

## **Issuing and repurchasing decisions: Mispricing or financing waves**

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### **Abstract**

This paper examines the impact of mispricing and financing waves on the decisions (1) to issue equity or debt and (2) to repurchase equity or debt. We use a large international data set from 51 countries (22 developed and 29 emerging market countries) in the period from 1984 to 2006. Our results are consistent first with mispricing. The equity shares in net issues occur relatively more, and the equity shares in net repurchases occur relative less after periods of high stock returns. This finding is robust for the US firms, under different levels of economic development (developed and emerging markets), different economic regimes (bank and market-based), and different legal systems (common and civil). Moreover, prior returns are higher before issuing equity and preferred stock and lower before repurchasing equity and preferred stock. On the other hand, our findings are only partially consistent with financing waves influencing both the issue and repurchase decisions. We find that firms do not issue equity and preferred stock more during periods of economic expansion. They do, however, repurchase more equity and preferred stock during the later years of an economic expansion which is consistent with the financial wave explanation for repurchases. However, this explanation does not have support for the developed countries without the US, the emerging markets, bank-based countries, and civil law countries.

EFM Classification Codes: 230; 140

Keywords: Securities issuance; equity financing; debt financing; repurchases; mispricing; financing waves; international financial markets.

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## **1. Introduction**

The focus of this paper is on the timing of equity and debt issues and the timing of repurchases/retirements of debt and equity. In particular we investigate the impact of mispricing and financing waves on the decisions (1) to issue equity or debt and (2) to repurchase equity or debt.

Mispricing suggests that occasionally a firm's stock price deviates from its "true" value. Some corporate executives take advantage of the temporary deviations by issuing stock when the stock price is viewed as abnormally high and by repurchasing stock when the stock price is considered abnormally low. While it is impossible to know with one hundred percent accuracy when the current stock price is abnormal, many researchers have used prior returns as a proxy for misvaluation, arguing that high (low) current abnormal valuations are more likely associated with high (low) prior returns.

Recently Dittmar and Dittmar (2008) propose that stock issues and repurchases are part of the same economic expansion periods and have very little to do with misvaluation. Economic growth results in an increase in demand for funds and firms respond to this need by issuing equity. Equity issues thus occur early during economic growth. In contrast, repurchases happen near the end of the same cycle when cash flows are still high but the need for new funds is generally less.

We examine the impact of mispricing and financing waves on a large international data set consisting of observations from 51 countries (22 developed and 29 emerging market countries). Most major studies have examined mispricing only on US data and only a few, in total, have looked at financing waves. Our data set allows us to compare our findings for firms residing in countries with different levels of economic development and for countries with

different economic/legal regimes (market vs. bank and common vs. civil). One interesting finding of our study is how similar are our results across different sub samples.

Our data set reveals that firms are often borrowing new long-term funds at the same time they are reducing the amount of other long-term borrowings. When firms are net issuers of funds (the sum of net debt and net equity is greater than zero), firms repurchase relatively little equity or preferred stock. However, when these firms are net repurchasers of funds (the sum of net debt and net equity is less than zero) firms frequently issue new common equity and/or preferred stock at the same time. Firms often are raising new funds via equity (debt) at the same time they are retiring/converting/repurchasing debt (equity).

Our results suggest that firms do issue stock after periods of high prior returns and repurchase after low prior returns, consistent with misvaluation. We find little evidence that stock issues occur relatively more often in periods of economic expansions. In fact we find just the opposite. However, we do observe that stock repurchases occur relatively more at the end of economic expansions, a fact consistent with Dittmar and Dittmar (2008).

We also find that firms in both their issue and repurchase decisions move toward target capital structures. In particular we observe that firms move toward industry norms. As expected, larger firms, companies with more tangible assets, firms with greater cash flows, and less risky companies issue less equity. In terms of repurchasing decisions, larger firms, companies with more cash, and firms with higher cash flows, repurchase relatively more equity. The real cost of debt does not seem to impact either the issue or the repurchase decision in a consistent manner.

The rest of the paper is as follows: in section 2, we review some prior studies on mispricing and financing waves. In section 3, we present our hypotheses, data sources, and methodology. In section 4, results are given and finally, in section 5, conclusions are offered.

## **2. Mispricing and Financing Waves**

### *2.1 Mispricing*

A number of authors argue that firms take advantage of temporary high valuations for their stock by issuing new equity and also repurchasing equity during periods of temporary low valuations. In both situations this amounts to a transfer of wealth to shareholders of these firms who neither buy nor sell any additional shares. In the case of issuing new shares at “inflated” prices the firm is able to reduce temporarily its cost of equity.

Researchers have noted high stock returns prior to stock issues and low returns after stock equity issues, both facts consistent with firms taking advantage of mispricing (Asquith and Mullins, 1986; Hovakimian et al., 2001; Baker and Wurgler, 2000; Gomes and Phillips, 2005; Henderson et al., 2006; Dong et al., 2008; Greenwood, 2005; Kim and Weisbach, 2008; Pagano et al., 1998; Loughran and Ritter, 1995; Lowry, 2003). A similar pattern occurs with a firm’s profits, generally high before issues and lower after issues (Loughran and Ritter, 1997; Pagano et al., 1998). Kim and Weisbach also note that firms with high market to book ratios keep a higher percentage of the proceeds from a seasoned equity offering in cash than firms with low market to book ratios. This suggests that these firms (high market to book) are taking advantage of mispricing by issuing stock and using some of funds at a later time. Additional support for mispricing comes from the survey results from Graham and Harvey (2001) where executives state the importance of mispricing in equity issuance.

Researchers have documented low returns prior to repurchases and higher returns subsequent to repurchases (Ikenberry et al., 1995; Stephens and Weisbach, 1998; Dittmar, 2000; Hovakimian et al., 2001; Skinner, 2008; Peyer and Vermaelen, 2008), results consistent with

mispricing. The survey research by Brav et al. (2005) also documents the importance of mispricing to executives in the repurchase decision.

While most of the evidence appears to be in favor of mispricing, there are some studies that minimize its importance. Jung et al. (1996) find little support for mispricing. DeAngelo et al. (2007) argue that firms issue SEOs to overcome liquidity issues and not to exploit mispricing. Dittmar and Thakor (2007) believe that managers issue equity when there is agreement between managers and investors concerning a project's expected cash flows.

## *2.2 Financing Waves*

Considerable research has been devoted to showing that corporate events happen in waves (mergers, IPOs, SEOs, and stock repurchases). Most studies have examined waves in reference to a single corporate event such as mergers. Rau and Stouraitis (2008) and Dittmar and Dittmar (2008), in contrast, examine waves of multiple corporate events.

Dittmar and Dittmar argue that the primary motivation for stock issues, mergers, and repurchases is not misvaluation but instead are responses to the same event – growth in GDP. Economic growth causes an increase in demand for funds and also a relative (to debt) reduction in the cost of equity and both factors promotes equity issues. Equity issues occur early in the expansionary cycle while repurchases happen later in the same cycle. Repurchases occur when cash flows are high and/or capital expenditures are low.

Dittmar and Dittmar observe a positive correlation between past returns and repurchases, the opposite that would be expected if mispricing were the dominant motivation for repurchases. In addition they find that repurchases are unrelated to future market returns, a fact that would not be expected if mispricing was the primary reason for repurchases.

Dittmar and Dittmar's contention that equity issues are procyclical is consistent with the findings of Choe et al. (1993) and Lowry (2003). Also their results that firms repurchase when cash flows are high agrees with the work of Skinner (2008) and the survey research of Brav et al. (2005) that firms use repurchases to distribute excess cash.

### **3. Hypotheses, Data Sources, and Methodology**

#### *3.1 Hypotheses and Major Tests*

This paper tries to see whether mispricing or financing waves or both can account for the issuing and repurchasing decisions of firms. In particular, we focus on whether either or both theories can explain the relative amount of equity issuance or repurchasing of equity in relation to the total amount of both equity and debt issued or repurchased.

If mispricing is a major influence then we would expect a positive relationship between prior stock returns and the percent of issuing equity and a negative relationship between prior returns and the percent of equity repurchases. These associations are examined over a number of different samples. In addition if mispricing is important factor in issuance (repurchase) decisions then returns in the year prior to issuance should be higher (lower) than in the year after issuance (repurchase).

On the other hand, if financing waves are the primary influence of repurchasers and issues then we would expect a positive relationship between the GDP growth and both the percent of equity issues and repurchases. Dittmar and Dittmar also argue that since issuances occur early in the expansionary cycle and repurchases later in the same cycle then during expansionary periods we should a positive association between issues and the first year or two of

the expansionary period and also a positive relationship between repurchases and the latter years of an expansionary period.

### *3.2 Dependent Variable*

For the dependent variable, we use the equity share in net new funds as well as the equity share in net funds repurchased. In both cases this equals the ratio  $E_t/(E_t+D_t)$  where  $E_t$  is the net amount of equity issued/repurchased in year  $t$  and  $D_t$  is the amount of net debt issued/repurchased in year  $t$ . Net equity is the difference between the “Net proceeds from the Sale/Issue of Common and Preferred and the amounts of Stocks Purchased, Retired, Converted, and Redeemed” (*Worldscope*). Net Debt is defined as the difference between Long-Term Borrowings and the Reduction in Long-Term Debt. For the equity share in net new funds we require the denominator to be greater than zero (a net inflow of external funds) and for the equity share in net funds repurchased the denominator must be less than zero (a net outflow of funds). It is important to note that when the denominator is positive (negative) it does not mean that both net equity and net debt are positive (negative). For the case of the equity share in net new funds (net funds repurchased) either net debt or net equity can be negative but the sum must be positive (negative).

