results for the regressions as expressed in equation 8 and 9. Panel A in table 5 reveals that the average levels for hot market firms is negative during the IPO+1 period. This difference is however reducing and becomes positive by the IPO+4 period. The hot market dummy for IPO firms in Panel B of table 5 has a coefficient of -0.37 in the IPO+1 period. During the IPO year, the coefficient was -1.08. The value has reduced by more than half. The next column shows that the negative value is higher for firms with higher growth opportunities. Contrastingly, for larger firms the reduction of the coefficient is less and the effect is significant at 5%.

[Insert table 5 about here]

The next two columns show the regressions without the market-to-book ratio. The results are similar. The hot market dummy has been reduced to -0.43. The interaction with firm size also

has a similar effect. The effect remains negative in the second year after the IPO. In the third year after IPO the effect has totally disappeared. The hot dummy coefficient has turned positive. In the fourth year, the positive coefficient is significant at 10%. The interaction terms show that growth opportunities and firm size increase further increase the effect. If market-to-book ratio is excluded from the regressions, the results are still similar. The coefficient remains positive until the seventh year after the IPO.

The regressions are repeated for book leverage. The results show the hot dummy is positive in the first year after the IPO. The next column shows that this effect is reduced for hot market firms with increase growth opportunities. Firm size however significantly increases the effect. The regressions are repeated without the market-to-book ratio in the next two columns. The results are similar. The coefficient remains positive until the seventh year after the IPO. The coefficient increases throughout the observation period. This suggests a reversal in the hot market effect for IPO firms beginning immediately after the IPO event. This is further evidenced by the average levels of book debt are almost similar for hot market and cold market firms. These conclusions do not concur with the findings in Barker and Wurgler (2002).

7. Capital structure rebalancing

This section will examine whether firms attempt to revert to their target leverage ratios after the issuance event. This may occur in two possible ways. The first would be that firms would issue securities in subsequent years to adjust their capital structure and move towards their targets. However if firms are not moving towards a particular target, no obvious tendency of reversal would be observed. The second possible alternative would be that the firm characteristics have changed and the target leverage would now resemble the existing leverage levels. This could be due to the existence of recapitalization costs. Given that recapitalizing capital would be costly, firms would not issue (retire) securities frequently. These activities would be limited and also be lumped in clusters. When managers do raise capital, this not only reflects current expectations but also anticipation of the landscape of the future[20].

It can be argued that hot and cold market firms may have different outlooks about their futures and thus choose to raise different levels of capitals during equity issues. The earlier analysis indicates that hot market IPO firms appear to be underleveraged during the issue event. However, this may in fact be optimal from a dynamic view. This could be due to the fact that over a certain period of time, managers may in fact be anticipating changes in the future that brings the target leverage ratio back in line to their current ratios. However, this change happens due to changes in the firm characteristics rather than leverage itself. If this notion is supported in this section, it would explain the disappearance of the hot market effect post issuance and also casts doubts on the market timing findings from previous sections.

Examining changes in leverage in subsequent years would give a better picture of this. If firms that go public in a hot market have a leverage ratio that is in fact optimal and yet lower than their cold market counterparts, there should be no systematic increase in debt ratios. Panel A in table 6

[20] See Fischer, Heinkel and Zechner (1989) and Titman and Tsyplakov (2003) where current optimal ratios may in fact not be optimal if future recapitalisation costs are considered

reveals that both hot market and cold market firms continue to increase their leverage levels in the IPO+1 and IPO+2 period. The differences in increases between the two groups are however not statistically significant from each other. Unreported results show that hot market firms appear to be content with their debt leves after these two years and changes in leverages are small in subsequent years. A similar trend is observed for cold market firms except for the IPO+5 period where the leverage ratio increases by 2.03%. To further evaluate the notion of recapitalization versus market timing considerations, the following regression for the change in leverage is done:

$$\frac{D}{A_t} - \frac{D}{A_{t-1}} = \alpha + \beta_1 HOT + \beta_2 Market_t + \beta_3 \frac{M}{B}_{t-1} + \beta_4 \frac{EBITDA}{A}_{t-1} + \beta_5 Size_{t-1} + \beta_6 \frac{PPE}{A}_{t-1} + \beta_7 \frac{R\&D}{A}_{t-1} + \beta_8 RDD_{t-1} + \beta_9 d_{high-lev} + \beta_{10} d_{low-lev} + \varepsilon_t \quad (10)$$

$$\frac{D}{A_t} - \frac{D}{A_{t-1}} = \alpha + \beta_1 HOT + \beta_2 Market_t + \beta_3 \frac{M}{B}_{t-1} + \beta_4 \frac{EBITDA}{A}_{t-1} + \beta_5 Size_{t-1} + \beta_6 \frac{PPE}{A}_{t-1} + \beta_7 \frac{R\&D}{A}_{t-1} + \beta_8 RDD_{t-1} + \beta_9 d_{high-lev} + \beta_{10} d_{low-lev} + \beta_{11} HOT * M/B_{t-1} + \beta_{12} HOT * Size_{t-1} + \varepsilon_t \quad (11)$$

[Insert table 6 about here]

In the above expressions, the dummy variables $d_{high\text{-}lev}$ *(*$d_{low\text{-}lev}$*)* takes the value of 1 (0) if lagged book leverage is greater than 80% (less than 10%)[21]. The model also includes the Market dummy which takes the value of 1 if the IPO market in the year t is hot (the IPO volume exceeds the median value) or 0 if otherwise[22]. This is intended to control for external market conditions that may influence financing decisions due to the cyclical nature of hot and cold markets. The results of the regressions are in Panel B. If firms were indeed timing the equity market, they would indeed be underleveraged during the IPO year. Thus, they would steadily increase their leverage ratios in subsequent years. This is however not the case as the HOT dummy has a negative correlation in the IPO+1 and IPO+2 period. Unreported results show that the coefficient becomes positive in the IPO+3 period but remains insignificant statistically.

The leverage ratio of a firm is also influenced by external financing issuance. The net debt issued is further considered in table 11. The average levels of this ratio are relatively the same for hot and cold firms in both IPO+1 and IPO+2 period. Unreported results show that the levels only differ significantly during the IPO+5 year. The regressions results reveal that the hot dummy is positive but insignificant during the two years considered. The result for the interaction term shows that the increase of size significantly increases the net debt issued during the IPO+1 period suggesting that larger firms may revert to targets faster. Unreported results show that the coefficient increases to 1.76 during the IPO+3 period but remains insignificant statistically. The coefficient then turns negative and remains insignificant during IPO+4 and IPO+5 periods. The effect of net equity issued is then considered. The average levels of net equity issued by hot market firms surprisingly is higher than cold market firms during the IPO+1 period. The level is however lower for the IPO+2 period. The hot dummy is positive in the IPO+1 period and gets larger during the next year. It is also statistically significant. This to a certain extent undermines

[21] This expression excludes lagged leverage as it would counter the effect of market timing. This is based on Alti (2006).

[22] SEO volume is not used as these firms would still be influenced by conditions in the IPO market. Alti (2006) uses a similar construct.

the reversal notion as well as the market timing expectations. Unreported results show that the hot variable remains positive for the IPO+3 period. The coefficient however is negative 2.83 and is statistically significant in the next year. This coefficient remains negative up to IPO+7 period.

Interestingly the results could also show that financing patterns exhibited by hot market firms could indeed be a reflection of pecking order considerations. Results in earlier sections show that hot market firms tend to have lower profits. Thus they may indeed rely more extensively on external financing. Considering net debt issued as a fraction of total securities issued would be able to test this notion further[23]. Panel A in table 6 shows that average for this ratio is lower for hot market firms during the first year after the IPO. The level is however higher for hot market firms during the second year after the IPO. Unreported results show that during the third year onwards the levels drops to less than half of cold market firms. This suggests that hot market firms only issue comparable levels of debt during the first two years after the IPO event. The regression results further support this notion of reverting to target leverage. In the first year the hot dummy has a positive coefficient of 1.48. The interaction term shows that larger firms are able to move significantly faster to their targets. The dummy has a very large coefficient of 15.06 during the second year after the IPO and is significant. This shows that a huge bulk of reversal occurs in the second year. This effect is further increase for firms with more growth opportunities as seen from the interaction results. Unreported results show that the dummy remains positive during the third year and turns negative during the fourth year onwards.

