The Determinants of Security Issuance Choice

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A Thesis
In
The John Molson School of Business

Presented in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Administration (Finance) at
Concordia University
Montreal, Quebec, Canada

June 2009

Your file Votre référence
ISBN: 978-0-494-63044-0
Our file Notre référence
ISBN: 978-0-494-63044-0

ABSTRACT

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Publicly listed companies have a wide range of possibilities when they seek new sources of financing. When doing so, they face a fundamental decision, namely what type of security to issue among a variety of securities including equity, debt, and hybrid securities such as convertible bonds, and warrants, etc. This study examines what drives US firms during the period of 1997-2007 to choose among convertible debt, debt, and equity based on their firm characteristics and macro-economic conditions through both binary and multi-nominal logistic regressions.

My results suggest that, first; there are significant differences in the characteristics of debt-like and equity-like convertible security issuers. These differences are particularly apparent in the following characteristics which, from the perspective of debt-like security issuers, tend to be as follows: tax shields (higher), profitability (higher), firm size (larger) and firm age (older). Second, the issuers of debt-like convertibles tend to differ significantly from straight debt issuers in the following dimensions: leverage (higher), firm risk (higher), profitability (higher), growth opportunities (fewer), issue amounts (smaller), pre-announcement performance (better), industry (more high-tech firms), and higher issuing activity when the economic environment reflects a high financing cost for both debt and equity. Third, equity-like convertible issuers tend to differ from equity issuers in the following dimensions: firm size (larger), industry (more non-tech firms), profitability (lower) and pre-announcement stock performance (worse). Similar differences can be found when I consider models in which I examine all three security choices at the same time. Lastly, in a separate investigation, I find that high-tech firms and non-tech firms demonstrate considerable differences with respect to the determinants

of their security issue choice. These findings provide strong support for Green's (1984) sweetened debt hypothesis and partial support for Stein (1992) delayed equity hypothesis.

ACKNOWLEDGEMENTS

This thesis is the result of a good learning, work, dedication, motivation and effort. First of all, I want to thank someone very special for me who makes me feel alive, energetic and motivated everyday and who I call God.

Second, I would like to express my sincere gratitude to my supervisors, Dr. Thomas Walker and Dr. Sandra Betton, for their understanding, expertise, patience, and guidance in all the time of research and writing of this thesis. The input and time of carrying committee members, Dr. Harjeet S. Bhabra and Dr. Yaxuan Qi, are also appreciated.

Finally, I am grateful to my mother who passed away, for her unconditional and endless love. Without her motive, I cannot achieve what I have today. Very special thanks also go out to my father and sister, for their care, support, understanding, and love through my entire life. I also want to thanks a special friend Kristen Robillard for her continuous encouragement.

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1 Introduction

Publicly listed companies have a wide range of possibilities when they seek new sources of financing. As an alternative to internally generated funds, they also look for external capital. When doing so, they face a fundamental decision, namely what type of security to issue. Indeed, companies can choose among a variety of securities including equity, debt, and hybrid securities such as convertible bonds and warrants.

The most well-known hybrid securities are so-called convertible bonds, which are bonds that can be converted into the common stock of the issuing company, usually at some pre-announced ratio. A convertible bond has both debt- and equity-like features: it resembles debt because it pays a fixed coupon interest. But it also resembles equity because part of its purchase price is paid for the option to exchange the bond into shares. Although convertible bonds typically have a low coupon rate, their holders are compensated with the ability to convert the bonds to common stock, usually at a substantial discount to the stock's market value.

From the issuer's perspective in practice, the sale of convertible bonds provides several benefits. The key advantage certainly lies in the reduced cash interest payment associated with conversions. However, in exchange for the benefit of reduced interest payments, the value of shareholder's equity is reduced due to the expected stock dilution offsets that arise when bondholders convert their bonds into new shares.

An interesting question that arises in this context is what motivates companies to issue a hybrid security like a convertible bond instead of straight debt or equity. Over the past few decades, the literature has offered two main explanations for the use of

convertible debt. The sweetened debt approach (Green, 1984; Brennan and Kraus, 1987; Brennan and Schwartz, 1988; Mayers, 1998) perceives convertibles as instruments that alleviate various debt-related financing costs. On the other hand, the delayed equity approach (Stein, 1992) perceives convertible debt as 'backdoor' equity financing that is well suited for firms with high equity-related adverse selection costs. Empirical evidence on these two theories remains mixed. Using a example of US security issues, Lewis *et al.* (1999) obtain evidence for both the sweetened debt and the delayed equity viewpoints on convertible debt. Their results are different from Dutordoir and Van de Gucht, (2008) who examine security issues in Western European and only find evidence in support of the former viewpoint.

The popularity of convertible bonds varies over time when examining trends in the total issue size of convertible bonds in the US during the period 1997 to 2007 in Table 1 for example; one can observe a decreased popularity from 1997, with a bounce-back in 2000, and another decline afterwards. In contrast to the issue size, the number of convertible bonds displays a continuously decreasing pattern. The number of convertible bond issues is not continuously decreased along with the issue size of convertible bond; there is a peak in 2007 after the peak in 1997 and 2000. Debt issues not only dominate the market in terms of total issue size (66%), they also dominate the in terms of total number of issues (51%). Equity issues follow in second place (30% and 46%, respectively), while convertible debt ranks last (5% and 3%, respectively). A break-down by SIC codes demonstrates that convertible debt issues are particularly popular in the high-tech industry where they constitute 38.55% of the total number of issues. In this study, I examine the determinants of security choice including debt, equity, and

convertible debt and test three main motivations of security choice, namely the pecking order model, the agency model and the sequential model. In addition, in contrast to other studies in this area, my study is the first to consider how security issue choices vary among industries, specially the high- and non-tech industry. Basically, my findings provide strong support for Green's (1984) sweetened debt hypothesis and partial support for Stein (1992) delayed equity hypothesis. And high-tech and non-tech firms tend to choose different ways of raising capital and seem to have different motivations.

The remainder of this paper is organized as follows: in the following section, I will provide an overview of the literature and will develop my hypotheses. Section 3 describes the sample and research methodology. Section 4 documents and discusses the security choice model results. Section 5 concludes the paper.

2 Literature review

There are number of different theoretical explanations as to why companies finance themselves with debt, equity or convertibles. These can be classified into several broader categories.

2.1 Pecking-order model

The pecking-order model is based on the view that information asymmetries between new investors and managers who maximize the wealth of existing stockholders make equity issues more costly than debt issues and therefore imply a financing hierarchy. Firms therefore prefer issuing debt to issuing equity and experience a negative stock price reaction if forced to issue equity. Managers with superior information acting in the best interests of stockholders issue equity when equity is overpriced. Managers will

pass up positive NPV projects if equity is sufficiently under priced. The underinvestment problem is avoided by issuing securities with less risk and less sensitivity to mispricing. Thus, there is a hierarchy of preferences; internal funding is most preferred followed by riskless debt, risky debt and finally equity. Hybrid securities like convertible bonds would fall between debt and equity.