Our metric is not bounded in either direction. For the case of the equity share in net new funds, when net equity is negative (repurchased) and debt is net positive (issued), the ratio will be negative since the denominator is positive and in theory could be a large negative number if the positive value of debt is just slightly bigger in absolute value than the negative value of equity. On the other hand, when net debt has a negative value and net equity has a positive value

the ratio will be positive and again is not, in theory, bounded. A similar situation occurs for the case of repurchases (the denominator in this case is negative).

Given that *Worldscope* (our data source) makes occasional reporting errors and also that there are some extreme values for some of our variables, we have chosen to winsorize our data. The top and bottom 1% of the values for a particular variable are set equal to the values for the 99 and 1 percent respectively for that variable.

Our choice of this metric is motivated by the tremendous diversity of combinations of equity and debt. Table 1 gives the joint frequencies of net equity (both common and preferred) and net debt for the 116,323 observations. 7000 of these cases, the firm neither issued/repurchased debt nor equity (net equity and net debt were both zero). The idea that firms raise or repurchase all their funds using only debt or equity in a given year is not a realistic picture. Of the 109,323 (116,323-7000) cases in Panel A where the firm issued/repurchased debt or equity or both, only 41% ( $1027 + 3020 + 4620 + 14,258 + 7636 + 5625 + 6287 + 2880 = 45353$ ) of the time did the firm confine itself to just equity or debt (when there was a non zero amount in one market and a zero amount in the other). In other words, most of the time (59%) firms are active in both debt and equity markets in the same year.

Another interesting observation from Panel A of Table 1 is the frequency that firms are issuing one security at the same time they are retiring another. Our data has 33,761 ( $568 + 759 + 3992 + 2751 + 4252 + 14861 + 2162 + 4416$ ) instances (31%) of positive amounts of one security and negative amounts of another. This, of course, makes sense if the firm is trying to alter its capital structure.

Our metrics (the equity share in net new funds and the equity share in funds repurchased) allows us to study all the different positive and negative combinations of equity and debt. The



only observations omitted are those where the firm did not have a net issue or a net repurchase (the denominator was zero). In contrast some studies model the choice between debt and equity and firm observations are classified as either debt or equity, but not both. Cases where firms issued (repurchased) both debt and equity in the same year are omitted (see, for example, Hovakimian et al., 2001).

[Insert Table 1 About here]

### 3.3 Models

Our two econometric models are listed next.

$$ESINNF_{it} = a + b \text{BUSCON}_{j,t-1} + c \text{MISP}_{i,t-1} + d \text{Cont} + e_{it} \quad (1)$$

$$ESINFR_{it} = a + b \text{BUSCON}_{j,t-1} + c \text{MISP}_{i,t-1} + d \text{Cont} + e_{it} \quad (2)$$

Where  $ESINNF_{it}$  = equity share in net new funds and equals  $E_t/(E_t+D_t)$  for firm  $i$  at time  $t$ . This variable is only applicable when the sum of net equity ( $E$ ) and net debt ( $D$ ) is positive.

$ESINFR_{it}$  = equity share in net funds repurchased and equals  $E_t/(E_t+D_t)$  for firm  $i$  at time  $t$ . This variable is only applicable when the sum of net equity ( $E$ ) and net debt ( $D$ ) is negative.

$BUSCON$  = Business Conditions in country  $j$  at time  $t-1$ . For each country we identify periods of economic expansions based on real GDP growth. Alternatively we measure Business Conditions as the growth rate of real GDP.

$MISP_{i,t-1}$  = Mispricing variable for firm  $i$  at  $t-1$ . We measure mispricing by the stock returns at time  $t-1$ .

$Cont$  = A vector of controls for firm  $i$

Our first control variable is  $DEVFT_{i,t-1}$  (deviation from target) and is defined as firm  $i$ 's equity ratio  $[E/(E+D)]$  at time  $t-1$  minus the industry average for this ratio. The industry average

is used as a proxy for the firm's target equity ratio. If firms try to move toward their target equity ratio, we would expect the coefficient for this variable to be negative in equation 1 and positive in equation 2.

$SIZE_{i,t-1}$  (size) is our second control variable. It is defined as the natural logarithm of firm  $i$ 's assets in dollars at time  $t-1$ . In equation 1 we expect the coefficient to be negative since previous research has shown larger firms (according to the tradeoff theory larger firms have more diversified cash flows and hence less bankruptcy risk) use more debt. We include size in equation 2 because Dittmar (2000) found that large firms were more likely to repurchase than small firms<sup>1</sup>.

$CFLOW_{i,t-1}$  (cash flow) is our third control variable. We measure cash flow in year  $t-1$  as the sum of net income plus depreciation, all divided by total assets. Firms with negative or low positive cash flow may find it desirable to raise funds through equity to avoid possible bankruptcy and hence there will likely be a negative relation between cash flow and equity issues. In an alternative specification, we use a dummy variable to represent the situation when the firm's cash flows are negative for that period. In this case, we would expect a positive coefficient on the dummy variable. We follow Skinner (2008) who argues that firms are increasing using repurchases to distribute excess funds. Therefore for equation 2, the greater the cash flow for a firm the more likely a firm will repurchase stock.

$CASH_{i,t-1}$  (cash) is included in the repurchase equation. It is defined as the ratio of the sum of cash and cash equivalents to total assets. Holding investment constant, presumably the more cash a firm has the more it could distribute to its stockholders.

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<sup>1</sup> An alternative view of size is that it is proxy for information asymmetry. Small firms presumably have more information asymmetry and would be less likely to issue stock and more likely to repurchase stock.

We also include  $TANG_{i,t-1}$  (tangibility) as a control variable in both equations. This is the ratio of fixed assets to total assets. The more tangible the assets the more collateral the firm has and the more likely firms will issue debt. Firms with more tangible assets should be more willing to repurchase stock.

$RISK_{i,t-1}$  (risk) is another control variable. It is measured as the standard deviation of operating return on assets. Greater risk should lead to greater issuance of equity and less repurchasing of equity.

$MTB_{i,t-1}$  (market to book ratio) is also used as control variable. It is defined as the sum of the market value of equity plus the book value of debt divided by book value of assets. This variable can be viewed in two ways, one as an indication of mispricing and the other as a proxy for growth opportunities. All things being equal, a firm with many growth opportunities should employ more equity and repurchase less equity.

We also include the  $REALINT_{t-1}$  (real interest rate) defined as the yield on long-term government bonds minus the rate of inflation. High real interest rates should favor the use of equity and less repurchasing of equity.

Finally, in the repurchase equation only, we include the variable  $D.HISTORY_{i,t}$  (Dividend History) which is a dummy variable that has a value equal to one if the firm has issued a dividend in the last three years (current and the previous two years). We employ this variable as a control because dividend paying firms may make different repurchase decisions than non-dividend paying firms.

To estimate our coefficients we employ a linear regression model of company and time fixed effects. The particular method is *restricted maximum likelihood (REML)*, also known as *residual maximum likelihood*. REML estimation methods are implemented with a Newton-

Raphson algorithm, which typically performs well and finds the optimum in a few iterations. The procedure is called “Empirical” in that it computes the estimated variance-covariance matrix of the fixed-effects parameters by using the asymptotically consistent estimator described in White (1980), Liang and Zeger (1986), and Diggle et al. (1994). This estimator is commonly referred to as the "sandwich" estimator and controls for heteroskedasticity.

### 3.4 Data Sources

Financial data was collected from *Worldscope* from 1984 to 2006 for 51 countries (22 developed countries and 29 emerging market countries). As shown in Table 2<sup>2</sup>, most of our data (both net issues and repurchases) occurs in the later years of our study. We eliminate financial firms and utilities and thus we avoid issues about regulatory influence on these firms.

[Insert Table 2 About here]

We gathered data on yields (Government Bond Yields) and inflation (Consumer Price Index) from the *International Financial Statistics* (IFS) of the International Monetary Fund. Unfortunately we do not have a series of interest rates or yields that are comparable across all countries<sup>3</sup>.

The data for GDP growth rates are from the World Bank World Development Indicators, adjusted to the 2000 base. Expansionary periods were identified using the entire 1980 to 2006

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<sup>2</sup> Table 2 reports the year by year breakdown of many of the important variable in our study. It also provides yearly information on the firms’ short term debt and cash flows.

<sup>3</sup> For the major developed countries Government Bond Yields (GBY) are available for short, middle, and long term. We select the long term yield for those countries. GBY is not available for some emerging market countries (Brazil, Egypt, Hon Kong, Israel, Sri Lanka, Mexico, Poland, Russia, Singapore, and Turkey and, in these cases, we collected Treasury Bill Rates. When this rate is not available, we collect lending rates for the following countries: Argentina, Chile, China Colombia, India, Indonesia Jordon, and Peru. There is no IFS data for Taiwan. For this country, we collect DataStream 90 day money market rates.

time frame. To be classified as an expansionary year, we included only years that had GDP growth rates in the top  $\frac{1}{4}$  of the period. The first year of the expansionary period was labeled year one. If the next expansionary year following immediately after the first, we labeled that year, year two. We followed the same procedure for year three.

## **4. Results**

### *4.1 Descriptive Statistics*

Table 3 presents descriptive statistics for all 51 countries. The equity ratios (total shareholders' equity divided by the sum of total shareholders' equity and total liabilities) for both developed and emerging markets<sup>4</sup> are very similar and are both slightly under .5. On average, *Worldscope* tracks similar sized firms (\$230 million) in the developed and emerging market countries. Firms in our sample from developed countries have larger market to book ratios, greater risk (measured as the standard deviation of operating return on assets), greater proportions of cash and short-term investments to total assets, smaller cash flows, and less asset tangibility than firms in our sample from emerging market countries.

There are 109,323 instances of either a net issue (58,393 or 53.4%) or a net repurchase (50,930 or 46.6%). Net issues (repurchases) occur when there is an increase (decreases) in net new funds. In the case of net issues (repurchases) the sum of new equity and debt must be positive (negative). Our study investigates (1) the percent of net equity in the total amount of net equity and net debt raised and (2) the percent of net equity repurchased in the total amount of net equity and net debt repurchased.