9. Conclusion

Previous studies have shown that firms attempt to time the market when issuing equity. Thus it is argued that their decisions are influenced purely by market conditions. Favourable market conditions would therefore lead to a hot market in equity issues as studied in this paper for IPOs in the UK. The results have revealed the pattern of equity issues in hot markets and how it impacts firms in the short and long run. These impacts are evaluated from several different angles. Firstly, how do managers view hot markets? The literature iterates that hot markets act as a window of opportunity for managers to issue equity. Given that issue volume is a good indicator for market conditions it has been the key issue throughout this study. Thus the hot market dummy used in this is used to capture equity market timing attempts by firms. The second angle studied in this paper is why firms time the market? The basic idea of finance is that firms would raise external capital to fund future or current projects. This study attempts to answer the motivation of firms to time the market which leads to abnormal increase in issue volumes. The last angle covered is to what degree firms time the market and how these attempts influence their financing policy in the subsequent periods. If a firm were to issue more equity during a hot market, they would deviate away from their target capital. Thus, in subsequent years, they may attempt to reverse these timing attempts.

[23] The definition used is similar to Alti (2006) where the fraction of debt to net external financing is net debt issues divided by absolute value of the sum of net debt and equity issues. Since this ratio is likely to be very large in cases of pure recapitalization, values where the denominator is less than 5% of total assets are dropped.

Based on these three aspects, the main findings recorded in the earlier sections are follows. Looking at the first two aspects, I am able to conclude that firms that go public in the hot market raise more capital than their cold market counterparts. When comparing the hot and cold market firms, hot market firms had significantly lower levels of leverage. They also had poorer investment opportunities during the IPO and subsequent years. This resulted in their profitability levels to be significantly lower than cold market firms. These findings negate the hypothesis that hot market firms grew faster than cold market firms.

Findings from the third aspect reveal that hot market IPO firms do increase the levels of their leverage ratios in subsequent years. The bulk of the reversal is evidenced in the second year after the IPO event. Thus it can be said that IPO market timing doesn't have a long-term influence on capital structure. However, cold market firms on the other hand significantly lower their leverage ratios. This raises the question of whether cold market firms were in fact timing the debt market instead of the equity market and were now lowering leverage levels to revert to their target. Unreported results reveal that both hot market and cold market firms converge to a relatively similar level of leverage in subsequent years. It remains an open question for further research in the area of market timing.

Overall, it can be said that market timing considerations do influence capital structure decisions. However the empirical results in this paper indicate that the effect is temporary in nature and does not persist. In the long-run, firms appear to be moving towards pre-determined target leverage. This conclusion is similar to Hovakimian (2004) who provides evidence where firms that have target debt ratios can engage in timing the equity market. Thus, there remain doubts whether market timing would suffice as a stand-alone theory in explaining financing behaviour or would act as a bridge in closing gaps existing in the current framework. Myers (2001) iterates this view by suggesting that currently there is no universal theory to explain capital structure and there is no reason to expect one.

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Table 1 Summary statistic of Firms' Characteristics and Financing Activities of IPO Firms

	N	D/A	M/B	d/A	e/A	ΔRE/A	EBITDA/A	SIZE	PPE/A	R&D/A	INV/A	DIV/E	CASH/A
Pre IPO	580	15.45	-	-	-	-	9.48	8.99	29.43	1.88	8.99	4.30	19.76
		(17.30)	-	-	-	-	(20.66)	(2.36)	(26.17)	(7.24)	(10.44)	(10.01)	(22.42)
IPO	580	13.35	2.27	1.46	17.14	0.02	8.63	9.38	29.87	1.82	8.96	4.49	19.31
		(14.13)	(1.55)	(13.62)	(25.99)	(11.23)	(17.46)	(2.16)	(26.25)	(5.72)	(10.04)	(8.79)	(21.06)
IPO+1	554	14.74	1.87	3.06	6.93	-1.27	7.44	9.68	31.13	2.20	8.31	5.27	16.05
		(14.39)	(1.23)	(10.15)	(17.74)	(13.12)	(18.86)	(2.07)	(26.57)	(7.47)	(9.46)	(8.03)	(18.61)
IPO+2	519	16.39	1.75	2.64	4.30	0.08	7.56	9.87	30.95	1.97	7.01	5.06	14.75
		(15.34)	(1.21)	(10.16)	(19.22)	(14.84)	(18.19)	(2.04)	(26.63)	(5.46)	(7.68)	(7.39)	(17.65)
IPO+3	391	16.20	1.71	0.70	4.49	1.02	9.39	10.18	33.00	1.82	6.76	4.92	13.34
		(14.85)	(1.19)	(10.17)	(19.54)	(12.90)	(14.71)	(2.02)	(26.77)	(5.26)	(7.16)	(6.89)	(15.14)
IPO+4	327	16.25	1.63	1.13	3.46	-0.36	8.66	10.38	34.18	1.81	6.64	5.65	12.93
		(14.25)	(0.95)	(9.09)	(13.94)	(10.94)	(14.85)	(2.05)	(26.05)	(5.09)	(7.31)	(7.05)	(15.29)
IPO+5	276	16.08	1.55	1.57	1.25	1.12	9.53	10.44	34.09	1.67	6.49	6.60	12.78
		(14.51)	(0.82)	(9.62)	(14.71)	(10.90)	(13.41)	(2.03)	(25.76)	(4.98)	(6.21)	(10.25)	(14.29)
IPO+7	198	15.45	1.58	1.75	4.50	0.93	10.76	10.73	33.69	1.75	5.97	6.39	12.69
		(12.74)	(0.85)	(8.10)	(12.51)	(9.08)	(11.80)	(2.03)	(25.67)	(4.89)	(5.13)	(8.09)	(14.40)

This table records means and standard deviations in brackets of firm specific variables for IPO firms in the sample. All variables except *M/B* and *SIZE* are scaled by year end assets and are reported in percentage terms. Book leverage, *D/A*, is the ratio of book debt to total assets. Market-to-book ratio, *M/B*, is defined as the ratio of book value of total assets less book value of equity plus market value of equity to book value of total assets. Net debt issued, d/A is the change in book debt. Net equity issued, e/A is the change in book equity minus the change in retained earnings. Newly retained earnings, ΔRE/A, is the change in retained earnings. Profitability is measured by EBITDA/A which is earnings before interest, taxes and depreciation. SIZE is the logarithm of net sales in 1979 pounds. Asset tangibility, PPE/A, is defined as net plant, property and equipment. R&D/A is the research and development expenses. INV/A is capital expenditure. DIV/E is cash dividends paid divided by book equity. CASH/A is cash and short-term investments.

Figure 1 Detrended monthly moving average of IPO volume. The horizontal line is the median line