The proxies used to test the pecking order model are based on information asymmetry arguments. The firm's choice of security issue may depend on management's information regarding expected future performance. Since asymmetric information increases the cost of external financing, Korajczyk et al. (1991) argue that firms should issue equity during periods when information asymmetries are small. Lucas and McDonald (1990) suggest that firms are more likely to have more high quality investment projects when pre-issue stock returns are high. In addition, Myers and Majluf (1984) argue that firms with high financial slack may face higher costs of adverse selection thus reducing the probability of an equity issue. Krasker (1986) argues that the costs of adverse selection may be directly related to the size of the security issue. Larger issues increase the potential for wealth loss by exiting stockholders, thus decreasing the probability of an equity issue.

When considering convertible bonds, Brennan and Kraus (1987) note that convertible debt can costlessly mitigate investment inefficiencies, which arises due to information asymmetry in the framework of Myers and Majluf (1984) and Heinkel (1982). The information asymmetries are related to the uncertainty regarding returns on investments made by firms or the uncertainty regarding the variance of returns. Brennan and Kraus develop a single parameter model of information asymmetry. The goal of the

firm is to maximize the difference between the value of the funds, obtained from the investors, and a true value of the firm. In equilibrium, each financing decision is chosen by the worst possible type of firm for those particular financing decisions. Securities that can lead to such equilibrium include convertible bonds, junior bonds, and bonds with warrants. These securities can effectively resolve the issue of adverse selection, as each type of firm reveals itself with the choice from the complete set of financial decisions. The strategy of the choice depends on the nature of the information asymmetry problem.

In addition, Brennan and Schwartz (1988) argue that investors are willing to pay more for a convertible bond than for a straight bond only because of its hybrid nature. The cost of convertibles is evaluated as a weighted average of the straight debt and equity cost of convertibles. Convertible bonds are relatively insensitive to the risk of the issuing company because of their hybrid nature. Namely, higher risk reduces the value of the straight debt component, but at the same time it increases the value of the equity option component. The opposing offsets limit the influence of risk on the value of convertibles. With straight debt outstanding, shareholders have strong incentives to increase the risk of the company, which increases the upper potential for gains of shareholders, but reduces the value of straight debt. Convertibles reduce these incentives, as their value is less sensitive to the changes of the issuing firm risk than the value of straight debt.

Further, in the model of Kim (1990) the convertible bond issue and in particular the conversion ratio serve as a signal of firm's type (good firms, medium firms, and bad firms in terms of quality). The conversion ratio serves as a credible signal of a company's future earnings. In the equilibrium, lower expected future earnings of the worse types of firms induce higher conversion ratios. These imply more shares per bond and thus higher

dilution of future earnings, as those have to be shared with a relatively larger share of new shareholders. The model yields a testable hypothesis that abnormal common stock returns at the announcements of the convertible debt issues are negatively related to the conversion ratio, since higher conversion ratios imply worse type firms.

Last, according to Stein (1992) firms issue convertible bonds in order to get equity through the "back door" in situations where informational asymmetries make conventional equity issues unattractive due to high issue costs and dilution (Myers and Majluf 1984). In Stein's model, two factors are particularly important: call features of convertibles bonds and the increased possibility of financial distress due to excess debt. In a fully separating equilibrium good firms issue debt, medium quality firms issue convertible debt and bad quality firms issue equity. Financing choice therefore serves as the signal to the market. Announcement effects, which are generally found to be negative for all kinds of security type issues, are expected to be worst for equity offerings, somewhat better for convertible debt issues and least negative for straight debt issues. These expectations are in line with the adverse selection models of a capital structure.

2.2 Agency model

Maximizing the value of the equity claim and of the firm can, with risky debt outstanding, lead to agency problems. In other words, the agency model relies on the argument that managers sometimes pursue their own objectives, such as firm growth, at the expense of stockholders. Myers (1977) argues that firms whose value is primarily derived from growth opportunities will be less likely to finance with debt due to underlying underinvestment problems. Thus, Jung et al. (1996) explain that since the

agency costs of debt are higher for firms with better investment opportunities, the probability that a firm will issue equity increases with investment opportunities (growth options) to maximize stockholder wealth. Instead of to maximizing existing stockholder wealth share holders have an incentive to adopt projects with higher risk due to their limited liability. Green (1984) develops a model in which option claims issued with debt may mitigate those incentive problems. By addressing the financing and incentive problems simultaneously, the correct incentives can be induced with a convertible bond or debt-warrant combination. This motivates shareholders to take risk, as their interests align with new shareholder interests. However, Green's analysis abstracts from a number of other incentive (agency) problems, where the most important conflict is between management and shareholders. Therefore, Green's model does not eliminate all the agency costs. The crucial characteristic of convertible and warrant bonds is sharing of the upper potential of the equity gains, while there must be the lower bound of the gains, for which the fixed claim on the debt is paid (when the option is not exercised).

2.3 Sequential model

According to Mayers (1998), the sequential financing hypothesis is based on the uncertainty about the value of future investment options while Stein's model is based on the uncertainty about the value of the time of the issue. The sequential financing problem arises where an initial project that requires funding is assumed to be followed by an investment option that also requires funding if it is profitable. Providing funds up front for both the project and the option creates an incentive conflict between the manager who makes the investment decision and those who provide the funds. Compared to straight bonds, convertible bonds economize on issue costs, because they leave funds in the firm

(convertibility feature) and reduce the leverage when the investment option is valuable. On the other hand, convertibles control the overinvestment problem (Jensen, 1986) when the investment option is not valuable. The call provision is an important feature of convertible bonds, when there is uncertainty about the maturity date of the investment option. Mayers notes that existing evidence on convertible bonds supports the sequential financing hypothesis, which is also consistent with other theories. The sequential financing hypothesis has no direct implication for stock price reactions at the time of convertible debt announcements. However, as none of the other motivations for the use of convertible debt predicts any additional investment at the time of conversion, evidence of investment related activity at the time of conversion would support the sequential-financing hypothesis.

2.4 Timing model

The timing model has evolved from the finding of Loughran and Ritter (1995) and Spiess and Affleck-Graves (1995) that firms experience long term underperformance after they issue equity. As argued by Stein (1992), if equity is overpriced and the market under-reacts to equity issues, then management maximizes the wealth of existing stockholders by issuing equity. Jung et al. (1996) argue that if the timing model plays an important role in the issuing firm's decision, long-term cumulative excess returns should significantly affect the firm's issuing decision because the timing model relies on the argument that management knows when future performance will be poor and issues accordingly. In addition, Lee and Loughran (1998) document that there is poor stock performance in the years following a convertible bond offering. This persistence has been proved when controlling for the stock underperformance after the IPO.