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<sup>4</sup> In Table 3 we grouped countries according to levels of economic development. We could just as easily classified them based on economic regime (market or bank-based) or legal background (common or civil).

Examining the equity share in new net funds indicates that the mean of this variable is .553 and the 1 and 99 percentiles are -2.01 and 6.59 (Table 4). 22.7% of the time this variable has a zero value and 10.3% (67%) this value is negative (positive). When we compare the gross equity issues with the gross long-term debt issues we find (row 1 of Table 5), on average, that gross long-term debt issues are larger (.092 vs. .062). However, the average net issue of equity is larger than the average net issue of debt (.059 vs. .043). The reason for this apparent contradiction is that when firms are net issuers of funds they rarely repurchase equity (.003) but still repurchase considerable amount of debt (.048). An examination of the joint frequencies (Panel B of Table 1) shows that when firms are net issuers of securities, 18.8% (1497 + 4416 + 5064 out of 58393) of the time they are net repurchasers of debt vs. only 10.3% (448 + 2796 + 2751 out of 58393) of the time are they net repurchasers of equity.

[Insert Table 3 About here]

We next investigate the characteristics of the variable equity share in net funds repurchased (Table 4). The mean (.055) is considerably smaller than the mean of the equity share in net new funds. The values for the 1 and 99 percentile are -6.24 and 3.06 respectively. The distribution of this variable is fairly even around zero. 28.9, 37.1, and 34.0 represent the percents below zero, equal to zero, and greater than zero. The long-term debt numbers are considerably larger than the corresponding equity numbers (Table 5) and this explains why the mean of the equity share in net funds repurchased is small. For this variable gross equity issued is .005, equity repurchased is .013 and net equity is -.007 while the corresponding numbers for debt are .034 (long-term debt issued), .070 (debt reduction), and -.034 (net long-term debt). When there is

net repurchase of debt and equity ( $\text{net debt} + \text{net equity} < 0$ ), only 4% (Panel C of Table1) of the time is net debt positive while net equity is positive 28.9% (Panel C of Table 1) of the time.

[Insert Table 4 About here]

An inspection of Table 5 shows that firms are consistently issuing new debt and reducing the amount of other debt all in the same year. This fact holds whether they are net issuers of funds or net repurchases of funds. The pattern is different for equity. When firms are net issuers of funds, they rarely repurchase equity (in a relative sense). On the other hand, when companies are net repurchasers of funds they repurchase as well as issue equity at the same time.

#### *4.2 Univariate Results for Mispricing and Financing Waves*

Table 5 compares the equity share in new net issues according to the growth in GDP and also according to past stock returns. If Dittmar and Dittmar (2008) are correct then one would expect more equity issues to take place in high growth periods. We divide growth into high and low periods based on the median growth rate. We follow a similar procedure for stock returns.

In Table 5, we present the statistics for the full sample. The low growth periods had a higher percent of equity in net new funds (.600 vs. .507), the opposite of what would be expected if expansionary periods resulted in relatively higher equity issues. Further analysis reveals that, on average, more equity is issued during low periods of growth (.064 vs. .060). Also the amount of net equity issued is higher in low periods of growth (.061 vs. .057). On the contrary, both more gross long-term debt (.105 vs. .079) as well net long-term debt (.050 vs. .036) are issued in high growth periods.

In terms of mispricing, the results are quite clear. For the entire sample (.587 vs. .519) the equity share in net new funds is higher when past returns are high as compared to when the past returns are low. The amount of gross equity and new equity are higher in periods that follow high stock returns as opposed to low stock returns. Comparing periods of high and low past stock returns shows that the differences between gross or net debt are small.

In summary, our findings indicate that when past stock returns are high the equity share in net new funds is higher than when past stock returns are low. On the other hand, the results are not supportive of the idea that the equity share in net new funds is higher during periods of high GDP growth than in periods of low GDP growth.

Table 5 compares the equity share in net funds repurchased according to growth in GDP and past stock returns. Dittmar and Dittmar (2008) argue that repurchases of stock should occur during periods of high GDP growth rates while mispricing would suggest they should follow periods of low stock returns. Our findings for the equity share in net funds repurchased are consistent with Dittmar and Dittmar (2008). During high growth periods the equity share in net funds repurchased (.089) is much higher than during periods of low growth (.018). Repurchases of equity and preferred stock are also higher (.016 vs. .009) in high growth periods.

On the other hand, the equity share in net funds repurchased is not different between periods that follow high previous returns and those that follow low prior returns. These results are not consistent with mispricing. In addition, the amount of equity repurchased following high past returns (.015) is higher than it is following low past stock returns (.011), a result again not consistent with mispricing.

Overall our univariate results are mixed. In terms of the equity share of net new funds, the evidence is consistent with mispricing but for the equity share in net funds repurchased the



findings are supportive of Dittmar and Dittmar (2008). We next turn to regression results which will allow us to control for known determinants of both the issue and the repurchase decisions.

[Insert Table 5 About here]

#### *4.3 Regression Results*

Tables 6, 7, and 8 present our main regression results. In Table 6 we give our findings based on the full sample of observations. Panel A presents the results for the regressions involving the equity share of net new funds and Panel B gives the same for the equity share in net funds repurchased. In column 2 we give the simple regression statistics using GDP growth as the single independent variable. In column 3 we present the regression findings where we isolate those periods that were clearly periods of high expansionary activity. We label these periods H1-H3. H1 stands for first year of high expansionary periods and H3 for the third year of the expansionary periods. If Dittmar and Dittmar (2008) are correct then we should see a strong positive coefficient for H1 (possibly H2) in the regression involving the equity share in net new funds because these authors argue that issues occur early in the expansionary periods. Similarly in the equation involving the equity share in net funds repurchased H3 (possibly H2) should be significantly positive since repurchases should take place at the end of the expansionary periods. Column 4 shows the findings for the regression that use as the sole independent variable our measure of mispricing (past stock returns). Columns 5-6 pair one measure of Business Conditions with our proxy for mispricing. Columns 7-10 give results based on the full models.

Tables 7 and 8 present the full model on various sub samples. We examine our models under different levels of economic development (developed and emerging markets), different economic regimes (bank and market-based), and different legal systems (common and civil).

While it seems reasonable that economic development and/or economic/legal regimes could impact the magnitudes of the coefficients in models 1 and 2, it is not clear that any signs of the coefficients should change as we move from one sub sample to another.

In columns 2-3 of Tables 7-8 we give the results only for net issues or net repurchases where the amount of net issues or repurchases was at least 5% of total assets, columns 4-5 present the findings for the developed countries excluding the US, columns 6-7 give the findings for the US, columns 8-9 for emerging markets, columns 10-11 for market based countries, columns 12-13 for bank-based countries, columns 14-15 for common law countries, and finally, column 16-17 for civil law countries. The first column in each sub section presents the results using GDP growth as the proxy for Business Conditions while the second column uses dummies for years 1 -3 for the years during business expansions.

Columns 2-3 and 5-6 of Panel A of Table 6 and Table 7 provide little support for the notion that equity issues occur relatively more in times of high GDP growth/expansionary periods. In fact the results suggest just the opposite. The coefficients associated with the different years of an expansion are all significantly negative in Table 6 as is the variable representing growth of GDP (Tables 6 and 7). In contrast, our variable for mispricing (prior returns) indicates (columns 4-10 in Panel A of Table 6 and Table 7) that issues occur relatively more after periods of high stock returns which is consistent with executives issuing stock after periods of abnormal valuation.

Examining the coefficients of three dummy variables for the first three years of business expansions shows the same outcome, all coefficients are negative, except for emerging countries and civil law countries, and it is positive, but only marginally significant for bank based countries. The coefficient for the first year expansion dummy is positive in these countries

providing a consistent evidence for financing waves in these countries. Our results suggest that two alternative explanations are true for emerging or civil law countries.

[Insert Table 6 and 7 About here]

The control variables are in line with prior expectations. The negative coefficient on DEVFT suggests that firms try and move toward their target leverage ratios. The negative coefficient on size suggests that larger firms issue relatively more debt than equity which is consistent with larger firms being more diversified and having in general less bankruptcy risk. The negative coefficient on the cash flow variable suggests that firms with low or negative cash flows may issue relatively more equity because they are afraid that they may not be able to service any additional debt payments. Alternatively, we use in some regression specifications a dummy variable to represent cases where the firm has a negative cash flow. The resulting coefficient is positive which suggests again that firms with bad cash flows are forced to use more equity in their capital structure. The coefficient for tangibility is negative which suggests that firms with more tangible assets (more collateral value) use more debt. Riskier firms, as expected, use more equity because presumably of their increased bankruptcy risk.

We use MTB ratios as a proxy for growth opportunities. We find that firms with more growth opportunities use more equity in their capital structure, a result consistent with previous studies. Alternatively if MTB is thought to proxy for mispricing, then the positive coefficient on this variable is consistent with the idea that firms that are valued highly (perhaps temporarily) are more likely to issue equity.

The one variable that changes signs from one sample to the next is real cost of debt. High real costs of debt should favor equity. The evidence in favor of that prediction is clearly mixed.

As stated earlier, we had troubles getting a consistent measure across all countries for this variable.

In Panel B of Table 6 and Table 8 we present the regression statistics for the equity share in repurchases. These results are supportive of both the financing wave theory and mispricing for repurchases. The variable for mispricing is negative, indicating firms repurchase more equity when their prior stock returns are low. The coefficient for Business Conditions is positive in Panel B of Table 6 suggesting that firms repurchase more during business expansions, consistent with Dittmar and Dittmar (2008). In addition the coefficients are positive for years 2 and 3 (and not year 1) which again is consistent with the idea that repurchases take place at the end of business expansions.