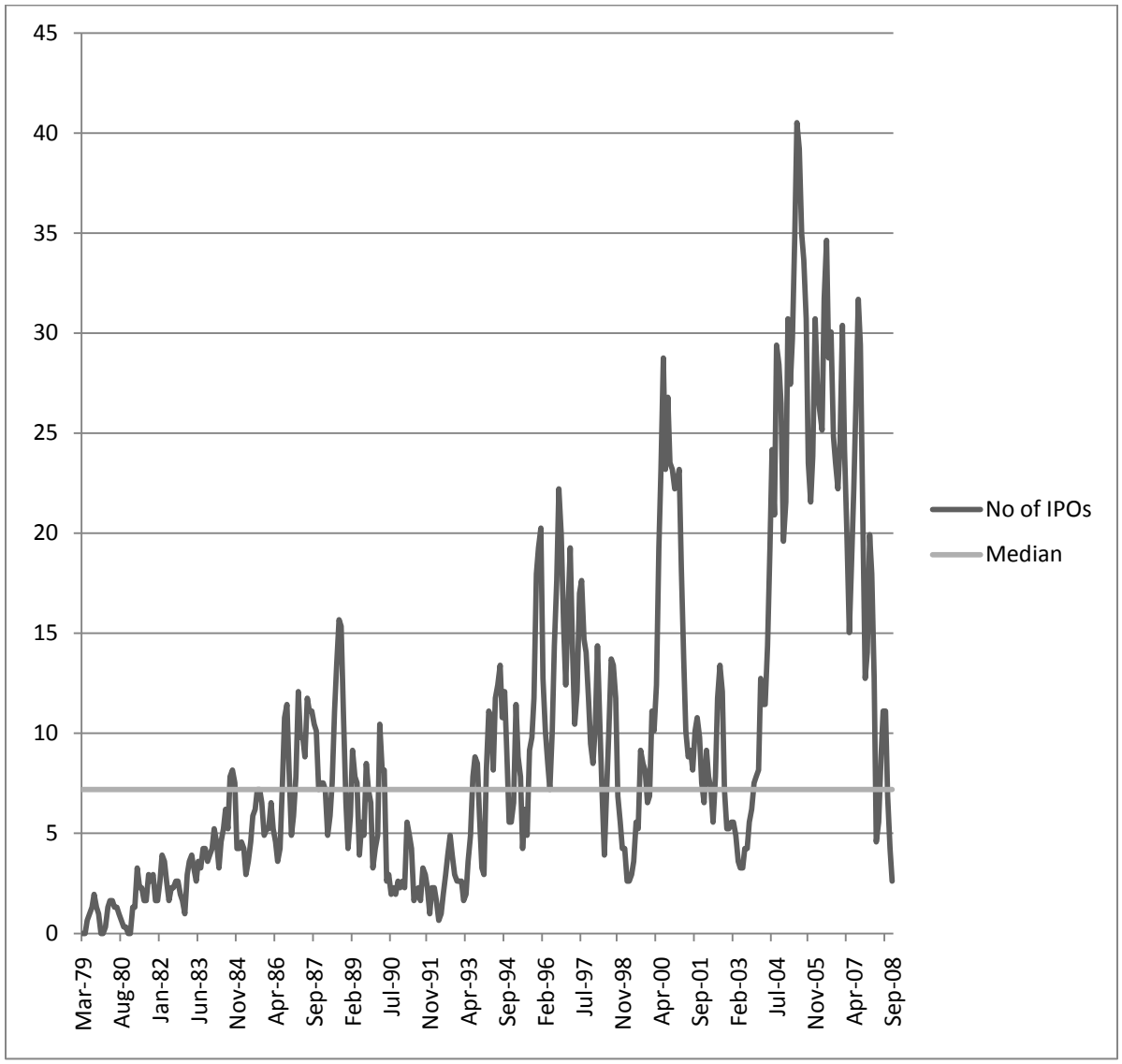

Table 2 Market Timing Effects on IPO Firms

	$Proceeds/A_t$	$Proceeds/A_t$	$Proceeds/A_{t-1}$	$Proceeds/A_{t-1}$	d/A_t	d/A_t
Panel A: Mean Values						
Hot	61.38	61.38	114.54	114.54	1.39	1.39
Cold	61.94	61.94	86.86	86.86	1.60	1.60
t -value (difference)	(0.05)	(0.05)	(1.32)	(1.32)	(0.17)	(0.17)
Panel B: Regression Analysis						
HOT	-5.15	-87.88*	31.57*	35.40	0.13	-0.98
	(11.16)	(51.45)	(17.58)	(121.97)	(1.13)	(5.22)
M/B_t	21.04***	17.84**	28.12***	22.70***	-1.23***	-1.27**
	(4.78)	(8.40)	(7.34)	(9.21)	(0.31)	(0.52)
$EBITDA/A_{t-1}$	-0.49*	-0.48*	0.51	0.51	-0.01	-0.01
	(0.26)	(0.26)	(0.56)	(0.55)	(0.02)	(0.02)
$SIZE_{t-1}$	5.40**	0.17	-2.13	0.33	-0.15	-0.21
	(2.69)	(3.83)	(4.67)	(6.58)	(0.24)	(0.41)
PPE/A_{t-1}	-0.17	-0.19*	-0.34	-0.37	0.11***	0.11***
	(0.12)	(0.12)	(0.26)	(0.25)	(0.03)	(0.03)
$R\&D/A_{t-1}$	-0.39	-0.47	1.56	1.50	0.00	0.00
	(0.43)	(0.39)	(1.80)	(1.76)	(0.05)	(0.05)
RDD_{t-1}	-4.02	-4.17	42.28	40.91	2.29*	2.28
	(12.26)	(12.48)	(25.91)	(25.43)	(1.36)	(1.36)
D/A_{t-1}	-0.32	-0.30	-0.76	-0.71	-0.40***	-0.40***
	(0.22)	(0.23)	(0.40)	(0.39)	(0.05)	(0.05)
$HOT*M/B_t$	-	5.79	-	8.62	-	0.07
	-	(9.43)	-	(13.82)	-	(0.62)
$HOT*SIZE_{t-1}$	-	7.26	-	-2.96	-	0.10
	-	(5.14)	-	(10.69)	-	(0.48)
R^2	0.31	0.32	0.20	0.20	0.25	0.25
Adj R^2	0.26	0.26	0.14	0.13	0.23	0.22
F-Test	5.86***	5.49***	3.22***	2.90***	10.36***	9.29***
N	238	238	238	238	580	580

Panel A reports the mean values of hot and cold market firms for each variable Y_t. The differences (t-values) are reported in parentheses. The period *t* denotes the IPO year. The results of the regressions from the following model are reported in Panel B:

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A}_{t-1} + \varepsilon_t$$

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A}_{t-1} + \beta_9 HOT * \frac{M}{B}_t + \beta_{10} HOT * Size_{t-1} + \varepsilon_t$$

All regressions are estimated with industry dummies. The standard errors that are robust to heteroscedasticity are reported in parentheses. The dummy variable RDD takes the value of 1 when R&D data is not available in Datastream. The dependent variable Y_t is the proceeds from IPO divided by year-end total assets, proceeds divided by beginning of year total assets and net debt issued divided by year-end total assets for IPO year for the three different sets of regressions. All variables are expressed in percentage terms. (*), (**) and (***) indicate that coefficients are significant at 10, 5 and 1 percent level of significance, respectively.

Table 3 Differentiating Hot and Cold Market IPO Firms

			INV/A_t						$EBITDA/A_t$			
	$D/A_{Pre-IPO}$	$D/A_{Pre-IPO}$	IPO	IPO	IPO+1	IPO+1	IPO+2	IPO+2	IPO	IPO	IPO+1	IPO+1
Panel A: Mean Values												
Hot	14.60	14.60	8.37	8.37	7.58	7.58	6.18	6.18	6.33	6.33	5.04	5.04
Cold	17.25	17.25	10.22	10.22	9.84	9.84	8.69	8.69	13.48	13.48	12.51	12.51
t -value (difference)	(1.72)	(1.72)	(2.07)	(2.07)	(2.63)	(2.63)	(3.54)	(3.54)	(5.37)	(5.37)	(5.13)	(5.13)
Panel B: Regression Analysis												
HOT	0.68	-2.29	-0.14	-4.91	-0.60	1.12	-0.49	-0.54	-3.46**	-12.85**	-3.84***	-8.12
	(1.49)	(6.50)	(0.86)	(4.69)	(0.85)	(5.17)	(0.72)	(3.99)	(1.29)	(5.64)	(1.46)	(7.99)
M/B_{IPO}	-	-	0.54**	0.17	0.48*	0.98*	0.38	0.83*	0.57	1.64*	0.55	1.67*
	-	-	(0.23)	(0.38)	(0.25)	(0.52)	(0.30)	(0.69)	(0.63)	(0.91)	(0.72)	(0.81)
M/B_{t-1}	-	-	-	-	-	-	0.56*	0.77	-	-	-	-
	-	-	-	-	-	-	(0.28)	(0.66)	-	-	-	-
$EBITDA/A_{t-1}$	-0.10***	-0.10***	-0.02	-0.01	-0.00	-0.00	0.00	0.00	-	-	-	-
	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	-	-	-	-
$SIZE_{t-1}$	0.47	0.28	-0.58***	-0.81***	-0.52**	-0.52*	0.12	-0.02	2.17***	1.33***	1.95***	1.46**
	(0.38)	(0.50)	(0.19)	(0.35)	(0.22)	(0.34)	(0.14)	(0.28)	(0.27)	(0.39)	(0.33)	(0.47)
PPE/A_{t-1}	0.25***	0.25***	0.17***	0.17***	0.17***	0.17***	0.14***	0.14***	0.08***	0.09***	0.11***	0.11***
	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	(0.01)	(0.01)	(0.03)	(0.03)	(0.03)	(0.03)
$R\&D/A_{t-1}$	-0.16**	-0.16**	-0.07*	-0.07	-0.09*	-0.07*	-0.03	-0.02	-0.16	-0.14	-0.33*	-0.31*
	(0.07)	(0.07)	(0.03)	(0.03)	(0.05)	(0.05)	(0.03)	(0.03)	(0.12)	(0.11)	(0.17)	(0.18)
RDD_{t-1}	-0.94	-0.94	1.45	1.39	0.68	0.77	1.15	1.14	3.13	3.25*	1.55	1.68
	(1.97)	(1.96)	(1.96)	(1.13)	(1.08)	(1.06)	(0.55)	(0.55)	(2.03)	(1.96)	(2.29)	(2.28)
$HOT*M/B_{IPO}$	-	-	-	0.57	-	-0.72	-	-0.66	-	-1.55	-	-1.52
	-	-	-	(0.47)	-	(0.58)	-	(0.72)	-	(1.20)	-	(1.19)
$HOT*M/B_{t-1}$	-	-	-	-	-	-	-	-0.33	-	-	-	-
	-	-	-	-	-	-	-	(0.72)	-	-	-	-
$HOT*SIZE_{t-1}$	-	0.32	-	0.38	-	-0.02	-	0.20	-	1.36**	-	0.76
	-	(0.69)	-	(0.39)	-	(0.43)	-	(0.31)	-	(0.52)	-	0.72)
R^2	0.16	0.16	0.22	0.22	0.26	0.26	0.30	0.30	0.19	0.20	0.15	0.16
Adj R^2	0.14	0.14	0.20	0.20	0.24	0.24	0.27	0.27	0.17	0.18	0.13	0.13
F-Test	6.87***	6.47***	9.29***	8.41***	11.151***	10.07***	11.7***	10.31***	8.28***	8.00***	5.97***	5.51***
N	580	580	580	580	554	554	519	519	580	580	554	554