The empirical studies of Green (1984), Stein (1992) and Mayers (1998) are the first to extend the security choice framework to include the choice of convertible debt as an alternative to equity or straight debt. Later, Lewis et al. (1999) investigates Stein's backdoor equity hypothesis and Green's risk shifting hypothesis using a sample of 203 convertible issues that took place in the U.S. between 1977 and 1984. They argue that convertible debt can be viewed as an alternative or substitute for straight debt or equity. Lewis' et al. classify convertible debt offers as either debt- or equity-like by estimating the probability of conversion of convertible bonds into equity at the maturity. "debt-like" firms issue convertible debt to reduce the agency costs associated with asset substitution problems while "equity-like" firms substitute convertible debt for common equity to reduce the adverse selection costs associated with seasoned equity offers. Lewis et al. (1999) find that firms with higher tax shields, stock return volatility, issue size and larger firms are more likely to issue debt-like securities (debt and convertible debt whose probability of conversion at maturity is low) and firms with higher leverage, higher growth opportunities, higher pre-announcement performance are more likely to issue equity-like securities (equity and convertible debt whose probability of conversion at maturity is high). Their results suggest that the security choice model of Jung et al. (1996) is robust when the financing set is enlarged to include financing instruments other than debt and equity and that both agency conflicts and information asymmetries impact the decision to issue convertible debt.

3 Methodology

3.1 Sample data

3.1.1 Sample selection

Firms in this study are public and listed on the New York Stock Exchange (NYSE), the American Stock Exchange (AMEX), or the over-the-counter (OTC) market, such as the NASDAQ. The announcement date and issuance date information is collected from the SDC Platinum new issue database for the period from January 1997 to December 2007. Daily returns for the overall stock market and for individual firms are obtained from CRSP. All accounting information is collected from Standard & Poor's Compustat and macroeconomic information is from Bloomberg. Sample screening process is provided by Table 3.

Specific selection criteria:

1) Following Guillaume et al. (2004), I exclude firms that do not list on one of these three exchanges because of data availability.

2) After excluding financial firms and utility firms and removing firms that have no information on issue-years and/or CUSIP I get a raw dataset for U.S. new security issues that comprises 179 convertible debt offerings made by 153 firms, 3,531 straight bond offerings made by 673 firms, and 3,152 equity offerings (SEOs) made by 2,578 firms.

3) I exclude issues of different security types made by the same firm during the same fiscal year.

There are 305 dual straight debt-equity issues, 82 dual convertible debt-straight debt issues, 102 dual convertible debt-equity issues, and 43 triple straight debt, convertible

debt, and equity issues. In line with Hovakimian et al. (2001), I remove all dual and triple security issues from the dataset. This makes the logistic regression results more easily interpretable, since only exclusive financing choices are included in my models.

4) Only issues of firms with accounting and stock price data for the fiscal year prior to the announcement, and with security-related data (e.g., announcement and issue date, conversion premium of the convertible debt issues, amount issued, maturity date, and dividend yield) available in Compustat, CRSP, and SDC are retained. The resulting final sample contains 33 convertible debt offerings, 286 straight bond offerings, and 838 equity offerings (SEOs) excluding those firms which issue multiple times within the same year.

3.1.2 Sample characteristics

When examining trend in issuing activity over time, I find that there are substantial temporal fluctuations in the volume of equity and straight debt offerings. Table 2 reports that the total amount of capital raised peaked in 2007 for convertibles, in 2001 for debt, and in 1999 for equity while the number of security issues peaked in 2007 for convertibles, in 1998 for debt, and in 1999 for equity. The total sample of security issues is comprised of 3% convertibles, 66% debt, and 31% equity in terms of issue amount and 3% convertibles, 25% debt, and 72% equity in terms of number of issues. The high number of convertible debt issues in year 2007 is likely due to market conditions in that the stock market was in a bull phase and interest rates were at a high level (which leads to a relatively high level of cost for issuing straight debt). These factors make a convertible issue attractive to both the issuing firm and the investor. The

results are similar to Ramanlal et al.'s (1999) finding in the U.S. market that managers issue more convertible debt during bull markets and when interest rates are relatively high. A break-down of the sample by SIC codes demonstrates that convertible debt issues are particularly prevailing in the high-tech industry where they constitute 36.36% of total number of issues.

3.1.3 Explanatory variables

3.1.3.1 Firm specific variables

Firm specific characteristics that are hypothesized to be determinants of a company's security choice include the firm's potential tax shield, the financial risk of the firm, growth options, profitability, firm size, relative issue size, stock price volatility, stock run-up, firm age, high-tech dummy and consecutive issue dummy. The variable list is provided in Table 5 and the descriptive statistics of each of the variables are given in Table 6.

Although the various sweetened debt models consider different kinds of debt-related financing costs, the proxies that can be used to capture these financing problems are largely similar. Therefore, I can only assess the joint validity of these models. In line with Dutordoir, M., and Van de Gucht, L (2008), all firm-specific variables are measured at the fiscal year-end preceding the security announcement date. Tax considerations are proxied by a tax shield measure defined as total tax paid over total assets on the firm's balance sheet. Firms with more tax liabilities benefit more from a debt (-type) issue since interest payments can be deducted from corporate tax payments. Financial distress is proxied by financial risk (leverage) measured as long term debt over total assets. Firms with higher leverage have more potential for asset substitution and

risk-related adverse selection costs. Moreover, higher leverage enhances the attractiveness of convertible debt as a sequential-financing device, since potential savings from reducing debt by calling the convertible should be larger when current leverage is higher (Mayers, 1998). In line with Lewis et al. (1999), growth options are measured as the market value of equity over total assets. Firms with highly profitable growth opportunities tend to issue convertible debt because they have higher levels of information asymmetry about their value and risk which incurs higher costs of issuing both straight debt and equity (Brennan and Schwartz, 1988; Lewis *et al.*, 1999). Profitability is proxied for by considering either cash flow over total assets or ROA. For the former, we create a "positive dummy" that takes on a value of 1 for firms whose cash flow over total assets is equal to or greater than zero, and 0 otherwise. Similarly, a "negative dummy" takes on a value of 1 for firms whose cash flow over total assets is less than zero, 0 otherwise. Firm size is measured by the natural log of total assets. It is generally assumed that larger firms face smaller information asymmetries regarding their (future) value and risk, and thus incur lower debt- and equity-related financing costs (Brennan and Schwartz, 1988; Lewis *et al.*, 1999). In line with Dutordoir, M., and Van de Gucht, L.(2008), relative issue size is calculated as the total issue amount over the market value of equity one week prior to the announcement date. According to Krasker (1986), issues with large offering proceeds increase the potential for wealth losses by existing shareholders, and should thus be associated with higher adverse selection costs. Firms may have the habit to issue the same type security for their comfort. The tendency of issuing the same type of security is accounted for by using a dummy variable, "consecutive issues", which takes a value of 1 if the firm had at least

two consecutive issues at the same type of security within a one-year period or 0 otherwise. Firm age is proxied by the number of years since its IPO or the number of years since the firm was founded. High-tech is a dummy variable, and takes on a value of 1 if the issuing firm belongs to a high-tech industry according to the classification by the American Electronics Association[1], or 0 otherwise. Bubble is a dummy variable, which takes on a value of 1 if the issue date is in the 1999-2001 time frame, 0 otherwise. Post-bubble is a dummy variable, and takes on a value of 1 if the issue date is after year 2001, 0 otherwise. In line with Lewis et al. (1999), Volatility denotes the standard deviation of the daily stock returns estimated over trading days (-240, -40). Firms with a higher stock return volatility are assumed to face higher asset substitution and risk-related adverse selection costs. Stock ret is the average of daily stock returns measured over the window (-75,-1) relative to the announcement date. When firms with high stock returns issue equity, stockholders are more likely to infer that the firm is overvalued, leading to higher equity-related adverse selection costs.