The other samples (Table 8) also indicate that mispricing is an important variable. The negative coefficient on this variable is always significant. However, the results for the other samples are not clear cut concerning the impact of Business Conditions. The coefficient for Business Conditions is not positive for the developed countries minus the US, the emerging markets, bank-based countries, and civil law countries.

[Insert Table 8 About here]

The control variables have in general the expected signs. DEVFT has a positive coefficient which indicates that firms when they repurchase move toward their target debt equity ratios. The coefficient for size is usually positive which indicates that larger firms repurchase relatively more equity. The sign on the cash flow variable is positive which suggests that repurchases are used to distribute funds to stockholders. The coefficient on the dummy variable for negative cash flow is negative which suggests that firms with low cash flows do not

repurchase much equity. The coefficient for tangibility is negative which suggests that firms with many tangible assets are less likely to repurchase equity. This result is contrary to expectations. In almost all of the samples, riskier firms repurchase less equity.

Firms with plenty of cash tend (availability of funds) to repurchase more equity. Firms with prior history of dividend disbursements tend to repurchase more stock. One possible explanation for this is that these firms are in the habit of distributing funds to shareholders and use both dividends and repurchases to accomplish this task.

The MTB ratio does not have a consistent sign. Assuming that this ratio proxies for growth opportunities, then the impact of growth opportunities does not have a consistent impact on the repurchase decision. When this variable was eliminated for these equations the signs on the other coefficients did not change much at all. Also the coefficient for real interest rates (cost of debt) does not have a consistent sign from one sub sample to the next.

#### *4.4 Comparison of Returns*

Table 9 compares the returns for the year before and year after for both (1) net issues of equity and preferred stock and (2) net repurchases of equity and preferred stock. In the case of net issues, returns prior to the net issues are significantly greater (.27) than in the year after the issue (.16). Likewise for net repurchases, returns in the year after the repurchase (.21) are significantly greater than the year before the repurchase (.16). Both results are consistent with mispricing being a significant determinant of both the issue and repurchase decisions.

[Insert Table 9 About here]

## 5. Conclusions

This paper investigates the impact of financing waves and mispricing on the decisions to (1) issue equity or debt and (2) to repurchase equity or debt. Mispricing argues that firms take advantage of temporary misvaluations by issuing equity when the price of equity is unusually high (most likely after a high previous return) and repurchasing equity when the stock price is temporary low (most likely after a low or negative prior return). Financing waves as articulated by Dittmar and Dittmar (2008) postulate that both issuing equity and repurchasing equity occur naturally in the same economic expansion. Issuing equity occurs early in the expansionary cycle as firms demand resources and the price of equity is relatively cheap. Repurchasing equity on the other hand happens late in the same cycle after firms have acquired plenty of cash but have less need for those funds in terms of investments.

We find first that firms exhibit a wide array of both financing and repurchasing activity. Companies tend to be active in both debt and equity markets at the same time. They frequently are retiring one debt instrument at the same time they are acquiring other debt instruments. When firms are net issuers of funds (the sum of net debt and net equity is greater than zero), they do not repurchase much common equity or preferred stock. On the other hand when firms are net repurchasers of funds (the sum of net debt and net equity is less than zero), they often issue common equity or preferred stock at the same time they are repurchasing these instruments. Furthermore companies are often net issuers of one instrument (debt or equity) and net repurchasers of the other instrument.

We focus our attention on the equity share of net new funds as well as the equity share in net funds repurchased. Our evidence shows that mispricing seems to influence both the decision to issue equity and the decision to repurchase equity. Firms issue equity after periods of high

returns and repurchase equity after periods of low returns. On the other hand, we find that firms do not issue relatively more equity during expansionary periods as Dittmar and Dittmar (2008) contend. Companies do, however, repurchase relatively more equity at the end of expansionary periods, a result in line with Dittmar and Dittmar. Our principle findings are fairly consistent across a variety of countries that exhibit different levels of economic development as well as different economic/legal regimes.

Our findings also indicate that firms use both the issue and repurchase decisions to, in general, move them toward industry target debt levels. Larger firms issue relatively more debt and repurchase more equity. Riskier firms (defined as greater standard deviations of operating return on assets) issue more equity and repurchase less equity. Companies with low and negative cash flows issue more equity while firms with lots of cash flow and/or high levels of cash tend to repurchase more equity. The latter suggests that firms use repurchases as a means to distribute excess cash. Somewhat surprisingly, we find that the cost of debt does not have a consistent influence on either the decision to issue equity or the decision to repurchase equity.

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**Table 1: Joint frequencies of net equity and net debt**

This table presents the frequencies for combinations of net equity and net debt. The data is collected from *Worldscope* for the period 1984-2006. *Net Equity (E)* is the difference between 'Net Proceeds from Sale/Issue of Common and Preferred Stocks' and 'Stocks Purchased, Retired, Converted, Redeemed'. *Net Debt (D)* is the net increase in long-term debts and is calculated by taking the difference between 'Long Term Borrowings' and 'Reduction in Long-term Debt'. Net equity and net debt are scaled by Total Assets.

*Panel A: Frequencies for all observations*

Total # of observations 116323 (% 100)	<b>E</b> =< - <b>0.05</b>	<b>-0.05</b> > <b>E</b> < <b>0</b>	<b>E</b> = <b>0</b>	<b>0</b> > <b>E</b> < <b>0.05</b>	<b>E</b> >= <b>0.05</b>
<b>D</b> =< - <b>0.05</b> 13146 (11.3%)	3932 (3.4%)	19401 (16.7%)	39139 (33.6%)	39860 (34.3%)	13991 (12.0%)
<b>-0.05</b> > <b>D</b> < <b>0</b> 42639 (36.7%)	306 (0.3%)	1806 (1.6%)	4620 (4.0%)	4252 (3.7%)	2162 (1.9%)
<b>D</b> = <b>0</b> 20214 (17.4%)	1272 (1.1%)	7832 (6.7%)	14258 (12.3%)	14861 (12.8%)	4416 (3.8%)
<b>0</b> > <b>D</b> < <b>0.05</b> 21562 (18.5%)	1027 (0.9%)	3020 (2.6%)	7000 (6.0%)	6287 (5.4%)	2880 (2.5%)
<b>D</b> >= <b>0.05</b> 18762 (16.1%)	568 (0.5%)	3992 (3.4%)	7636 (6.6%)	7497 (6.4%)	1869 (1.6%)
	759 (0.7%)	2751 (2.4%)	5625 (4.8%)	6963 (6.0%)	2664 (2.3%)

*Panel B: Frequencies for equity shares in net new funds, {[E / (E+D)] when (E+D) > 0}*

Total # of observations 58393 (% 100)	<b>E</b> =< - <b>0.05</b>	<b>-0.05</b> > <b>E</b> < <b>0</b>	<b>E</b> = <b>0</b>	<b>0</b> > <b>E</b> < <b>0.05</b>	<b>E</b> >= <b>0.05</b>
<b>D</b> =< - <b>0.05</b> 1497 (2.6%)					1497 (2.6%)
<b>-0.05</b> > <b>D</b> < <b>0</b> 9480 (16.2%)				5064 (8.7%)	4416 (7.6%)
<b>D</b> = <b>0</b> 9167 (15.7%)				6287 (10.8%)	2880 (4.9%)
<b>0</b> > <b>D</b> < <b>0.05</b> 19798 (33.9%)		2796 (4.8%)	7636 (13.1%)	7497 (12.8%)	1869 (3.2%)
<b>D</b> >= <b>0.05</b> 18451 (31.6%)	448 (0.8%)	2751 (4.7%)	5625 (9.6%)	6963 (11.9%)	2664 (4.6%)

*Panel C: Frequencies for equity shares in net funds repurchased, {[E / (E+D)] when (E+D) < 0}*

Total # of observations 50930 (% 100)	<b>E</b> =< - <b>0.05</b>	<b>-0.05</b> > <b>E</b> < <b>0</b>	<b>E</b> = <b>0</b>	<b>0</b> > <b>E</b> < <b>0.05</b>	<b>E</b> >= <b>0.05</b>
<b>D</b> =< - <b>0.05</b> 11649 (22.9%)	3484 (6.8%)	13854 (27.2%)	18878 (37.1%)	14049 (27.6%)	665 (1.3%)
<b>-0.05</b> > <b>D</b> < <b>0</b> 33159 (65.1%)	306 (0.6%)	1806 (3.5%)	4620 (9.1%)	4252 (8.3%)	665 (1.3%)
<b>D</b> = <b>0</b> 4047 (7.9%)	1272 (2.5%)	7832 (15.4%)	14258 (28.0%)	9797 (19.2%)	
<b>0</b> > <b>D</b> < <b>0.05</b> 1764 (3.5%)	1027 (2.0%)	3020 (5.9%)			
<b>D</b> >= <b>0.05</b> 311 (0.6%)	568 (1.1%)	1196 (2.3%)			
	311 (0.6%)				

**Table 2: Annual summary statistics**

This table reports annual summary statistics for sources of financing. The data is collected from Worldscope for the period 1984-2006. *Equity* is 'Net Proceeds from Sale/Issue of Common and Preferred Stocks', *Repurchase* is 'Stocks Purchased, Retired, Converted, Redeemed', and *Net Equity (E)* is the difference between Equity and Repurchase. *LT Debt* is 'Long Term Borrowings', *Debt Reduction* is 'Reduction in Long-term Debt', and *Net Debt (D)* is the net increase in long-term debts and calculated by taking the difference between *LT Debt* and *Debt Reduction*. All are scaled by total assets. *ESINNF* (Equity Share in Net New Funds) is the ratio of net equity to the sum of net equity and net debt, when the total is positive. *ESINRF* (Equity Share in Net New Funds Repurchased) is the ratio of net equity to the sum of net equity and net debt, when the total is negative. *ST Debt* measures the ratio of the increase or decrease in Short-term Borrowings (short-term debt and current portion of long-term debt) to total assets. *Cash Flow* is calculated as the ratio of Net Income plus Depreciation to total assets.