Panel A reports the mean values of hot and cold market firms for each variable Y_t. The differences (t-values) are reported in parentheses. The period *t* denotes the pre-IPO,IPO, IPO+1 and IPO+2 year. The results of the regressions from the following models are reported in Panel B:

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A}_{t-1} + \varepsilon_t$$

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A}_{t-1} + \beta_9 HOT * \frac{M}{B}_t + \beta_{10} HOT * Size_{t-1} + \varepsilon_t$$

All regressions are estimated with industry dummies. The standard errors that are robust to heteroscedasticity are reported in parentheses. The dependent variable Y_t is the pre-IPO book leverage divided by total assets, investments rates scaled by total assets and profitability scaled by total assets. All variables are expressed in percentage terms. (*), (**) and (***) indicate that coefficients are significant at 10, 5 and 1 percent level of significance, respectively.

Table 3 (con't) Differentiating Hot and Cold Market IPO Firms

	$EBITDA/A_t$						Div/E_t					
	IPO+2	IPO+2	IPO+3	IPO+3	IPO+4	IPO+4	IPO	IPO	IPO+1	IPO+1	IPO+2	IPO+2
Panel A: Mean Values												
Hot	5.24	5.24	7.69	7.69	6.71	6.71	4.52	4.52	5.10	5.10	4.58	4.58
Cold	12.23	12.23	12.21	12.21	11.50	11.50	4.43	4.43	5.62	5.62	6.03	6.03
t -value (difference)	(4.49)	(4.49)	(2.97)	(2.97)	(2.90)	(2.90)	(0.14)	(0.14)	(0.72)	(0.72)	(2.11)	(2.11)
Panel B: Regression Analysis												
HOT	-3.66**	-10.79	-1.44	4.33	-1.89	-2.58	0.57	-7.77**	0.36	-10.74***	-0.26	-4.36
	(1.58)	(9.38)	(1.57)	(10.42)	(1.55)	(11.32)	(0.71)	(2.93)	(0.77)	(3.54)	(0.73)	(4.05)
M/B_{IPO}	-0.52	0.94	-0.29	-0.38	-0.47	-0.96	0.80***	0.22	0.92***	0.51	-0.08	-0.63
	(0.97)	(1.28)	(0.74)	(0.93)	(0.88)	(1.46)	(0.32)	(0.25)	(0.28)	(0.44)	(0.26)	(0.48)
M/B_{t-1}	1.83	1.52	3.29***	5.97***	1.76*	4.12**	-	-	-	-	1.61***	1.83***
	(1.58)	(1.78)	(0.91)	(1.57)	(1.00)	(1.56)	-	-	-	-	(0.40)	(0.87)
$EBITDA/A_{t-1}$	-	-	-	-	-	-	0.01	0.01	-0.00	-0.00	0.01	0.01
	-	-	-	-	-	-	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)
$SIZE_{t-1}$	2.17***	1.49**	1.76***	1.75***	1.45***	1.16*	0.90***	0.48***	1.11***	0.51*	1.07***	0.90***
	(0.36)	(0.54)	(0.37)	(0.65)	(0.43)	(0.65)	(0.16)	(0.17)	(0.20)	(0.20)	(0.17)	(0.32)
PPE/A_{t-1}	0.07**	0.07**	0.10***	0.10***	0.15***	0.15***	-0.03*	-0.03*	-0.01	-0.01	0.01	0.01
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
$R\&D/A_{t-1}$	-0.23	-0.22	-0.39*	-0.39**	-0.65**	-0.72**	-0.02	-0.03	-0.14**	-0.16**	-0.11***	-0.12**
	(0.18)	(0.18)	(0.22)	(0.21)	(0.29)	(0.27)	(0.05)	(0.05)	(0.06)	(0.06)	(0.04)	(0.04)
RDD_{t-1}	3.21	3.12	1.79	1.67	-1.72	-1.94	0.74	0.65	-0.25	-0.43	0.74	0.67
	(2.03)	(2.03)	(2.18)	(2.14)	(1.90)	(1.78)	(1.11)	(1.10)	(1.20)	(1.20)	(0.72)	(0.73)
$HOT*M/B_{IPO}$	-	-2.06	-	-0.06	-	1.02	-	0.86*	-	0.65	-	0.80
	-	(1.80)	-	(1.37)	-	(1.61)	-	(0.49)	-	(0.56)	-	(0.56)
$HOT*M/B_{t-1}$	-	0.40	-	-3.48**	-	-3.56*	-	-	-	-	-	-0.29
	-	(2.68)	-	(1.87)	-	(2.00)	-	-	-	-	-	(0.94)
$HOT*SIZE_{t-1}$	-	1.05	-	0.05	-	0.44	-	0.69**	-	1.00***	-	0.30
	-	(0.76)	-	(0.87)	-	(0.93)	-	(0.30)	-	(0.35)	-	(0.38)
R^2	0.14	0.15	0.20	0.22	0.20	0.22	0.09	0.10	0.11	0.12	0.15	0.15
Adj R^2	0.11	0.12	0.17	0.18	0.16	0.17	0.06	0.07	0.08	0.09	0.12	0.12
F-Test	4.95***	4.51***	5.57***	5.17***	4.67***	4.35***	3.22***	3.22***	3.83***	3.95***	4.90***	4.33***
N	519	519	391	391	327	327	579	579	553	553	518	518

Panel A reports the mean values of hot and cold market firms for each variable Y_t. The differences (t-values) are reported in parentheses. The period *t* denotes the IPO, IPO+1, IPO+2, IPO+3 and IPO+4 year. The results of the regressions from the following models are reported in Panel B:

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A}_{t-1} + \varepsilon_t$$

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A}_{t-1} + \beta_9 HOT * \frac{M}{B}_t + \beta_{10} HOT * Size_{t-1} + \varepsilon_t$$

All regressions are estimated with industry dummies. The standard errors that are robust to heteroscedasticity are reported in parentheses. The dependent variable Y_t is profitability divided by total assets and dividends divided by total equity. All variables are expressed in percentage terms. (*), (**) and (***) indicate that coefficients are significant at 10, 5 and 1 percent level of significance, respectively.