There are some interesting points that are worthwhile mentioning. On one side, Table 6 indicates that convertible debt and equity issuers have higher financial risks measured by leverage (total long term debt over total assets) than debt issuers, which is inconsistent with the financial distress argument that firms with higher leverage choose equity or equity-like securities; on the other side, convertible debt issuers demonstrate they have the lowest tax shield, which is consistent with the earlier observation that the convertible debt issues in my sample are more debt-like because of their conversion probability is as high as 44%. In addition, it appears that convertible debt issuers

[1] See appendix for the definition of high-tech industry

experience positive pre-announcement performance, and the level of the stock price reaction falls between investors' response to straight debt and common equity offerings, which is the expected reaction for convertibles. Last, typical convertible debt issuers seems to have a similar firm size (as measured by the natural log of total assets) as debt issuers but have closer relative issue size (as measured by the total issue amount over the market value of equity) with equity issuers, non-consecutive issuer (as measured by the consecutive dummy variable), more likely in high-tech industry.

Table 6 provides sample mean-test and median-test statistics for comparisons between convertible debt and straight debt or equity issuers, respectively. For completeness, I also compare straight debt to equity issuers. The table shows that convertible issuers are significantly different from straight debt issuers on all dimensions except for the market-to-book ratio, as well as bubble, and post-bubble dummies. Specifically, convertible issuers are non-consecutive issuers clustered in the high-tech industry and are significantly younger, less profitable, lower tax shield, smaller firm size, and a significantly higher leverage, relative issue size, stock return volatility and stock return. Convertible issuers also differ significantly from equity issuers on several dimensions: they are non-consecutive issuers having a higher leverage, a larger relative issue size, a higher stock return volatility, older firm age and bigger firm size, but smaller stock returns.

In terms of high-tech sub-samples, high-tech convertible debt issuers have significantly difference with high-tech debt issuers on these dimensions: consecutive issues, market-to-book ratio, firm size, issue size and volatility. More specific speaking, high-tech convertible issuers are consecutive issuers with larger firm size, higher

leverage, smaller issue size, lower stock return volatility. Comparing to high-tech straight debt, high-tech convertible issuers differ significantly from high-tech equity issuers on these dimensions: they are consecutive issuers having higher leverage, less profitability, smaller firm size, larger issue size, higher stock return volatility, younger firm age, clustering in IT bubble years.

In terms of non-tech sub-samples, non-tech convertible debt issuers have significantly difference with non-tech debt issuers on all dimensions except for the market-book ratio, bubble, and post-bubble. More specifically, non-tech convertible issuers are non-consecutive issuers with less profitability, higher leverage, less tax benefit, smaller firm size, larger issue size, higher stock return volatility, better pre-announcement stock performance, younger age. Comparing to non-tech straight debt, non-tech convertible issuers differ significantly from non-tech equity issuers on these dimensions: they are non-consecutive issuers having higher leverage, larger firm size, smaller issue size, higher stock return volatility, and older firm age. In summary, high-tech and non-tech firms tend to choose different ways of raising capital and seem to have different motivations when making their financing choices.

In the next section, I use a more sophisticated regression procedure to examine issuers' motivations in a multivariate context.

3.1.3.2 Control variables

Several authors argue that financing costs vary not only on a firm-specific level but also on an economy-wide level, e.g., due to temporal fluctuations in the availability of profitable investment opportunities and in the level of asymmetric information about firm value and firm risk (Choe *et al.*, 1993; Bayless and Chaplinsky, 1996; Korajczyk and

Levy, 2003). Prior empirical evidence on the impact of aggregate financing costs on the choice between straight debt, convertible debt and equity is scarce and inconsistent (Billingsley *et al.*, 1988; Lewis *et al.*, 1999; Krishnaswami and Yaman, 2008).

I add both macroeconomic indicators to capture temporal fluctuations in economy-wide financing costs. The definitions of my macroeconomic indicators are consistent with those used by Choe *et al.* (1993). Market ret is the average daily stock index return calculated over the window (-60,-1) and serves as an inverse measure for the economy wide level of equity-related financing costs. TB Yield is the yield on five-year US Treasury Bonds, expressed as an average value over the three months preceding the issue month, serves as a direct proxy for the economy wide level of debt-related financing costs Leading indicator for the general business condition is defined as the US leading indicator index monthly return, an average value over the three months prior to the announcement month.

3.2 Research design

3.2.1 Testable hypotheses

My paper adopts a two-step security choice framework as in Lewis et al. (1999) to assess the validity of the sweetened debt and delayed equity viewpoints for US security issuance in the period from 1997 to 2007. I evaluate the joint validity of the sweetened debt (Green 1984) explanations by testing the following hypotheses.

H1: Conditioning on a debt-type security choice, firms with high debt-related financing costs substitute debt-like convertible debt for straight debt.

The delayed equity (Stein 1992) hypothesis is evaluated by testing hypotheses 2.

H2: Conditioning on an equity-type security choice, firms with high equity-related adverse selection costs substitute equity-like convertible debt for straight debt.

3.2.2 Binary logistic model

I model convertible debt issuance decisions by means of the two-step security choice framework proposed by Lewis et al. (1999).

In step 1, firms decide whether to issue a debt-type security (straight debt and debt-like convertible debt) or an equity-type security (equity and equity-like convertible debt). For the dependent variable, debt is assigned a value of 0, while equity is assigned a value of 1. For convertibles, I label the dependent variables according to the probability that the convertible bond will convert into equity at maturity as a dependent variable. The conversion probability value is estimated using the standard Black-Scholes assumptions. That is, I assume that the underlying common stock follows a diffusion process described by geometric Brownian motion. This probability is then calculated as N (d_2), with N (.) being the cumulative probability under a standard normal distribution function and d_2 being determined as:

$$d_2 = \frac{\ln\left(\frac{S}{X}\right) + \left(r - \delta - \frac{\sigma^2}{2}\right)T}{\sigma\sqrt{T}}$$

where δ is the continuously-compounded dividend yield for the year-end preceding the announcement date; T is the initial convertible debt maturity (in years); S is the price of the underlying stock measured one week (5 trading days) prior to the announcement date; X is the conversion price; r is the continuously-compounded yield on a five-year US

Treasury Bond on the announcement date; and σ is the stock return volatility per annum over the period 240 to 40 trading days prior to the announcement date.

The average (median) conversion probability of convertible debt issues is 34.1% (33.4%)[2]. Then I use this value as the cut-off value for classifying the dependent variable; that is, for all convertibles with N (d_2) equal or larger than 0.34 (or 0.334), the dependent variable is assigned a value of 1, otherwise, it is assigned a value of 0. My first model can then be expressed as follows:

Model 1

Security choice = Logit (Leverage, Volatility, CF_TA*Positive dummy, CF_TA*Negative dummy, Growth, Firm size, Relative issue size, Stock Ret, Consecutive Issues, Age, High-tech, Bubble , Post-bubble, TB Yield, Market Ret, Leading Indicator)

(1)

where security choice is 0 for debt-type securities, and 1 for equity-type securities.