*Panel A: Statistics for equity shares in net new funds (ESINNF),  $\{[E / (E+D)] \text{ when } (E+D) > 0\}$*

	N	Equity	Repurchase	Net Equity (E)	LT Debt	Debt reduction	Net LT Debt (D)	ESSINF	ST Debt	Cash Flow
1984	421	0.031	0.005	0.027	0.078	0.033	0.043	0.485	0.002	0.107
1985	534	0.031	0.007	0.024	0.092	0.037	0.054	0.452	-0.001	0.097
1986	580	0.044	0.005	0.039	0.107	0.044	0.059	0.498	0.001	0.093
1987	567	0.050	0.008	0.040	0.098	0.045	0.052	0.519	0.001	0.098
1988	977	0.035	0.004	0.031	0.085	0.035	0.049	0.440	0.004	0.108
1989	1304	0.046	0.004	0.042	0.085	0.035	0.049	0.476	0.004	0.107
1990	1467	0.036	0.003	0.034	0.076	0.030	0.046	0.432	0.002	0.094
1991	1644	0.041	0.002	0.039	0.066	0.032	0.034	0.520	-0.002	0.087
1992	1722	0.042	0.002	0.040	0.073	0.040	0.032	0.621	-0.002	0.082
1993	1845	0.048	0.002	0.046	0.077	0.044	0.033	0.601	-0.005	0.079
1994	2061	0.052	0.002	0.050	0.081	0.042	0.039	0.637	-0.003	0.085
1995	2716	0.053	0.002	0.051	0.091	0.048	0.043	0.575	0.002	0.077
1996	3093	0.065	0.002	0.063	0.102	0.052	0.048	0.525	0.000	0.065
1997	3416	0.054	0.003	0.051	0.111	0.056	0.054	0.481	0.001	0.052
1998	3376	0.050	0.004	0.045	0.113	0.054	0.057	0.437	-0.001	0.041
1999	3391	0.070	0.004	0.066	0.107	0.055	0.051	0.506	-0.005	0.018
2000	3252	0.101	0.004	0.097	0.096	0.049	0.045	0.548	0.002	-0.005
2001	3601	0.064	0.003	0.061	0.091	0.046	0.043	0.549	-0.005	-0.021
2002	3608	0.062	0.003	0.059	0.081	0.046	0.035	0.619	-0.006	-0.033
2003	3717	0.067	0.003	0.064	0.085	0.047	0.037	0.595	-0.006	0.000
2004	4157	0.081	0.003	0.078	0.085	0.049	0.035	0.658	-0.004	0.019
2005	5383	0.068	0.002	0.065	0.090	0.049	0.039	0.598	-0.001	0.030
2006	5561	0.068	0.004	0.064	0.099	0.053	0.044	0.552	-0.001	0.031

Panel B: Statistics for equity shares in net funds repurchased (ESINFR),  $\{[E/(E+D)] \text{ when } (E+D) < 0\}$

	N	Equity	Repurchase	Net Equity (E)	LT Debt	Debt reduction	Net LT Debt (D)	ESINFR	ST Debt	Cash Flow
All Sample										
1984	409	0.004	0.017	-0.012	0.017	0.037	-0.020	0.101	0.002	0.113
1985	419	0.007	0.017	-0.011	0.021	0.050	-0.027	0.111	0.003	0.095
1986	458	0.007	0.019	-0.011	0.023	0.055	-0.030	0.063	0.001	0.097
1987	576	0.008	0.021	-0.013	0.025	0.057	-0.030	0.141	0.005	0.103
1988	794	0.005	0.017	-0.011	0.020	0.048	-0.027	0.169	0.002	0.113
1989	869	0.005	0.015	-0.010	0.021	0.050	-0.028	0.071	0.005	0.109
1990	1141	0.004	0.012	-0.008	0.024	0.052	-0.028	0.077	0.004	0.095
1991	1253	0.004	0.007	-0.003	0.023	0.059	-0.033	-0.062	-0.001	0.084
1992	1518	0.005	0.006	-0.001	0.027	0.064	-0.037	-0.131	0.003	0.094
1993	1650	0.006	0.007	-0.001	0.026	0.065	-0.037	-0.143	0.001	0.091
1994	1744	0.005	0.009	-0.004	0.026	0.064	-0.036	-0.088	0.003	0.102
1995	2017	0.004	0.009	-0.005	0.028	0.063	-0.034	-0.050	0.006	0.101
1996	2230	0.005	0.011	-0.005	0.037	0.072	-0.034	-0.022	0.005	0.102
1997	2334	0.005	0.014	-0.008	0.032	0.068	-0.035	0.016	0.005	0.093
1998	2437	0.006	0.018	-0.011	0.038	0.071	-0.032	0.121	0.005	0.084
1999	2800	0.005	0.017	-0.011	0.038	0.076	-0.035	0.166	0.003	0.081
2000	2699	0.005	0.016	-0.011	0.041	0.081	-0.037	0.140	0.005	0.087
2001	3592	0.005	0.011	-0.006	0.039	0.080	-0.038	0.070	-0.002	0.044
2002	4288	0.005	0.010	-0.004	0.037	0.080	-0.041	0.025	-0.002	0.041
2003	4328	0.004	0.009	-0.004	0.038	0.077	-0.036	0.083	-0.002	0.068
2004	3868	0.006	0.012	-0.005	0.035	0.070	-0.033	0.049	0.000	0.094
2005	4787	0.006	0.014	-0.007	0.038	0.072	-0.032	0.078	0.001	0.092
2006	4719	0.005	0.017	-0.010	0.037	0.068	-0.029	0.142	0.001	0.093

**Table 3: Descriptive statistics for sample countries**

The data is collected from Worldscope and Datastream for the period 1983-2006. *LEVERAGE* is the ratio of total shareholders' equity to the sum of shareholders' equity and total liabilities. *RETURN* is the annual stock market return. *SIZE* is the natural logarithm of total assets measured in US Dollars. *MTB* is measured as the ratio of the sum of the market value of equity and book value of debt to the book value of assets. *CFLOW* (*Cash flows*) is calculated as Net Income plus Depreciation and is scaled by total assets. *TANG* is the ratio of net property, plant, and equipment to total assets. *RISK* is measured by the standard deviation of operating return on assets for each firm. *CASH* is the ratio of cash and short term investments to total assets. *MARKET* is 1 if the country is a market based and 0 if it is a bank based country, and *LAW* is 1 for common law countries and 0 for civil law countries as defined in Demircug-Kunt and Levine (1999) and Demircug-Kunt and Maksimovic (2002). T-statistics are reported in parentheses for the comparisons of means between developed and emerging countries. a, b and c denote significance at 1%, 5% and 10% respectively.

*Panel A: Developed countries*

	<b>N</b>	<b>LEVERAGE</b>	<b>RETURN</b>	<b>SIZE</b>	<b>MTB</b>	<b>CFLOW</b>	<b>TANG</b>	<b>RISK</b>	<b>CASH</b>	<b>MARKET</b>	<b>LAW</b>
Australia	4239	0.561	0.163	4.352	1.708	0.009	0.349	0.126	0.137	1	1
Austria	197	0.362	0.199	6.433	1.261	0.089	0.387	0.039	0.113	0	0
Belgium	283	0.359	0.130	6.610	1.500	0.112	0.374	0.037	0.103	0	0
Canada	4870	0.532	0.227	5.418	1.761	0.051	0.456	0.079	0.119	1	1
Denmark	864	0.440	0.179	5.063	1.431	0.101	0.339	0.047	0.155	1	0
Finland	420	0.439	0.159	6.203	1.507	0.115	0.307	0.052	0.121	0	0
France	2127	0.368	0.190	6.278	1.448	0.082	0.215	0.042	0.137	0	0
Germany	1451	0.368	0.105	6.181	1.412	0.072	0.286	0.068	0.120	0	0
Greece	53	0.425	0.239	5.995	1.406	0.151	0.417	0.036	0.078	0	0
Ireland	612	0.468	0.230	5.206	1.527	0.086	0.370	0.053	0.142	0	1
Italy	1073	0.365	0.085	6.529	1.279	0.066	0.265	0.060	0.125	0	0
Japan	9642	0.426	0.183	7.012	1.311	0.066	0.308	0.025	0.168	0	0
Luxemburg	47	0.471	0.284	7.458	1.335	0.101	0.397	0.050	0.095	0	0
Netherlands	1627	0.380	0.178	5.903	1.569	0.112	0.326	0.050	0.097	1	0
New Zealand	391	0.535	0.178	5.040	1.548	0.125	0.451	0.066	0.054	0	1
Norway	876	0.384	0.307	5.574	1.467	0.086	0.421	0.073	0.166	0	0
Portugal	26	0.501	0.184	4.917	0.921	0.103	0.377	0.047	0.040	0	0
Spain	422	0.445	0.205	6.422	1.399	0.094	0.413	0.041	0.077	0	0
Sweden	889	0.419	0.236	5.938	1.604	0.075	0.297	0.067	0.143	1	0
Switzerland	1041	0.442	0.140	6.040	1.508	0.089	0.368	0.044	0.146	1	0
United Kingdom	12520	0.470	0.158	4.780	1.718	0.101	0.344	0.074	0.122	1	1
United States	46440	0.534	0.212	5.251	2.046	0.040	0.286	0.104	0.173	1	1
Developed Countries	90110	0.497	0.195	5.441	1.811	0.057	0.313	0.084	0.154		