Table 4 The Impact of Market Timing on Capital Structure for IPO firms on the Short Run

	D/A_t-D/A_{t-1}	D/A_t-D/A_{t-1}	e/A_t	e/A_t	$\Delta Cash/A_t$	$\Delta Cash/A_t$	ΔOther Assets/A_t	ΔOther Assets/A_t	$\Delta RE/A_t$	$\Delta RE/A_t$	D/A_t	D/A_t
Panel A: Mean Values												
Hot	-2.38	-2.38	18.48	18.48	5.35	5.35	20.83	20.83	-0.38	-0.38	12.22	12.22
Cold	-1.50	-1.50	14.30	14.30	2.16	2.16	21.61	21.61	0.89	0.89	15.75	15.75
t- value (difference)	(0.69)	(0.69)	(-1.97)	(-1.97)	(-2.16)	(-2.16)	(0.36)	(0.36)	(1.55)	(1.55)	(2.82)	(2.82)
Panel B: Regression Analysis												
HOT	-1.08	-5.02	1.23	3.62	2.36*	16.09**	-3.10	-8.22	-1.14	-1.32	-0.50	-3.87
	(1.32)	(6.67)	(2.06)	(12.20)	(1.40)	(7.41)	(2.08)	(11.01)	(0.80)	(4.73)	(1.19)	(5.62)
M/B_t	-1.19**	-1.66**	1.35*	2.25*	1.46**	2.23**	-1.79**	-1.36	-0.26	0.56*	-1.52***	-1.33**
	(0.48)	(0.79)	(0.90)	(1.25)	(0.67)	(0.63)	(0.69)	(0.84)	(0.43)	(0.34)	(0.30)	(0.49)
$EBITDA/A_{t-1}$	0.03	0.03	0.23***	0.22***	0.08	0.09	0.15***	0.16***	-0.07*	-0.08**	-0.07**	-0.07**
	(0.03)	(0.03)	(0.09)	(0.09)	(0.07)	(0.07)	(0.05)	(0.05)	(0.04)	(0.04)	(0.03)	(0.03)
$SIZE_{t-1}$	0.18	0.03	-3.06***	-3.09***	-0.48	0.22	-2.92***	-3.38***	0.28	0.11	0.60**	0.35
	(0.32)	(0.49)	(0.54)	(0.83)	(0.36)	(0.43)	(0.49)	(0.81)	(0.19)	(0.28)	(0.29)	(0.42)
PPE/A_{t-1}	-0.07**	-0.07**	0.02	0.02	0.04	0.04	0.02	-0.02	0.01	0.01	0.18***	0.18***
	(0.03)	(0.03)	(0.05)	(0.05)	(0.03)	(0.03)	(0.04)	(0.04)	(0.02)	(0.02)	(0.03)	(0.03)
$R\&D/A_{t-1}$	0.04	0.03	0.62***	0.63***	0.78***	0.79***	0.14	0.17	-0.00	0.01	-0.12*	-0.11
	(0.07)	(0.07)	(0.19)	(0.19)	(0.15)	(0.15)	(0.16)	(0.16)	(0.07)	(0.07)	(0.06)	(0.06)
RDD_{t-1}	1.47	1.39	7.60**	7.75**	7.36***	7.51***	5.17*	5.36*	-1.67	-1.54	0.38	0.41
	(1.71)	(1.70)	(3.18)	(3.18)	(2.56)	(2.57)	(2.70)	(2.72)	(1.38)	(1.37)	(1.53)	(1.53)
D/A_{t-1}	0.03	0.03	-0.05	-0.06	-0.01	-0.01	-0.16*	-0.03	0.02	0.02	-	-
	(0.04)	(0.04)	(0.06)	(0.06)	(0.05)	(0.05)	(0.07)	(0.07)	(0.03)	(0.03)	-	-
$HOT*MTB_t$	-	0.71	-	-1.35	-	-1.23	-	-0.63	-	-1.22*	-	-0.27
		(0.96)	-	(1.62)	-	(1.04)	-	(1.21)	-	(0.70)	-	(0.61)
$HOT*Size_{t-1}$	-	0.26	-	0.05	-	-1.19	-	0.66	-	0.30	-	0.42
		(0.62)	-	(1.12)	-	(0.67)	-	(1.00)	-	(0.40)	-	(0.52)
R^2	0.04	0.04	0.14	0.14	0.10	0.10	0.12	0.11	0.04	0.04	0.22	0.22
Adj R^2	0.01	0.01	0.11	0.11	0.07	0.07	0.08	0.08	0.00	0.01	0.19	0.19
F-Test	1.41	1.31	4.98***	4.52***	3.38***	3.20***	3.84***	3.50***	1.15	1.27	9.07***	8.16***
N	580	580	580	580	580	580	580	580	580	580	580	580

Panel A reports the mean values of hot and cold market firms for each variable Y_t. The differences (t-values) are reported in parentheses. The period *t* denotes the IPO year. The results of the regressions from the following models are reported in Panel B:

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A}_{t-1} + \varepsilon_t$$

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A}_{t-1} + \beta_9 HOT * \frac{M}{B}_t + \beta_{10} HOT * Size_{t-1} + \varepsilon_t$$

All regressions are estimated with industry dummies. The standard errors that are robust to heteroscedasticity are reported in parentheses. The dependent variable Y_t is the change in book leverage, net equity issued, the change in cash, the change in other assets, the change in retained earnings and book leverage scaled by year end assets. All variables are expressed in percentage terms. (*), (**) and (***) indicate that coefficients are significant at 10, 5 and 1 percent level of significance, respectively.

Table 5 The Impact of Market Timing in the Long-Run for IPO Firms

	D/A_t - $D/A_{Pre\text{-}IPO}$											
	IPO+1	IPO+1	IPO+1	IPO+1	IPO+2	IPO+2	IPO+2	IPO+2	IPO+3	IPO+3	IPO+3	IPO+3
Panel A: Mean Values												
Hot	-1.34	-1.34	-1.34	-1.34	-0.5	-0.5	-0.5	-0.5	-0.28	-0.28	-0.28	-0.28
Cold	-0.06	-0.06	-0.06	-0.06	1.32	1.32	1.32	1.32	-0.54	-0.54	-0.54	-0.54
t -value (difference)	(-0.93)	(-0.93)	(-0.93)	(-0.93)	(1.16)	(1.16)	(1.16)	(1.16)	(-0.14)	(-0.14)	(-0.14)	(-0.14)
Panel B: Regression Analysis												
HOT	-0.37	-9.81*	-0.43	-12.99***	-0.53	-14.41**	-0.42	-13.87**	1.75	-13.31	1.75	-11.30
	(1.08)	(5.55)	(1.08)	(4.60)	(1.35)	(6.86)	(1.35)	(6.24)	(1.45)	(8.09)	(1.45)	(7.28)
M/B_{t-1}	-1.09***	-0.61	-	-	-1.07**	-1.22	-	-	-0.76	-1.41	-	-
	(0.33)	(0.77)	-	-	(0.45)	(0.98)	-	-	(0.40)	(0.87)	-	-
$EBITDA/A_{t-1}$	-0.04	-0.06*	-0.05	-0.06**	-0.03	-0.03	-0.04	-0.04	-0.06	-0.06	-0.07	-0.08*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)	(0.04)	(0.04)
$SIZE_{t-1}$	0.76***	0.12	0.96***	0.19	0.79***	-0.03	0.92***	0.10	0.90***	0.18	0.94***	0.26
	(0.24)	(0.38)	(0.23)	(0.36)	(0.28)	(0.48)	(0.28)	(0.48)	(0.33)	(0.49)	(0.32)	(0.47)
PPE/A_{t-1}	0.10***	0.10***	0.11***	0.11***	0.11***	0.11***	0.12***	0.12***	0.13***	0.13***	0.14***	0.14***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
$R\&D/A_{t-1}$	0.01	0.00	-0.01	-0.03	-0.06	-0.07	-0.09	-0.10	0.07	0.08	0.04	0.05
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.13)	(0.13)	(0.14)	(0.14)
RDD_{t-1}	1.91	1.87	2.52*	2.33	1.59	1.40	1.85	1.65	2.30	2.43	2.46	2.55
	(1.42)	(1.42)	(1.42)	(1.41)	(1.51)	(1.50)	(1.48)	(1.48)	(1.74)	(1.70)	(1.74)	(1.71)
$D/A_{Pre\text{-}IPO}$	-0.61***	-0.61***	-0.61***	-0.61***	-0.66***	-0.66***	-0.65***	-0.65***	-0.72***	-0.72***	-0.72***	-0.72***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)
$HOT*MTB_{t-1}$	-	-0.59	-	-	-	0.25	-	-	-	0.85	-	-
	-	(0.83)	-	-	-	(1.020)	-	-	-	(0.96)	-	-
$HOT*Size_{t-1}$	-	1.08**	-	1.28***	-	1.33**	-	1.34**	-	1.32*	-	1.27*
	-	(0.48)	-	(0.46)	-	(0.61)	-	(0.59)	-	(0.69)	-	(0.68)
R^2	0.47	0.47	0.46	0.46	0.46	0.47	0.46	0.46	0.52	0.52	0.52	0.52
Adj R^2	0.45	0.45	0.44	0.44	0.44	0.45	0.44	0.44	0.50	0.50	0.49	0.50
F-Test	25.84***	23.76***	26.38***	25.56***	23.92***	21.91***	24.89***	24.00***	22.25***	20.36***	23.39***	22.47***
N	554	554	554	554	519	519	519	519	391	391	391	391

Panel A reports the mean values of hot and cold market firms for each variable Y_t. The differences (t-values) are reported in parentheses. The period *t* denotes the IPO+1, IPO+2 and IPO+3. The results of the regressions from the following models are reported in Panel B:

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A}_{Pre-IPO} + \varepsilon_t$$

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A}_{Pre-IPO} + \beta_9 HOT * \frac{M}{B}_t + \beta_{10} HOT * Size_{t-1} + \varepsilon_t$$

All regressions are estimated with industry dummies. The standard errors that are robust to heteroscedasticity are reported in parentheses. The dependent variable Y_t is the change in book leverage from the pre-IPO year. All variables are expressed in percentage terms. (*), (**) and (***) indicate that coefficients are significant at 10, 5 and 1 percent level of significance, respectively.