In step 2, I examine the determinants of the security choice within the debt-type and the equity-type security groups separately, within each group using the same explanatory variables as those included in my Model 1 analysis. Lewis *et al.* (1999) label all convertible offerings with a conversion probability lower than 50% as being debt-like and all other convertibles as being equity-like. In this way, their sample is almost evenly split between debt-like and equity-like issues. Using a similar criterion for my sample, I identify 10 equity-like convertibles and 23 debt-like convertible after excluding observations with missing data for calculating N (d_2).

[2] Note that this percentage is substantially smaller than the median conversion probability of 50.03% recorded for the US convertibles studied by Lewis et al. (1999).

Following Dutordoir, M., and Van de Gucht, L.(2008), in the debt-type security sub-group, I examine the determinants of the choice between debt-like convertibles and straight debt. The dependent variable of the logistic regression equals one for debt-like convertibles, and zero for straight debt. In the equity-type security sub-group, the dependent variable equals one for equity-like convertibles, and zero for equity. Thus I estimate the following two models:

Model 2

Security choice = Logit (Leverage, Volatility, CF_TA*Positive dummy, CF_TA*Negative dummy, Growth, Firm size, Relative issue size, Stock Ret, Consecutive Issues, Age, High-tech, Bubble , Post-bubble, TB Yield, Market Ret, Leading Indicator)

(2)

where security choice is 0 for debt, and 1 for debt-like convertible bonds.

Model 3

Security choice = Logit (Leverage, Volatility, CF_TA*Positive dummy, CF_TA*Negative dummy, Growth, Firm size, Relative issue size, Stock Ret, Consecutive Issues, Age, High-tech, Bubble , Post-bubble, TB Yield, Market Ret, Leading Indicator)

(3)

where security choice is 0 for equity, and 1 for equity-like convertible bonds.

3.2.3 Multi-nominal logistic model

I extend the security choice model from a binary logistic regression to a multi-nominal logistic regression by including three types of instruments, namely convertibles, straight debt, and equity by using the same explanatory variables as those included in

Model 1. The dependent variables are assigned a value of 0 for debt, 1 for convertibles, and 2 for equity. My model thus reads as follows:

Model 4

Security choice = Logit (Leverage, Volatility, CF_TA*Positive dummy, CF_TA*Negative dummy, Growth, Firm size, Relative issue size, Stock Ret, Consecutive Issues, Age, High-tech, Bubble , Post-bubble, TB Yield, Market Ret, Leading Indicator)

(4)

where security choice is 0 for convertibles, 1 for debt, and 2 for equity.

4 Empirical results and analysis

4.1 Determinants of the choice between debt-like securities and equity-like securities

Table 7 reports the results for the first step logistic regression analysis. Since the dependent variable measures the level of the equity–likeness of the chosen security (which is assigned 1 for equity), I expect the coefficient proxies for the debt related financing costs to be positive and the coefficient proxies for the equity related financing costs to be negative. Therefore, a positive coefficient indicates that the firm is more likely to issue an equity type security. I present results for 4 regressions. Regression 1 includes basic measures for profitability (cash flow over total assets), relative issue size, and firm age (years since the firm's IPO date). Regression 2 does the same thing as regression 1 except that it uses the natural logarithm of the relative issue size. Regression 3 uses years since the firm's founding date as an alternative measure for firm age. Regression 4 does the same thing as regression 1 except that it uses ROA (return on assets) as a measure for firm profitability instead of cash flow over total assets.

The results in Table 7 show that, in terms of the full sample, firm size, firm age, stock returns and the bubble dummy are the most significant security choice determinants across all regressions. Specifically, my results suggest that smaller & younger firms with better pre-announcement performance in IT bubble years are more likely to issue equity-type securities. The findings that firm size and stock ret matter is similar to those found in Jung et al. (1996) who examine the choice between debt and equity and Lewis et al. (1999) who include convertible debt in addition to debt and equity in their security choice model. Further, profitability (profitable firms only) is negatively significant across three of my four regressions, which suggests that firms with higher profitability are more likely to issue debt-type securities, which supports theoretical argument involving financial distress costs and the sequential model. The tax shield influence is negatively significant for three out of four regressions, suggesting that firms with higher tax shields are more likely to issue debt-type security. The results support the impact of taxation on debt issues. Lastly, the post-bubble dummy is positive significant across three out of four regressions, indicating that firms that had post bubble (after year 2001) issues are more likely to issue equity-like securities. The t-bill yield is negative and significant across all regressions, which is different from my expectations. In brief, for the full sample, I find that larger and older firms with higher tax shields, higher profitability are more likely to issue debt-like securities while smaller and younger firms with better pre-announcement performance and issues during or after year 1999 are more likely to issue equity-like securities.

For the high-tech sub-sample, I re-run regressions 1 to 4 in the same manner. I find that except for the bubble dummy, firm size, firm age, and stock ret remain as the

most significant security choice determinants across all regressions. Further, non-profitability (unprofitable firms only) is significantly positive across three out of four regressions which imply that firms running at a loss more likely to issue equity-like securities. In short, larger and older high-tech firms are more likely to issue debt-like securities while un-profitable high-tech firms with better pre-announcement performance are more likely to issue equity-like securities.

I also re-run regressions 1 to 4 for my non-tech sub-sample. Here, I find that firm size, firm age, and stock return still act as the most significant security choice determinants across all regressions, which is similar to what I found in the full sample and the high-tech sub-sample. Different from the high-tech sub-sample, profitability (profitable firms only) is significantly negative in three out of four regressions, which suggests that non-tech firms with higher profitability are more likely to issue debt-type securities, similar to what I found in the full sample. Further, consecutive issues exert a significant positive influence in all regressions, which suggest that non-tech firms with consecutive issues of the same type of security prefer to issue equity-like securities. In short, larger, older and profitable non-tech firms are more likely to issue debt-like securities while non-tech consecutively issuing firms with better pre-announcement performance are more likely to issue equity-like securities.