Panel B: Emerging countries

	<b>N</b>	<b>LEVERAGE</b>	<b>RETURN</b>	<b>SIZE</b>	<b>MTB</b>	<b>CFLOW</b>	<b>TANG</b>	<b>RISK</b>	<b>CASH</b>	<b>MARKET</b>	<b>LAW</b>
Argentina	175	0.516	0.272	5.847	1.221	0.083	0.500	0.062	0.060	0	0
Brazil	533	0.430	0.405	6.562	1.102	0.098	0.431	0.076	0.139	1	0
Chile	498	0.587	0.192	5.748	1.253	0.099	0.497	0.047	0.064	1	0
China	1146	0.510	0.113	6.090	1.448	0.073	0.430	0.044	0.144	0	0
Colombia	52	0.657	0.393	5.866	0.819	0.069	0.515	0.046	0.074	0	0
Czech Rep.	32	0.614	-0.076	5.383	1.022	0.136	0.523	0.056	0.075	0	0
Egypt	30	0.477	0.602	5.987	1.772	0.155	0.564	0.047	0.128	0	0
Hong Kong	1329	0.589	0.187	4.955	1.544	0.071	0.315	0.069	0.201	1	1
Hungary	53	0.578	0.076	4.953	1.229	0.094	0.467	0.046	0.083	0	0
India	1587	0.449	0.435	5.107	1.785	0.129	0.411	0.052	0.062	1	1
Indonesia	425	0.465	0.120	5.061	1.502	0.084	0.427	0.053	0.130	0	0
Israel	202	0.498	0.331	5.704	1.827	0.071	0.238	0.059	0.217	0	1
Malaysia	1239	0.547	-0.041	4.342	1.172	0.075	0.447	0.041	0.101	1	1
Mexico	493	0.504	0.238	6.959	1.198	0.085	0.532	0.044	0.074	1	0
Morocco	9	0.727	0.182	5.946	1.957	0.181	0.291	0.042	0.125	0	0
Pakistan	285	0.406	0.315	4.429	1.338	0.150	0.490	0.066	0.111	0	1
Peru	98	0.537	0.364	5.084	1.153	0.101	0.496	0.087	0.045	1	0
Philippines	496	0.529	0.156	5.048	1.215	0.079	0.530	0.065	0.087	1	0
Poland	199	0.524	0.380	5.002	1.537	0.105	0.405	0.069	0.089	0	0
Russian F.	68	0.576	0.685	7.747	1.244	0.161	0.641	0.052	0.079	0	0
Singapore	1076	0.546	0.093	4.532	1.364	0.082	0.360	0.059	0.158	1	1
Slovakia	3	0.519	0.363	6.633	0.645	0.109	0.601	0.066	0.033	0	0
South Africa	1032	0.489	0.267	5.878	1.501	0.161	0.359	0.069	0.112	1	1
South Korea	2900	0.424	0.281	5.907	1.047	0.058	0.384	0.046	0.117	1	0
Sri Lanka	48	0.439	0.272	4.437	1.041	0.095	0.506	0.042	0.085	0	1
Taiwan	3169	0.543	0.120	5.885	1.396	0.071	0.367	0.045	0.129	0	0
Thailand	1871	0.451	0.214	4.591	1.234	0.087	0.445	0.057	0.075	1	1
Turkey	101	0.507	0.948	5.169	1.893	0.165	0.367	0.084	0.114	1	0
Venezuela	64	0.601	0.344	5.485	0.782	0.073	0.578	0.040	0.067	0	0
Emerging Countries	19213	0.499	0.212	5.431	1.343	0.086	0.406	0.053	0.116		
Emerging – Developed		0.002	0.017	-0.01	-0.468	0.029	0.093	-0.031	-0.038		
T statistics		(1.64) <sup>c</sup>	(2.95) <sup>a</sup>	(-0.80)	(-55.5) <sup>a</sup>	(31.6) <sup>a</sup>	(54.6) <sup>a</sup>	(-64.6) <sup>a</sup>	(-37.4) <sup>a</sup>		

**Table 4: Descriptive statistics of variables**

The data is collected from Worldscope and Datastream for the period 1984-2006.  $ESINNF_t$  (Equity Share in Net New Funds) is the ratio of net equity to the sum of net equity and net debt, when the total is positive.  $ESINFR_t$  (Equity Share in Net New Funds Repurchased) is the ratio of net equity to the sum of net equity and net debt, when the total is negative.  $BUSCON_{t-1}$  is the growth rate of real GDP.  $MISP_{t-1}$  is mispricing as is measured as the stock returns in the previous year.  $DEVFT_{t-1}$  is the ratio of total shareholders' equity to the sum of shareholders' equity and total liabilities minus the mean of the ratio for firms in the same 4 digit industry.  $SIZE_{t-1}$  is the natural logarithm of total assets measured based in US Dollars.  $CFLOW_{t-1}$  is calculated as Net Income plus Depreciation and scaled by total assets.  $TANG_{t-1}$  is the ratio of net property, plant, and equipment to total assets.  $RISK_{t-1}$  is measured by the standard deviation of operating return on assets for each firm.  $MTB_{t-1}$  is measured as the ratio of the sum of the market value of equity and book value of debt to the total book value of assets.  $REALINT_{t-1}$  is real interest rate and calculated by taking the difference between Government bond yield and the consumer price index.  $CASH_{t-1}$  is the ratio of cash and short term investments to total assets.

*Panel A: Equity share in net new funds,  $\{[E_t / (E_t + D_t)] \text{ when } (E_t + D_t) > 0\}$* 

Variable	N	Mean	Median	1 <sup>st</sup> Per.	99 <sup>th</sup> Per.
$ESINNF_t$	58393	0.553	0.168	-2.010	6.595
$ESINNF_t = 0$ (22.7%)	13261	0.000	0.000	0.000	0.000
$ESINNF_t < 0$ (10.3%)	5995	-0.454	-0.135	-2.010	0.000
$ESINNF_t > 0$ (67.0%)	39137	0.895	1.000	0.001	6.595
$BUSCON_{t-1}$ (%)	58393	3.383	3.377	-2.093	9.486
$MISP_{t-1}$	58393	0.247	0.094	-0.813	3.632
$DEVFT_{t-1}$	58393	0.008	0.010	-0.457	0.395
$SIZE_{t-1}$	58393	5.287	5.218	1.019	10.228
$CFLOW_{t-1}$	58393	0.047	0.086	-0.811	0.344
$TANG_{t-1}$	58393	0.326	0.283	0.010	0.911
$RISK_{t-1}$	58393	0.090	0.052	0.006	0.600
$MTB_{t-1}$	58393	1.951	1.394	0.549	9.419
$REALINT_{t-1}$	58393	0.031	0.034	-0.197	0.109

*Panel B: Equity share in net funds repurchased,  $\{[E_t / (E_t + D_t)] \text{ when } (E_t + D_t) < 0\}$* 

$ESINFR_t$	50930	0.055	0.000	-6.239	3.060
$ESINFR_t = 0$ (37.1%)	18878	0.000	0.000	0.000	0.000
$ESINFR_t < 0$ (28.9%)	14714	-0.678	-0.127	-6.239	0.000
$ESINFR_t > 0$ (34.0%)	17338	0.737	0.798	0.000	3.060
$BUSCON_{t-1}$ (%)	50930	3.103	3.063	-2.137	9.486
$MISP_{t-1}$	50930	0.142	0.047	-0.809	2.657
$DEVFT_{t-1}$	50930	-0.009	-0.007	-0.448	0.388
$SIZE_{t-1}$	50930	5.615	5.520	1.414	10.349
$CFLOW_{t-1}$	50930	0.080	0.088	-0.404	0.344
$TANG_{t-1}$	50930	0.333	0.300	0.013	0.891
$RISK_{t-1}$	50930	0.066	0.046	0.006	0.416
$MTB_{t-1}$	50930	1.474	1.171	0.522	6.000
$REALINT_{t-1}$	50930	0.029	0.032	-0.197	0.110
$CASH_{t-1}$	50930	0.135	0.083	0.000	0.713

**Table 5: The effect of business conditions and mispricing on equity share in net new funds**

The data is collected from Worldscope and Datastream for the period 1984-2006. Business conditions are represented by high and low growth years. High (low) growth years are determined if growth rate of real GDP is equal or higher (lower) than the median growth rate. We measure mispricing by stock returns in the previous year. High and low past returns periods are determined by using the median of the return. *Net Equity* is the difference between *Equity* (Net Proceeds from Sale/Issue of Common and Preferred Stocks) and *Repurchase* (Stocks Purchased, Retired, Converted, Redeemed). *Net Debt* is the difference between *LT Debt* (Long Term Borrowings) and *Debt reduction* (Reduction in Long-term Debt). All are scaled by Total Assets. *ESINNF* (Equity Share in Net New Funds) is the ratio of net equity to the sum of net equity and net debt, when the total is positive. *ESINRF* (Equity Share in Net New Funds Repurchased) is the ratio of net equity to the sum of net equity and net debt, when the total is negative. a, b and c denote significance at 1%, 5% and 10% respectively.