Table 5 (con't) The Impact of Market Timing in the Long-Run for IPO Firms

	D/A_t - $D/A_{Pre\text{-}IPO}$											
	IPO+4	IPO+4	IPO+4	IPO+4	IPO+5	IPO+5	IPO+5	IPO+5	IPO+7	IPO+7	IPO+7	IPO+7
Panel A: Mean Values												
Hot	1.20	1.20	1.20	1.20	0.82	0.82	0.82	0.82	0.01	0.01	0.01	0.01
Cold	-1.13	-1.13	-1.13	-1.13	0.32	0.32	0.32	0.32	-0.05	-0.05	-0.05	-0.05
t -value (difference)	(1.29)	(1.29)	(1.29)	(1.29)	(-0.23)	(-0.23)	(-0.23)	(-0.23)	(-0.26)	(-0.26)	(-0.26)	(-0.26)
Panel B: Regression Analysis												
HOT	2.38*	-13.70*	2.42*	-9.17	2.09	-10.02	2.08	-5.21	2.40	0.68	2.40	-1.22
	(1.42)	(7.43)	(1.42)	(6.68)	(1.61)	(9.78)	(1.61)	(8.83)	(1.62)	(11.11)	(1.62)	(10.41)
M/B_{t-1}	-0.47	-1.91*	-	-	-0.85	-2.73**	-	-	-0.30	0.71	-	-
	(0.66)	(0.80)	-	-	(0.81)	(1.29)	-	-	(1.09)	(2.05)	-	-
$EBITDA/A_{t-1}$	-0.06	-0.06	-0.07	-0.06	-0.10*	-0.10*	-0.11**	-0.12**	-0.21***	-0.21***	-0.22***	-0.22***
	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.07)	(0.08)	(0.07)	(0.07)
$SIZE_{t-1}$	0.98***	0.36	0.99***	0.38	0.82**	0.38	0.81**	0.40	1.06**	0.84	1.06**	0.88
	(0.32)	(0.44)	(0.32)	(0.45)	(0.39)	(0.57)	(0.39)	(0.59)	(0.47)	(0.56)	(0.47)	(0.55)
PPE/A_{t-1}	0.13***	0.14***	0.14***	0.14***	0.21***	0.20***	0.21***	0.21***	0.14***	0.14***	0.14***	0.14***
	(0.03)	(0.03)	(0.03)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
$R\&D/A_{t-1}$	-0.11	-0.07	-0.15	-0.15	-0.33**	-0.31**	-0.38**	-0.38***	-0.37**	-0.39**	-0.38**	-0.38*
	(0.115)	(0.16)	(0.18)	(0.18)	(0.15)	(0.15)	(0.15)	(0.15)	(0.17)	(0.18)	(0.16)	(0.16)
RDD_{t-1}	0.33	0.61	0.28	0.31	-0.80	-0.72	-0.82	-0.84	0.23	0.04	0.19	0.17
	(1.70)	(1.68)	(1.70)	(1.68)	(1.96)	(1.96)	(1.92)	(1.93)	(2.08)	(2.16)	(2.04)	(2.04)
$D/A_{Pre\text{-}IPO}$	-0.70***	-0.69***	-0.70***	-0.69***	-0.79***	-0.79***	-0.79***	-0.78***	-0.79***	-0.79***	-0.79***	-0.79***
	(0.06)	(0.06)	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)
$HOT*MTB_{t-1}$	-	2.12*	-	-	-	2.57*	-	-	-	-1.42	-	-
	-	(1.22)	-	-	-	(1.53)	-	-	-	(2.27)	-	-
$HOT*Size_{t-1}$	-	1.12*	-	1.11*	-	0.75	-	0.68	-	0.37	-	0.34
	-	(0.62)	-	(0.62)	-	(0.80)	-	(0.80)	-	(0.96)	-	(0.97)
R^2	0.48	0.49	0.47	0.48	0.52	0.52	0.52	0.52	0.61	0.61	0.61	0.61
Adj R^2	0.45	0.45	0.45	0.45	0.49	0.49	0.49	0.49	0.57	0.57	0.58	0.58
F-Test	15.53***	14.42***	16.44***	15.73***	15.43***	14.08***	16.29***	15.40***	15.79***	14.13***	16.80***	15.81***
N	327	327	327	327	276	276	276	276	198	198	198	198

Panel A reports the mean values of hot and cold market firms for each variable Y_t. The differences (t-values) are reported in parentheses. The period *t* denotes the IPO+4, IPO+5 and IPO+7. The results of the regressions from the following models are reported in Panel B:

$$\boldsymbol{Y_t} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A_{Pre-IPO}} + \varepsilon_t$$

$$\boldsymbol{Y_t} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A_{Pre-IPO}} + \beta_9 HOT * \frac{M}{B}_t + \beta_{10} HOT * Size_{t-1} + \varepsilon_t$$

All regressions are estimated with industry dummies. The standard errors that are robust to heteroscedasticity are reported in parentheses. The dependent variable Y_t is the change in book leverage from the pre-IPO year. All variables are expressed in percentage terms. (*), (**) and (***) indicate that coefficients are significant at 10, 5 and 1 percent level of significance, respectively.

Table 5 (con't) The Impact of Market Timing in the Long-Run for IPO Firms

	Book Leverage (D/A_t)											
	IPO+1	IPO+1	IPO+1	IPO+1	IPO+2	IPO+2	IPO+2	IPO+2	IPO+3	IPO+3	IPO+3	IPO+3
Panel A: Mean Values												
Hot	13.65	13.65	13.65	13.65	15.18	15.18	15.18	15.18	15.41	15.41	15.41	15.41
Cold	17.04	17.04	17.04	17.04	18.82	18.82	18.82	18.82	17.51	17.51	17.51	17.51
t- value (difference)	(2.6)	(2.6)	(2.6)	(2.6)	(2.56)	(2.56)	(2.56)	(2.56)	(1.36)	(1.36)	(1.36)	(1.36)
Panel B: Regression Analysis												
HOT	0.17	-8.83	0.11	-12.78**	-0.12	-13.61*	0.05	-12.22*	1.96	-12.56	1.96	-9.61
	(1.27)	(6.38)	(1.26)	(5.42)	(1.46)	(7.93)	(1.45)	(6.83)	(1.52)	(8.79)	(1.53)	(7.82)
M/B_{t-1}	-1.29***	-0.70	-	-	-1.53***	-1.89*	-	-	-1.28**	-2.20*	-	-
	(0.37)	(0.71)	-	-	(0.49)	(1.02)	-	-	(0.43)	(0.93)	-	-
$EBITDA/A_{t-1}$	-0.07*	-0.08**	-0.08**	-0.09**	-0.04	-0.05	-0.07*	-0.07*	-0.08*	-0.09*	-0.10**	-0.11***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)
$SIZE_{t-1}$	1.01***	0.37	1.25***	0.46	0.94***	0.19	1.14***	0.39	1.01***	0.34	1.09***	0.49
	(0.29)	(0.46)	(0.28)	(0.44)	(0.34)	(0.55)	(0.32)	(0.52)	(0.36)	(0.54)	(0.35)	(0.52)
PPE/A_{t-1}	0.17***	0.18***	0.19***	0.19***	0.16***	0.15***	0.17***	0.17***	0.16***	0.16***	0.17***	0.17***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
$R\&D/A_{t-1}$	-0.07	-0.08	-0.11	-0.12	-0.12	-0.14*	-0.17	-0.18**	-0.00	0.00	-0.06	-0.05
	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.08)	(0.14)	(0.14)	(0.14)	(0.14)
RDD_{t-1}	1.35	1.33	2.06	1.87	1.05	0.88	1.42	1.23	2.06	2.18	2.31	2.39
	(1.63)	(1.64)	(1.61)	(1.61)	(1.64)	(1.63)	(1.62)	(1.62)	(1.72)	(1.68)	(1.73)	(1.69)
$D/A_{Pre\text{-}IPO}$	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
$HOT*MTB_{t-1}$	-	-0.75	-	-	-	0.55	-	-	-	1.21	-	-
	-	(0.81)	-	-	-	(1.11)	-	-	-	(1.03)	-	-
$HOT*Size_{t-1}$	-	1.07*	-	1.31**	-	1.24*	-	1.21*	-	1.21*	-	1.13
	-	(0.57)	-	(0.54)	-	(0.71)	-	(0.66)	-	(0.75)	-	(0.73)
R^2	0.22	0.22	0.20	0.21	0.22	0.22	0.20	0.21	0.23	0.24	0.23	0.23
Adj R^2	0.19	0.20	0.18	0.18	0.19	0.19	018	0.18	0.20	0.20	0.19	0.20
F-Test	8.67***	8.08***	8.44***	8.32***	8.09***	7.45***	8.02***	7.80***	6.73***	6.23***	6.79***	6.58***
N	554	554	554	554	519	519	519	519	391	391	391	391