4.2 Determinants of the choice between debt-like convertibles and straight debt

Table 8 reports results for the second step logistic regression analysis on the debt-type security sub-sample. It examines the determinants of the choice between debt-like convertibles and straight debt. The dependent variable of the logistic regression equals one for debt-like convertibles, and zero for straight debt. I expect that firms with higher

debt-related costs prefer to issue debt-like convertibles over debt. The results in Table 8 show that volatility and the high-tech dummy have a significant positive influence across all four regressions. This suggests that high-tech firms with higher risk are more likely to issue debt-like convertibles than straight debt. Further, our proxy for growth opportunities is significantly negative in three of the four regressions. This suggests that firms with fewer growth opportunities are more likely to issue convertible debt. According to Brennan and Schwartz (1988) and Lewis et al. (1999), firms with more growth opportunities tend to have a higher level of information asymmetry about their future value and risk, and thus incur higher costs of issuing both straight debt and equity. Moreover, the availability of growth opportunities increases the possibility that convertible debt will be used as a sequential financing tool (Mayer, 1998). Further, consistent with my expectation, variable leverage (as a proxy for financial distress risk) is significantly positive in most regressions which implies that firms with higher financial distress risk are more likely to issue convertible debt. The results are in line with Mayers (1998) who claim that higher leverage enhances the attractiveness of convertible debt as a sequential financing device. In addition, relative issue size is negative and significant in three regressions, which suggests that firms with larger capital needs are more inclined to issue straight debt instead of convertible debt. As expected, I also find that firms are significantly more likely to issue debt-like convertible debt than straight debt after a larger stock ret given the equity component embedded in debt-like convertibles. Lastly, profitability (profitable firms only) has a significant positive influence in three out of four regressions, indicating that lucrative firms are more apt to issue convertible debt. In terms of control variables, market ret has a significant positive impact on security choice in

three out of four regressions. It appears that convertible debt issues are more likely when the economy-wide level of equity-related financing costs (measured by market return, an inverse proxy) is high. The t-bill yield also shows a strong positive influence in all regressions, indicating that convertible debt issues are preferred when the straight debt-related financing cost is high. Simply put, I find that firms with higher leverage, firm risk, and profitability, fewer growth opportunities, a smaller issue amount, better pre-announcement performance as well as high-tech firms are more likely to issue debt-like convertible debt than straight debt when the economic environment is indicative of a high financing cost stage for both debt and equity.

For the high-tech sub-sample, I re-run regressions 1 to 4 in the same manner. Interestingly, I find that none of the firm characteristic variables is significance in most regressions.

I also re-run regressions 1 to 4 in the same manner for non-tech firms. Different from my high-tech sub-sample but similar with the full sample (except for the relative issue size variable), I find that all of the variables including growth opportunity, leverage, profitability in terms of profitable firms, volatility, stock ret, firm age, market ret, and the T-bill yield have a significantly positive coefficients in most regressions. Summing up, I find that non-tech firms with higher profitability, leverage, firm risk, and higher profitability, less growth opportunities, better pre-announcement performance and younger firms are more likely to issue debt-like convertible debt than straight debt when the economic environment is in a high financing cost stage for both debt and equity.

4.3 Determinants of the choice between equity-like convertibles and equity

Table 9 reports results for the second step logistic regression analysis for the equity-type security sub-sample, where the dependent variable equals one for equity-like convertibles, and zero for equity. I expect that firms with higher equity-related adverse selection costs prefer to issue equity-like convertibles over equity. The results in Table 9 show that, in terms of the full sample, profitability (profitable firms only), the high-tech dummy, and stock ret have significantly negative coefficients in almost all regressions, which suggest that high-tech firms with higher profitability and better pre-announcement stock performance are less likely to issue equity-like convertible debt instead of equity. Further, firm size is significantly positive in all regressions. It advises that bigger firms tend to issue equity-like convertible debt over equity. Different from my expectations, leverage is significantly positive and relative issue size is significantly negative in most regressions. The latter two results are counter intuitive given the debt component embedded in equity-like convertibles. The potential reason for the unexpected sign for leverage may be that the firms with high leverage have a relatively weaker debt capacity, in the sense that the large amount of debt they have outstanding makes it difficult for them to issue more debt even though they prefer to. Thus, they have to choose equity-like securities in which equity-like convertible debt is more similar as debt. The possible reason for the unexpected sign for relative issue size may be that the firms with large issue amounts are facing a potentially big change of their capital structure in the near future after their issuance, which drives them to prefer to issue equity instead of convertibles to offset these changes. In terms of my control variables, I find that firms are significantly more likely to issue equity instead of equity-like convertible debt when

economic prospects (represented by the leading indicator) are favorable. Market ret has a significantly negative coefficient for three out of four regressions. It appears that convertible debt issues are more likely when the economy wide level of equity-related financing costs (measured by market ret, an inverse proxy) is high, which supports the delayed equity point of view. The T-bill yield is significantly positive in all regressions, which is different from my expectation. This suggests that convertible debt issues are preferred over equity when debt-related financing costs (measured by the T-bill yield) is high; the reason however is unclear. In short, I find that larger non-tech firms with higher leverage, smaller issue size, lower profitability and worse pre-announcement stock performance are more likely to issue equity-like convertible debt than equity.

When looking at my high-tech versus non-tech sub-samples, I find some indication that tax shields are one of the main drivers of a firm's security choice (the tax shield variable is significantly positive in all regressions, suggesting that high-tech firms with larger potential tax benefit are more likely to issue equity-like convertibles than equity). Because of the small sample size in the corresponding models, my results provide at best a potential indication, and further research may be warranted to provide more conclusive evidence. For the same reason, the results are not included as part of my main tables, but are instead provided in the Appendix.

When considering my non-tech sub-sample, I find that firm size has a significant positive effect while stock ret has s significant negative effect in all regressions, which suggests that larger non-tech firms with worse pre-announcement performance prefer to issue equity-like convertible debt rather than equity. Again, different from my

expectation but similar with the results in the full sample, leverage is significantly positive and relative issue size is significantly negative in most regressions.

4.4 Determinants of the choice among straight debt, convertible debt, and equity

The results in Table 10 show that across all regressions, leverage is significantly negatively for the choice between debt and convertible debt suggesting that firms with higher financial risk prefer to issue convertibles over debt, which supports the sweetened debt viewpoint; but it's also significantly negative for the choice between equity and convertible debt indicating that firms with higher financial risk prefer to issue convertibles over equity (which does not support the delayed equity viewpoint and the financial distress argument); the reason may be lie in firms having weak debt capacity as I mentioned in my discussion of Table 9 results above. Further, firm size and firm age is significantly positive across all regressions for the choice between debt and convertible debt and significantly negative for the choice between equity and convertible debt. This indicates that larger and older firms are more likely to issue debt than convertible debt and also more likely to issue convertible debt than equity. Relative issue size is significantly positive across all regressions for both the choice between convertible debt and debt and the choice between convertible debt and equity, indicating that firms that plan to raise large amounts of capital tend to do so by means of a debt or equity issue rather than a convertible debt issue. But my expectation is relative issue size is significantly positive in all regressions for the choice between convertible debt and debt while significantly negative in all regressions for the choice between convertible debt and equity. The issue size results does not support the pecking order model's claim that firms facing higher information asymmetries should issue securities that are less sensitive to

mispricing. The possible reason may be that the firms tend to offset the change of big future capital structure as I reasoned in my discussion of Table 9. In addition, volatility as a proxy for debt-related financing costs is significantly negative for the choice between debt and convertible debt suggesting that firms with relatively higher risk tend to issue convertibles over debt, which supports the sweetened debt viewpoint; but it's also significantly negative for the choice between equity and convertible debt indicating that firms with higher risk tend to issue convertibles over equity (which does not support the delayed equity viewpoint). Lastly, stock ret is significantly negative in all regressions for the choice between convertible debt and debt but positively significant for the choice between convertible debt and equity, revealing that firms with relatively better pre-announcement performance tend to issue convertible debt rather than debt while firms with relative worse pre-announcement performance have a tendency to issue convertible debt than equity. The T-bill yield is significantly negative in all regressions for the choice between convertibles and equity, which is different with my expectation. In summary, I find that smaller and younger firms with higher leverage, higher firm risk, smaller issue size, and better pre-announcement performance are more likely to issue convertible debt rather than straight debt while relative larger and older firms with higher leverage, higher firm risk, smaller issue size, and worse pre-announcement performance are more likely to issue convertible debt than equity.