*Panel A: Equity share in net new funds (ESINNF),  $\{[E_t / (E_t + D_t)] \text{ when } (E_t + D_t) > 0\}$* 

	N	Equity	Repurchase	Net Equity	LT Debt	Debt reduction	Net LT Debt	ESINNF
All observations	58393	0.062	0.003	0.059	0.092	0.048	0.043	0.553
<b>Business Conditions</b>								
High Growth	29538	0.060	0.004	0.057	0.105	0.053	0.050	0.507
Low Growth	28855	0.064	0.003	0.061	0.079	0.042	0.036	0.600
Difference		-0.003	0.001	-0.004	0.025	0.011	0.014	-0.093
t statistics		(-3.03) <sup>a</sup>	(8.08) <sup>a</sup>	(-3.76) <sup>a</sup>	(22.86) <sup>a</sup>	(12.99) <sup>a</sup>	(22.47) <sup>a</sup>	(-11.08) <sup>a</sup>
<b>Mispricing</b>								
High Past Returns	29197	0.067	0.003	0.063	0.093	0.047	0.044	0.587
Low Past Returns	29196	0.057	0.003	0.054	0.091	0.048	0.043	0.519
Difference		0.009	0.001	0.008	0.001	-0.001	0.001	0.068
t statistics		(8.22) <sup>a</sup>	(6.42) <sup>a</sup>	(7.54) <sup>a</sup>	(0.92)	(-0.82)	(1.62)	(8.12) <sup>a</sup>

*Panel B: Equity share in net funds repurchased (ESINFR),  $\{[E_t / (E_t + D_t)] \text{ when } (E_t + D_t) < 0\}$* 

	N	Equity	Repurchase	Net Equity	LT Debt	Debt reduction	Net LT Debt	ESINFR
All observations	50930	0.005	0.013	-0.007	0.034	0.070	-0.034	0.055
<b>Business Conditions</b>								
High Growth	26661	0.006	0.016	-0.010	0.039	0.076	-0.035	0.089
Low Growth	24269	0.004	0.009	-0.004	0.029	0.064	-0.034	0.018
Difference		0.002	0.007	-0.006	0.010	0.011	-0.001	0.071
t statistics		(9.76) <sup>a</sup>	(26.81) <sup>a</sup>	(-23.37) <sup>a</sup>	(11.7) <sup>a</sup>	(10.77) <sup>a</sup>	(-1.69) <sup>c</sup>	(8.0) <sup>a</sup>
<b>Mispricing</b>								
High Past Returns	25465	0.006	0.015	-0.008	0.033	0.067	-0.032	0.055
Low Past Returns	25465	0.004	0.011	-0.006	0.035	0.074	-0.036	0.055
Difference		0.002	0.004	-0.002	-0.002	-0.007	0.004	0.000
t statistics		(10.56) <sup>a</sup>	(14.22) <sup>a</sup>	(-8.66) <sup>a</sup>	(-2.01) <sup>b</sup>	(-7.05) <sup>a</sup>	(9.78) <sup>a</sup>	(0.04)



**Table 6: Fixed effect regressions for the effect of business conditions and mispricing**

Dependent variables are *ESINNF* (Equity Share in Net New Funds), which is the ratio of net equity to the sum of net equity and net debt, when the total is positive in Panel A, and *ESINRF* (Equity Share in Net New Funds Repurchased), which is the ratio of net equity to the sum of net equity and net debt, when the total is negative in Panel B. The definitions of the variables are given in the text of Table 4. The coefficients are estimated with a linear regression model of company and time fixed effects by using *restricted maximum likelihood (REML) method*. The procedure computes the estimated variance-covariance matrix of the fixed-effects parameters by using the asymptotically consistent estimator, which controls for heteroskedasticity and clustering. T statistics reported below the estimated coefficients.

	<i>Panel A: Dependent variable: ESINNF</i>									<i>Panel B: Dependent variable: ESINRF</i>								
Intercept	0.639 (68)	0.555 (98)	0.528 (95)	0.621 (65)	0.538 (9.3)	0.952 (45)	0.865 (43)	0.904 (41)	0.818 (40)	0.005 (0.6)	0.013 (2.3)	0.033 (6.0)	0.014 (1.7)	0.020 (3.4)	-0.209 (-7.9)	-0.199 (-7.8)	-0.170 (-6.4)	-0.158 (-6.1)
BUSCON	-0.027 (-13)			-0.027 (-13)		-0.027 (-13)		-0.025 (-13)		0.007 (3.4)			0.006 (3.2)		0.008 (4.0)		0.009 (4.4)	
H1		-0.044 (-3.1)			-0.052 (-3.7)		-0.043 (-3.0)		-0.041 (-2.9)		0.003 (0.2)			0.010 (0.6)		0.016 (1.0)		0.019 (1.1)
H2		-0.085 (-4.8)			-0.092 (-5.2)		-0.091 (-5.2)		-0.088 (-5.0)		0.114 (5.0)			0.119 (5.3)		0.112 (5.0)		0.114 (5.1)
H3		-0.050 (-2.2)			-0.040 (-1.8)		-0.086 (-3.9)		-0.087 (-3.9)		0.252 (11)			0.242 (10)		0.262 (11)		0.263 (11)
MISP			0.068 (13)	0.067 (13)	0.069 (13)	0.042 (7.4)	0.045 (7.9)	0.046 (8.2)	0.049 (8.8)			-0.057 (-7.1)	-0.056 (-7.0)	-0.054 (-6.8)	-0.079 (-9.8)	-0.076 (-9.4)	-0.074 (-9.1)	-0.071 (-8.8)
DEVFT						-0.110 (-3.9)	-0.113 (-4.0)	-0.093 (-3.3)	-0.096 (-3.4)						0.621 (17)	0.622 (17)	0.654 (18)	0.655 (18)
SIZE						-0.070 (-25)	-0.068 (-24)	-0.065 (-23)	-0.063 (-22)						0.040 (12)	0.040 (12)	0.038 (11)	0.038 (11)
CASH FLOW						-0.082 (-3.2)	-0.096 (-3.8)								0.486 (9.0)	0.489 (9.0)		
NEGCFDUM								0.133 (9.9)	0.143 (11)								-0.092 (-6.0)	-0.093 (-6.1)
TANG						-0.241 (-11)	-0.254 (-12)	-0.237 (-11)	-0.249 (-12)						-0.184 (-6.8)	-0.174 (-6.5)	-0.168 (-6.2)	-0.157 (-5.8)
RISK						0.654 (13)	0.686 (14)	0.549 (12)	0.578 (12)						-0.355 (-3.5)	-0.386 (-3.8)	-0.496 (-4.9)	-0.528 (-5.2)
MTB						0.027 (9.7)	0.025 (9.1)	0.026 (9.3)	0.024 (8.8)						-0.004 (-0.6)	-0.007 (-0.9)	0.008 (1.1)	0.006 (0.7)
REALINT						0.190 (2.1)	0.220 (2.4)	0.209 (2.4)	0.239 (2.6)						-0.255 (-2.4)	-0.194 (-1.8)	-0.231 (-2.1)	-0.170 (-1.6)
CASH															0.375 (8.3)	0.381 (8.4)	0.354 (7.8)	0.360 (8.0)
D.HISTORY															0.045 (4.2)	0.046 (4.3)	0.052 (4.9)	0.053 (5.0)
R Square	0.004	0.001	0.004	0.008	0.004	0.062	0.059	0.064	0.061	0.0001	0.003	0.001	0.001	0.004	0.036	0.039	0.034	0.036

**Table 7: Fixed effect regressions on new net issues for various samples**

Dependent variable is *ESINNF* (Equity Share in Net New Funds), which is the ratio of net equity to the sum of net equity and net debt, when the total is positive. The definitions of the variables are given in the text of Table 4. *E* represents *Net Equity*, and *D* represents *Net Debt*. *DWUS* is the sample of Developed Countries Without US firms. The coefficients are estimated with a linear regression model of company and time fixed effects by using *restricted maximum likelihood (REML) method*. The procedure computes the estimated variance-covariance matrix of the fixed-effects parameters by using the asymptotically consistent estimator, which controls for heteroskedasticity and clustering. T statistics reported below the estimated coefficients.

	(E+D)>=%5		DWUS		US		Emerging		Market Based		Bank based		Common Law		Civil Law	
Intercept	0.760 (48)	0.701 (47)	0.839 (26)	0.833 (26)	1.106 (29)	0.997 (30)	0.731 (14)	0.625 (14)	1.043 (44)	0.935 (42)	0.468 (10)	0.453 (10)	1.060 (42)	0.951 (41)	0.535 (14)	0.476 (13)
BUSCON	-0.019 (-13)		-0.002 (-0.5)		-0.049 (-8.7)		-0.017 (-5.0)		-0.036 (-14)		-0.006 (-1.9)		-0.037 (-13)		-0.015 (-5.7)	
H1		-0.031 (-2.7)		-0.048 (-2.2)		-0.116 (-5.2)		0.087 (2.4)		-0.046 (-2.9)		-0.051 (-1.7)		-0.080 (-4.9)		0.069 (2.4)
H2		-0.087 (-6.9)		-0.101 (-2.7)		-0.173 (-7.3)		-0.039 (-0.8)		-0.130 (-6.8)		-0.049 (-1.1)		-0.148 (-7.5)		0.015 (0.4)
H3		-0.073 (-4.8)		-0.053 (-1.0)		-0.129 (-5.0)		0.053 (0.6)		-0.118 (-4.9)		0.070 (1.2)		-0.125 (-5.1)		0.025 (0.5)
MISP	0.050 (12)	0.052 (13)	0.053 (5.6)	0.057 (6.0)	0.047 (5.3)	0.047 (5.3)	0.026 (2.5)	0.032 (3.1)	0.039 (6.3)	0.041 (6.7)	0.068 (4.7)	0.071 (5.0)	0.044 (6.7)	0.045 (6.9)	0.055 (5.1)	0.058 (5.3)
DEVFT	-0.287 (-14)	-0.294 (-14)	-0.252 (-5.4)	-0.251 (-5.4)	0.029 (0.7)	0.028 (0.7)	-0.367 (-5.0)	-0.378 (-5.1)	-0.090 (-2.9)	-0.093 (-3.0)	-0.228 (-3.3)	-0.231 (-3.3)	-0.074 (-2.4)	-0.077 (-2.5)	-0.238 (-4.0)	-0.240 (-4.0)
SIZE	-0.072 (-35)	-0.071 (-34)	-0.082 (-22)	-0.082 (-21)	-0.056 (-11)	-0.056 (-11)	-0.064 (-10)	-0.063 (-9.8)	-0.064 (-19)	-0.063 (-19)	-0.035 (-6.6)	-0.035 (-6.5)	-0.062 (-17)	-0.060 (-17)	-0.041 (-8.8)	-0.038 (-8.2)
CASH FLOW	-0.305 (-16)	-0.309 (-17)	-0.077 (-1.9)	-0.077 (-1.9)	-0.110 (-3.1)	-0.125 (-3.5)	-0.130 (-1.4)	-0.138 (-1.5)	-0.099 (-3.8)	-0.112 (-4.2)	-0.213 (-2.0)	-0.216 (-2.0)	-0.103 (-3.9)	-0.117 (-4.3)	-0.269 (-3.0)	-0.300 (-3.3)
TANG	-0.044 (-2.8)	-0.052 (-3.3)	-0.078 (-2.5)	-0.076 (-2.5)	-0.422 (-11)	-0.421 (-11)	-0.135 (-3.2)	-0.136 (-3.2)	-0.265 (-11)	-0.268 (-11)	-0.236 (-5.2)	-0.244 (-5.4)	-0.271 (-11)	-0.274 (-11)	-0.189 (-4.9)	-0.218 (-5.7)
RISK	0.342 (9.3)	0.363 (9.8)	0.469 (5.9)	0.464 (5.8)	0.577 (8.3)	0.572 (8.2)	0.570 (2.9)	0.679 (3.4)	0.512 (9.7)	0.551 (11)	0.719 (4.4)	0.733 (4.5)	0.470 (8.8)	0.506 (9.4)	0.808 (5.5)	0.815 (5.6)
MTB	0.025 (12)	0.025 (12)	0.036 (7.8)	0.037 (7.9)	0.011 (3.0)	0.010 (2.5)	0.047 (5.0)	0.041 (4.3)	0.022 (7.6)	0.021 (7.3)	0.059 (6.4)	0.057 (6.2)	0.019 (6.3)	0.018 (5.9)	0.055 (7.4)	0.054 (7.0)
REALINT	0.270 (3.6)	0.284 (3.8)	1.873 (6.1)	2.003 (6.3)	-0.370 (-1.8)	-0.908 (-4.1)	0.086 (1.0)	0.165 (1.9)	-0.118 (-0.8)	-0.410 (-2.8)	0.321 (3.1)	0.394 (4.1)	-0.026 (-0.2)	-0.272 (-1.6)	0.187 (2.1)	0.278 (3.2)
R Square	0.193	0.190	0.058	0.058	0.060	0.059	0.034	0.031	0.055	0.051	0.031	0.031	0.051	0.048	0.033	0.031