Panel A reports the mean values of hot and cold market firms for each variable Y_t. The differences (t-values) are reported in parentheses. The period *t* denotes the IPO+1, IPO+2 and IPO+3. The results of the regressions from the following models are reported in Panel B:

$$\boldsymbol{Y_t} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A_{Pre-IPO}} + \varepsilon_t$$

$$\boldsymbol{Y_t} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A_{Pre-IPO}} + \beta_9 HOT * \frac{M}{B}_t + \beta_{10} HOT * Size_{t-1} + \varepsilon_t$$

All regressions are estimated with industry dummies. The standard errors that are robust to heteroscedasticity are reported in parentheses. The dependent variable Y_t is the book leverage scaled by year end assets. All variables are expressed in percentage terms. (*), (**) and (***) indicate that coefficients are significant at 10, 5 and 1 percent level of significance, respectively.

Table 5 (con't) The Impact of Market Timing in the Long-Run for IPO Firms

	Book Leverage (D/A_t)											
	IPO+4	IPO+4	IPO+4	IPO+4	IPO+5	IPO+5	IPO+5	IPO+5	IPO+7	IPO+7	IPO+7	IPO+7
Panel A: Mean Values												
Hot	15.54	15.54	15.54	15.54	15.17	15.17	15.17	15.17	15.16	15.16	15.16	15.16
Cold	17.27	17.27	17.27	17.27	17.53	17.53	17.53	17.53	15.85	15.85	15.85	15.85
t -value (difference)	(1.08)	(1.08)	(1.08)	(1.08)	(1.31)	(1.31)	(1.31)	(1.31)	(0.37)	(0.37)	(0.37)	(0.37)
Panel B: Regression Analysis												
HOT	1.95	-11.59	2.02	-7.79	2.17	-8.13	2.16	-2.91	2.62	6.55	2.62	3.98
	(1.52)	(8.23)	(1.52)	(7.47)	(1.65)	(10.58)	(1.65)	(9.50)	(1.67)	(12.50)	(1.66)	(11.64)
M/B_{t-1}	-1.10	-2.31**	-	-	-1.28	-3.21**	-	-	-0.08	1.32	-	-
	(0.70)	(0.96)	-	-	(0.83)	(1.38)	-	-	(1.16)	(2.09)	-	-
$EBITDA/A_{t-1}$	-0.07	-0.07	-0.10*	-0.09	-0.11*	-0.10*	-0.13**	-0.13**	-0.25***	-0.26***	-0.25***	-0.25***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)	(0.06)	(0.05)	(0.05)	(0.07)	(0.08)	(0.07)	(0.07)
$SIZE_{t-1}$	0.96**	0.43	1.00*	0.48	0.81*	0.48	0.79*	0.51	1.06**	1.06	1.06**	1.12*
	(0.35)	(0.52)	(0.35)	(0.52)	(0.42)	(0.61)	(0.43)	(0.62)	(0.50)	(0.57)	(0.50)	(0.57)
PPE/A_{t-1}	0.17***	0.17***	0.18***	0.18***	0.24***	0.24***	0.25***	0.25***	0.17***	0.17***	0.17***	0.17***
	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
$R\&D/A_{t-1}$	-0.13	-0.09	-0.23	-0.23	-0.35**	-0.32	-0.42***	-0.42*	-0.41**	-0.44	-0.41**	-0.41**
	(0.17)	(0.18)	(0.18)	(0.18)	(0.15)	(0.15)	(0.15)	(0.15)	(0.19)	(0.21)	(0.19)	(0.18)
RDD_{t-1}	0.71	0.96	0.62	0.64	-0.41	-0.31	-0.42	-0.43	0.31	0.09	0.30	0.31
	(1.71)	(1.70)	(1.70)	(1.68)	(1.95)	(1.94)	(1.91)	(1.91)	(2.05)	(2.13)	(2.02)	(2.01)
$D/A_{Pre\text{-}IPO}$	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-
$HOT*MTB_{t-1}$	-	1.78	-	-	-	2.67	-	-	-	-1.98	-	-
	-	(1.38)	-	-	-	(1.65)	-	-	-	(2.40)	-	-
$HOT*Size_{t-1}$	-	1.01	-	0.94	-	0.57	-	0.48	-	-0.08	-	-0.13
	-	(0.68)	-	(0.68)	-	(0.86)	-	(0.86)	-	(1.06)	-	(1.08)
R^2	0.23	0.24	0.22	0.23	0.27	0.28	0.26	0.27	0.33	0.33	0.33	0.33
Adj R^2	0.19	0.19	0.18	0.18	0.22	0.22	0.22	0.22	0.27	0.26	0.27	0.27
F-Test	5.36***	5.00***	5.50***	5.28***	5.62***	5.17***	5.83***	5.49***	5.19***	4.65***	5.54***	5.19***
N	327	327	327	327	276	276	276	276	198	198	198	198

Panel A reports the mean values of hot and cold market firms for each variable Y_t. The differences (t-values) are reported in parentheses. The period *t* denotes the IPO+4, IPO+5 and IPO+7. The results of the regressions from the following models are reported in Panel B:

$$Y_t = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A_{Pre-IPO}} + \varepsilon_t$$

$$\boldsymbol{Y_t} = \alpha + \beta_1 HOT + \beta_2 \frac{M}{B}_t + \beta_3 \frac{EBITDA}{A}_{t-1} + \beta_4 Size_{t-1} + \beta_5 \frac{PPE}{A}_{t-1} + \beta_6 \frac{R\&D}{A}_{t-1} + \beta_7 RDD_{t-1} + \beta_8 \frac{D}{A_{Pre-IPO}} + \beta_9 HOT * \frac{M}{B}_t + \beta_{10} HOT * Size_{t-1} + \varepsilon_t$$

All regressions are estimated with industry dummies. The standard errors that are robust to heteroscedasticity are reported in parentheses. The dependent variable Y_t is the book leverage scaled by year end assets. All variables are expressed in percentage terms. (*), (**) and (***) indicate that coefficients are significant at 10, 5 and 1 percent level of significance, respectively.