When considering my high-tech sub-sample, firm size remains as the only significant determinant of a firm's security choice. It is significantly positively in all regressions for the choice between convertible debt and debt and significantly negative

for the choice between convertible debt and equity, suggesting that smaller size high-tech firms are more likely to issue convertible debt as is also the case in my full sample.

When considering my non-tech sub-sample, firm size again remains as a significant determinant of security choice (as I found for the full sample and the high-tech sub-sample), in addition, I find similar results for leverage, that is, leverage is significantly negatively in all regressions for both the choice between debt and convertible debt and the choice between equity and convertible debt. Overall, the results indicate that smaller non-tech firms with higher leverage lean towards issuing convertible debt rather than straight debt while larger non-tech firms with higher leverage lean towards issuing convertible debt rather than equity as is the same case in my full sample.

4.5 Robustness tests

4.5.1 Tests for model 2 and 3

In line with Dutordoir, M., and Van de Gucht, L.(2008), I use call features on convertible debt as an alternative equity component measure instead of conversion probability. As such, I re-estimate Model 2 and 3 with debt-like (equity-like) convertibles defined as issues without (with) a call feature. Under this classification, 94% of the convertibles are considered as debt-like. The results are intact with those obtained by means of the probability of conversion. Thus, my main findings do not depend on the specific benchmark used for the debt-like versus equity-like classification.

4.5.2 Tests for model 1 to model 4

All the binary models and multinomial models are rerun using alternative specifications for profitability (now measured as ROA), relative issue size (now measured as the natural logarithm of relative issue size), and age (now measured as years

since the firm is founded). Again, I find that the results are qualitatively similar to those reported in Table 7 - Table 10 where I used the original specifications for these variables. Thus, my main conclusions remain.

4.6 Discussion

The regression results reported in Table 8 and 9 suggest that convertible debt is used to not only alleviate firm-specific debt-related financing costs, but also to mitigate firm-specific equity-related financing costs. This conclusion is in line with the US evidence that supports both view points for convertible debt (Billingsley and Smith, 1996; Lewis et al., 1999). The regression results reported in Table 10 indicate that convertible debt is used to lessen firm-specific debt-related financing costs but not to mitigate firm-specific equity-related financing costs.

The divergence between my findings (in terms of the choice between convertibles and equity and the choice between equity-like convertibles and equity, and specially for variables such as leverage, relative issue size, and volatility) and the expected results based on the previous literature might be driven by the weak debt capacity, which force firms to choose equity type securities but better to have debt-like components such as convertibles. It may also be driven by firms trying to counter-balance potential capital structure changes since changes in a firm's capital structure may provide outsiders with a signal with respect to a change of firm value.

The lack of supportive evidence for the delayed equity hypothesis in a multivariate context may be due to the small number of equity-like convertibles in my sample. However, similar to Dutordoir and Van de Gucht (2008) the low conversion probability is not an idiosyncratic feature of our sample, but is representative of the US

convertible bond universe during the recent decade. Furthermore, my results are robust to alternative measures for classifying convertible bonds.

5 Conclusion

This paper makes several contributions. First, it is the first paper to examine what drives US firms to choose among convertible debt, debt, and equity in recent years by (1) splitting convertible debt into two sub-samples and distinguish between debt-like convertibles and equity-like convertibles and (2) examining the choice between convertibles and debt and the choice between convertibles and equity by running binary logistic regressions. Second, it is the first paper to (1) consider convertibles as a substitute for debt and equity at the same time by incorporating convertibles as a third type of security in a mutually exclusive security choice pool and (2) examine the determinants of a firm's security choice by setting up multinomial logistic regressions. Finally, my paper is the first to examine how issuance decisions vary in different types of industries by exploring determinants of a firm's issuance choice separately for high-tech and non-tech firms.

My full sample results are similar to those of Lewis at al. (1999). In terms of the choice between two securities (debt-like securities vs. equity-like securities), firms with higher tax shields, higher profitability, larger and older firms are more likely to issue debt-like securities while smaller and younger firms having issues during or after the year 1999 with better pre-announcement performance are more likely to issue equity-like securities. The analysis of high-tech and non-tech firms suggests that non-tech firms with consecutive issues are more likely to issue equity-like securities and while non-tech firms with higher profitability are more likely to issue debt-like securities, conditioning on

keeping other determinants (firm size, stock run-up, firm age) having the same level of influence on security choice as those reported in the high-tech sub-sample.

In terms of the choice between two securities (debt-like convertibles vs. debt), firms with higher leverage, risk, and profitability, fewer growth opportunities, smaller issue amount, better pre-announcement performance and high-tech firms are more likely to issue debt-like convertible debt than straight debt when the economic environment is reflecting of a high financing-cost for both debt and equity, which supports to Green's (1984) sweetened debt hypothesis. The differences between high-tech and non-tech firms is remarkable in the sense that younger non-tech firms are more likely to issue debt-like convertible debt, conditioning on keeping all other determinants (except relative issue size) having the same level of influence on security choice as those reported in the full sample .

In terms of the choice between equity-like convertibles vs. equity), larger non-tech firms with higher leverage, smaller issue size, lower profitability, and worse pre-announcement stock performance are more likely to issue equity-like convertible debt than equity, which provides partial support for Stein's (1992) delayed equity hypothesis. The difference between high-tech and non-tech firms is larger non-tech firms with higher leverage are more likely to issue equity-like convertible debt than equity.

When exploring a firm's simultaneous choice among three securities in a multi-nominal model, I find that the results for leverage, issue size, volatility, and stock ret are qualitatively similar to those reported in Table 8 and leverage, firm size, issue size, and stock ret are qualitatively similar to those reported in Table 9. The results in Table 10 show that smaller and younger firms with higher leverage, higher firm risk, smaller issue

size, and better pre-announcement performance are more likely to issue convertible debt than straight debt while larger and older age firms with higher leverage, higher firm risk, smaller issue size, and worse pre-announcement performance are more likely to issue convertible debt than equity. This partially supports the pecking order model as convertible debt is viewed as a substitute for debt. The sequential model also receives some limited supports as firms with low financial distress risk and firm risk tend to use convertibles to solve the sequential financing problem, which is only proved in the choice between convertible debt and debt but not in the choice between convertible and equity. Further, my results support to the agency model that claims that firms with worse pre-announcement performance prefer to issue convertible debt over debt and that firms with better pre-announcement performance prefer to issue equity over convertible debt. The difference between high-tech and non-tech firms is that non-tech firms with higher leverage are expected to issue convertible debt other than debt and equity conditioning on keeping firm size having the same level of influence on security choice as those reported in the full sample, which only supports the sweetened debt hypothesis but not the delayed equity hypothesis that claims that firms with higher financial risk prefer to issue equity rather than convertibles.