**Table 8: Fixed effect regressions on new net repurchases for various samples**

Dependent variable is *ESINRF* (Equity Share in Net New Funds Repurchased), which is the ratio of net equity to the sum of net equity and net debt, when the total is negative. The definitions of the variables are given in the text of Table 4. *E* represents *Net Equity*, and *D* represents *Net Debt*. *DWUS* is the sample of Developed Countries Without US firms. The coefficients are estimated with a linear regression model of company and time fixed effects by using *restricted maximum likelihood (REML) method*. The procedure computes the estimated variance-covariance matrix of the fixed-effects parameters by using the asymptotically consistent estimator, which controls for heteroskedasticity and clustering. T statistics reported below the estimated coefficients.

	(E+D)>=%5		DWUS		US		Emerging		Market Based		Bank based		Common Law		Civil Law	
Intercept	-0.170	-0.154	0.119	0.116	-0.441	-0.375	-0.005	-0.032	-0.309	-0.275	0.200	0.166	-0.327	-0.299	0.116	0.111
	(-9.3)	(-8.7)	(3.0)	(3.0)	(-9.5)	(-8.7)	(-0.1)	(-0.8)	(-10)	(-9.4)	(4.5)	(3.8)	(-10)	(-9.6)	(3.0)	(2.9)
BUSCON	0.011		-0.002		0.040		-0.005		0.017		-0.013		0.017		-0.004	
	(7.2)		(-0.5)		(6.4)		(-2.0)		(6.6)		(-4.8)		(5.4)		(-1.5)	
H1		0.027		0.043		0.040		-0.069		0.025		-0.035		0.031		-0.048
		(2.0)		(1.9)		(1.4)		(-2.0)		(1.3)		(-1.1)		(1.5)		(-2.0)
H2		0.150		0.100		0.191		-0.024		0.138		-0.099		0.159		-0.111
		(9.1)		(2.3)		(6.2)		(-0.4)		(5.7)		(-1.5)		(6.3)		(-2.3)
H3		0.178		0.055		0.271		0.065		0.292		-0.051		0.301		-0.009
		(10)		(1.1)		(10)		(1.9)		(12)		(-1.1)		(12)		(-0.2)
MISP	-0.036	-0.035	-0.063	-0.066	-0.118	-0.114	-0.025	-0.020	-0.088	-0.084	-0.049	-0.045	-0.093	-0.088	-0.048	-0.044
	(-6.2)	(-6.1)	(-4.8)	(-5.0)	(-7.7)	(-7.4)	(-2.6)	(-2.0)	(-9.2)	(-8.8)	(-3.6)	(-3.3)	(-8.9)	(-8.4)	(-4.2)	(-3.9)
DEVFT	0.699	0.697	0.526	0.523	0.661	0.663	0.518	0.509	0.601	0.604	0.716	0.713	0.594	0.595	0.713	0.711
	(25)	(25)	(9.7)	(9.6)	(11)	(11)	(8.8)	(8.7)	(14)	(14)	(13)	(13)	(13)	(13)	(14)	(14)
SIZE	0.033	0.033	0.007	0.008	0.064	0.066	0.010	0.011	0.052	0.051	-0.008	-0.007	0.055	0.054	-0.002	-0.002
	(13)	(13)	(1.7)	(1.7)	(11)	(11)	(1.6)	(1.7)	(13)	(13)	(-1.6)	(-1.3)	(13)	(12)	(-0.3)	(-0.4)
CASH FLOW	0.465	0.476	0.387	0.384	0.684	0.711	0.112	0.118	0.538	0.546	0.088	0.054	0.523	0.529	0.291	0.293
	(13)	(13)	(4.8)	(4.7)	(7.9)	(8.3)	(1.3)	(1.4)	(9.0)	(9.1)	(1.0)	(0.6)	(8.4)	(8.5)	(3.6)	(3.6)
TANG	-0.189	-0.179	-0.123	-0.127	-0.221	-0.219	-0.108	-0.106	-0.206	-0.193	-0.071	-0.086	-0.206	-0.195	-0.122	-0.124
	(-9.5)	(-9.1)	(-3.0)	(-3.1)	(-4.4)	(-4.4)	(-2.8)	(-2.8)	(-6.4)	(-6.0)	(-1.8)	(-2.2)	(-6.0)	(-5.7)	(-3.3)	(-3.4)
RISK	0.122	0.103	-0.499	-0.502	-0.379	-0.377	-0.188	-0.149	-0.257	-0.295	-0.900	-0.903	-0.252	-0.287	-0.595	-0.583
	(1.9)	(1.6)	(-3.5)	(-3.5)	(-2.3)	(-2.3)	(-0.9)	(-0.7)	(-2.3)	(-2.6)	(-4.7)	(-4.7)	(-2.1)	(-2.4)	(-3.5)	(-3.4)
MTB	0.065	0.063	-0.064	-0.066	0.012	0.009	-0.006	-0.008	0.002	-0.001	-0.046	-0.049	0.001	-0.002	-0.033	-0.032
	(13)	(13)	(-4.5)	(-4.6)	(1.0)	(0.8)	(-0.6)	(-0.7)	(0.2)	(-0.1)	(-2.7)	(-2.8)	(0.1)	(-0.2)	(-2.1)	(-2.1)
REALINT	-0.068	-0.014	-4.038	-4.218	0.325	0.878	0.105	0.146	-0.313	-0.077	-0.373	-0.236	-0.248	0.019	-0.320	-0.293
	(-0.8)	(-0.2)	(-12)	(-12)	(1.4)	(3.5)	(1.1)	(1.5)	(-1.9)	(-0.5)	(-3.4)	(-2.1)	(-1.3)	(0.1)	(-3.3)	(-3.0)
CASH	0.545	0.549	0.496	0.501	0.439	0.442	0.249	0.241	0.385	0.390	0.391	0.386	0.385	0.391	0.372	0.364
	(16)	(17)	(7.7)	(7.8)	(6.1)	(6.2)	(2.9)	(2.8)	(7.2)	(7.4)	(5.3)	(5.2)	(6.9)	(7.0)	(5.6)	(5.5)
D.HISTORY	0.034	0.032	0.036	0.037	0.143	0.152	0.016	0.019	0.038	0.040	0.056	0.064	0.040	0.044	0.047	0.049
	(4.0)	(3.8)	(2.6)	(2.7)	(6.3)	(6.7)	(1.0)	(1.1)	(2.8)	(2.9)	(3.8)	(4.4)	(2.6)	(2.9)	(3.6)	(3.8)
R Square	0.282	0.293	0.039	0.039	0.060	0.062	0.022	0.022	0.039	0.041	0.050	0.049	0.039	0.042	0.043	0.043

**Table 9: Returns before and after net issues and repurchases**

*Net Equity (E)* is the difference between ‘Net Proceeds from Sale/Issue of Common and Preferred Stocks’ and ‘Stocks Purchased, Retired, Converted, Redeemed’. a denotes significance at 1%.

*Panel A: Net issues of equity and preferred stock, ( $E_t > 0$ )*

	<b>N</b>	<b>Mean</b>	<b>Median</b>
Return before net issues	53851	0.273	0.115
Return after net issues	44311	0.157	0.051
Difference		0.116	0.064
Test statistics		(25.56) <sup>a</sup>	(18.15) <sup>a</sup>

*Panel B: Net repurchases of equity and preferred stock, ( $E_t < 0$ )*

	<b>N</b>	<b>Mean</b>	<b>Median</b>
Return before net repurchases	23333	0.156	0.086
Return after net repurchases	19296	0.213	0.125
Difference		-0.057	-0.039
Test statistics		(-10.91) <sup>a</sup>	(-9.27) <sup>a</sup>