Table 6 Issuance Activity and Capital Structure Rebalancing for IPO Firms

	Change in Book Leverage (D/A_t - D/A_{t-1})				Net Debt Issued (d/A_t)			
	IPO+1	IPO+1	IPO+2	IPO+2	IPO+1	IPO+1	IPO+2	IPO+2
Panel A: Mean Values								
Hot	1.34	1.34	1.17	1.17	2.99	2.99	3.31	3.31
Cold	1.31	1.31	1.77	1.77	3.23	3.23	2.90	2.90
t -value (difference)	(0.38)	(0.38)	(0.71)	(0.71)	(0.26)	(0.26)	(0.42)	(0.42)
Panel B: Regression Analysis								
HOT	-0.02	-4.58	-0.73	-3.68	0.17	-9.31*	0.28	-3.72
	(0.84)	(4.47)	(1.03)	(4.58)	(1.04)	(5.01)	(1.13)	(4.79)
$Market_t$	-0.83	-1.00	-0.48	-0.45	-1.01	-1.17	0.92	0.97
	(0.93)	(0.94)	(0.88)	(0.87)	(1.02)	(1.03)	(0.97)	(0.96)
M/B_{t-1}	0.01	0.47	-0.04	-0.16	0.19	0.48	-0.08	-0.54
	(0.28)	(0.44)	(0.40)	(1.03)	(0.29)	(0.49)	(0.44)	(1.07)
$EBITDA/A_{t-1}$	0.02	0.01	0.02	0.02	0.02	0.01	0.06*	0.06*
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
$SIZE_{t-1}$	0.13	-0.21	-0.03	-0.19	0.10	-0.51	-0.02	-0.19
	(0.21)	(0.26)	(0.18)	(0.34)	(0.23)	(0.36)	(0.21)	(0.35)
PPE/A_{t-1}	0.02	0.02	0.01	0.01	0.03	0.03	0.01	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
$R\&D/A_{t-1}$	0.04	0.04	-0.01	-0.01	0.08	0.07	-0.01	-0.01
	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)	(0.06)	(0.06)	(0.06)
RDD_{t-1}	1.85*	1.85*	0.51	0.48	3.31**	3.22**	0.76	0.72
	(1.05)	(1.05)	(1.06)	(1.05)	(1.33)	(1.34)	(1.19)	(1.18)
$d_{high-lev}$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
$d_{low-lev}$	4.36***	4.43***	3.11***	3.11***	1.55	1.62*	1.11	1.08
	(0.84)	(0.84)	(0.89)	(0.89)	(0.96)	(0.96)	(1.00)	(0.99)
$HOT*MTB_{t-1}$	-	-0.60	-	0.17	-	-0.32	-	0.65
	-	(0.54)	-	(1.02)	-	(0.59)	-	(1.07)
$HOT*Size_{t-1}$	-	0.59	-	0.26	-	1.03**	-	0.28
	-	(0.37)	-	(0.41)	-	(0.43)	-	(0.45)
R^2	0.07	0.08	0.08	0.08	0.05	0.06	0.07	0.07
Adj R^2	0.04	0.04	0.04	0.04	0.01	0.02	0.03	0.03
F-Test	2.09***	2.10***	2.05***	1.87**	1.27	1.44*	1.81**	1.68**
N	554	554	518	518	554	554	518	518

Panel A reports the mean values of hot and cold market firms for each variable Y_t. The differences (t-values) are reported in parentheses. The period *t* denotes the IPO+1 and IPO+2. The results of the regressions from the following models are reported in Panel B:

$$Y_t = \alpha + \beta_1 HOT + \beta_2 Market_t + \beta_3 \frac{M}{B}_{t-1} + \beta_4 \frac{EBITDA}{A}_{t-1} + \beta_5 Size_{t-1} + \beta_6 \frac{PPE}{A}_{t-1} + \beta_7 \frac{R\&D}{A}_{t-1} + \beta_8 RDD_{t-1} + \beta_9 d_{high-lev} + \beta_{10} d_{low-lev} + \varepsilon_t$$

$$Y_t = \alpha + \beta_1 HOT + \beta_2 Market_t + \beta_3 \frac{M}{B}_{t-1} + \beta_4 \frac{EBITDA}{A}_{t-1} + \beta_5 Size_{t-1} + \beta_6 \frac{PPE}{A}_{t-1} + \beta_7 \frac{R\&D}{A}_{t-1} + \beta_8 RDD_{t-1} + \beta_9 d_{high-lev} + \beta_{10} d_{low-lev} + \beta_{11} HOT * M/B_{t-1} + \beta_{12} HOT * Size_{t-1} + \varepsilon_t$$

All regressions are estimated with industry dummies. The standard errors that are robust to heteroscedasticity are reported in parentheses. The dependent variable Y_t is the change in book leverage and the net debt issued scaled by total assets. All variables are expressed in percentage terms. (*), (**) and (***) indicate that coefficients are significant at 10, 5 and 1 percent level of significance, respectively.

Table 6 (con't) Issuance Activity and Capital Structure Rebalancing for IPO Firms

	Net Equity Issued (e/A_t)				$d_t/(\|d_t+e_t\|)$			
	IPO+1	IPO+1	IPO+2	IPO+2	IPO+1	IPO+1	IPO+2	IPO+2
Panel A: Mean Values								
Hot	7.01	7.01	6.44	6.44	15.86	15.86	16.27	16.27
Cold	6.76	6.76	8.77	8.77	20.25	20.25	15.20	15.20
t- value (difference)	(0.15)	(0.15)	(1.42)	(1.42)	(0.72)	(0.72)	(0.15)	(0.15)
Panel B: Regression Analysis								
HOT	1.14	-5.92	3.13**	7.52	1.48	-62.19*	15.06**	3.38
	(1.39)	(9.02)	(1.55)	(10.95)	(6.40)	(32.28)	(7.68)	(36.82)
$Market_t$	0.01	-0.13	2.32	2.35	-2.96	-3.19	0.14	1.21
	(1.67)	(1.69)	(1.54)	(1.55)	(6.46)	(6.49)	(6.81)	(6.78)
M/B_{t-1}	0.06	0.33	1.61*	0.21	0.74	0.64	-5.37*	-10.94
	(0.67)	(0.67)	(0.92)	(0.99)	(1.70)	(2.25)	(3.11)	(7.32)
$EBITDA/A_{t-1}$	0.26***	0.25***	0.54***	0.54***	0.11	0.06	0.09	0.10
	(0.13)	(0.13)	(0.08)	(0.08)	(0.18)	(0.18)	(0.20)	(0.20)
$SIZE_{t-1}$	-1.17***	-1.63***	-1.13***	-0.64	1.95	-2.32	0.80	1.10
	(0.45)	(0.53)	(0.42)	(0.71)	(1.49)	(2.75)	(1.68)	(2.91)
PPE/A_{t-1}	-0.04	-0.04	-0.03	-0.03	0.15	0.17	0.27*	0.25*
	(0.03)	(0.03)	(0.04)	(0.04)	(0.14)	(0.14)	(0.15)	(0.15)
$R\&D/A_{t-1}$	-0.30	-0.31	0.29	0.28	0.24	0.13	-0.13	-0.20
	(0.24)	(0.24)	(0.27)	(0.26)	(0.36)	(0.35)	(0.43)	(0.41)
RDD_{t-1}	-1.77	-1.83	2.56	2.67	10.34	9.40	5.85	5.97
	(2.22)	(2.22)	(2.10)	(2.08)	(9.22)	(9.16)	(8.62)	(8.46)
$d_{high\text{-}lev}$	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
$d_{low\text{-}lev}$	-2.29	-2.24	0.64	0.50	1.09	1.32	13.67	13.12*
	(1.56)	(1.58)	(1.62)	(1.62)	(6.12)	(6.14)	(8.62)	(7.13)
$HOT*MTB_{t-1}$	-	-0.31	-	1.98	-	0.70	-	8.08
	-	(1.04)	-	(1.37)	-	(2.89)	-	(7.14)
$HOT*Size_{t-1}$	-	0.78	-	-0.79	-	6.58**	-	-0.40
	-	(0.81)	-	(0.92)	-	(3.20)	-	(3.52)
R^2	0.08	0.08	0.27	0.28	0.04	0.05	0.08	0.08
Adj R^2	0.05	0.05	0.24	0.25	0.01	0.01	0.01	0.01
F-Test	2.39***	2.23***	9.30***	8.66***	0.91	1.01	1.13	1.14
N	554	554	518	518	411	411	295	295

Panel A reports the mean values of hot and cold market firms for each variable Y_t. The differences (t-values) are reported in parentheses. The period *t* denotes the IPO+1 and IPO+2. The results of the regressions from the following models are reported in Panel B:

$$Y_t = \alpha + \beta_1 HOT + \beta_2 Market_t + \beta_3 \frac{M}{B}_{t-1} + \beta_4 \frac{EBITDA}{A}_{t-1} + \beta_5 Size_{t-1} + \beta_6 \frac{PPE}{A}_{t-1} + \beta_7 \frac{R\&D}{A}_{t-1} + \beta_8 RDD_{t-1} + \beta_9 d_{high-lev} + \beta_{10} d_{low-lev} + \varepsilon_t$$

$$Y_t = \alpha + \beta_1 HOT + \beta_2 Market_t + \beta_3 \frac{M}{B}_{t-1} + \beta_4 \frac{EBITDA}{A}_{t-1} + \beta_5 Size_{t-1} + \beta_6 \frac{PPE}{A}_{t-1} + \beta_7 \frac{R\&D}{A}_{t-1} + \beta_8 RDD_{t-1} + \beta_9 d_{high-lev} + \beta_{10} d_{low-lev} + \beta_{11} HOT * M/B_{t-1} + \beta_{12} HOT * Size_{t-1} + \varepsilon_t$$

All regressions are estimated with industry dummies. The standard errors that are robust to heteroscedasticity are reported in parentheses. The dependent variable Y_t is the net equity issued scaled by total assets and the share of debt in net issuance activity. All variables are expressed in percentage terms. (*), (**) and (***) indicate that coefficients are significant at 10, 5 and 1 percent level of significance, respectively.