My security choice model controls for economy-wide factors. The results indicate that these factors have a significant incremental impact over firm-specific characteristics on the convertible debt choice.

During my sample selection process, it became apparent that there are about two of three (100 out of 153) dual/triple issuers. Based on the extant research in this area, I have excluded the respective observations from my sample. However, an interesting

question that arises is what motivates firms to issue both convertible debts together with straight debt and/or equity at same time, i.e. in the same year. Given the high frequency with which additional security issues are tied to convertibles it would certainly be interesting to shine some light on this question and I would encourage future researchers to consider investigating this phenomenon.

With respect to future research, other studies could further focus on security issuance choice in an international setting since there has been several papers document that convertible debt is particularly popular in the Australian and European market, which stands in contrast to the decreasing popularity of convertible debt in the US market during the same time period. Also an extra investigation could be conducted regarding the influence of the T-bill rate on a firm's security choice, which leaves as a puzzle for now. To my knowledge, no such investigations have been conducted to date, and I believe that understanding of the new the security choice determinants differ across different economic stages and on a global level.

Figure 1 US New Security Issues Universe by Amount 1997-2007

This figure reports all US new security issues including debt, convertible debt, and equity from 1997-2007. "% of amount of year" is calculated by one security's yearly amount over another security's yearly amout. For example, in 1997, "% of amount of year" for cvt/debt is 6.17% which is calculated by 5666.6/91766.9 (these numbers are from Table 1).

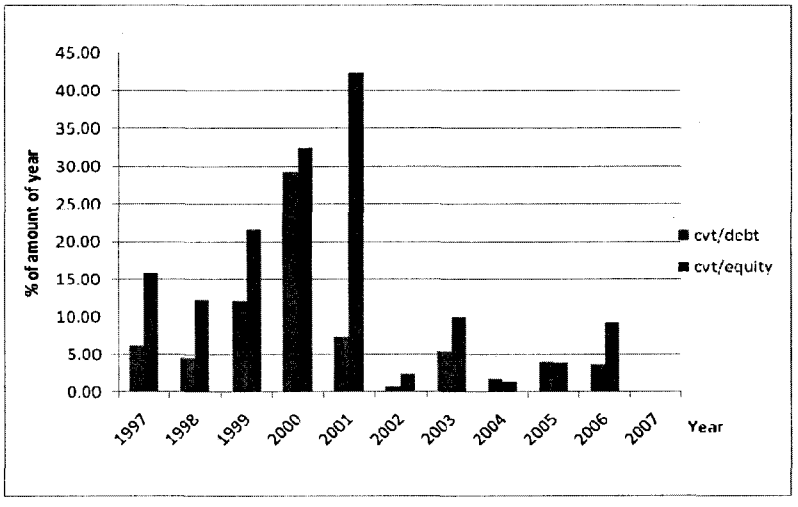

Figure 2 US New Security Issues Universe by Frequency 1997-2007

This figure reports all US new security issues including debt, convertible debt, and equity from 1997-2007. "% of # issues of year" is calculated by one security's yearly issues over another security's yearly issues. For example, in 1997, "% of # issues of year" for cvt/debt is 5.1% which is calculated by 30/588 (thes numbers sre from Table 2).

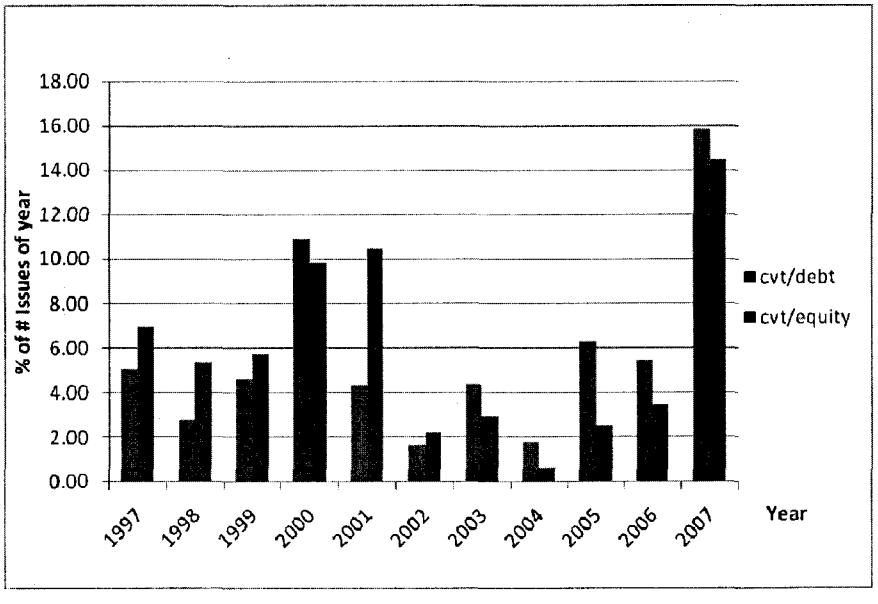

Figure 3 US New Security Issues Sample by Amount 1997-2007

This figure reports US new security issues sample including debt, convertible debt, and equity from 1997-2007. "% of amount of year" is calculated by one security's yearly amount over another security's yearly amout. For example, in 1997, "% of amount of year" for cvt/debt is 13.33% which is calculated by 90/675 (thes numbers sre from Table 1).

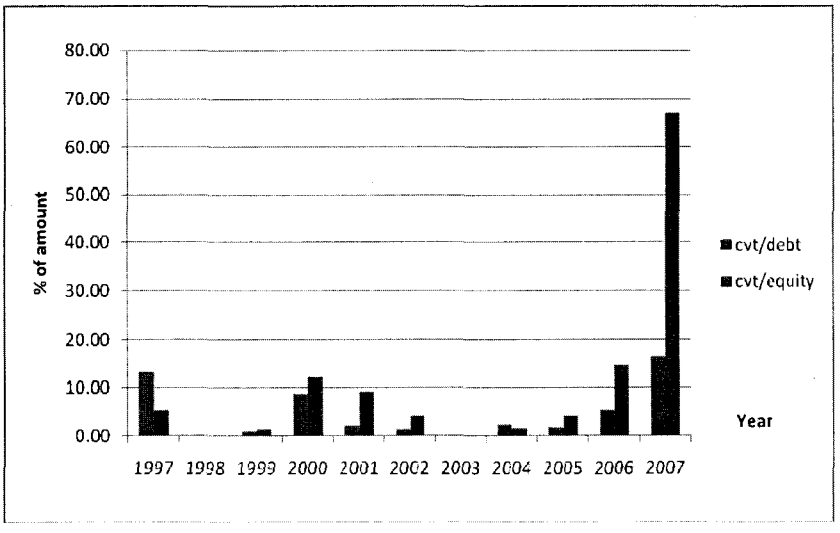

Figure 4 US New Security Issues Sample by Frequency 1997-2007

This figure reports US new security issues sample including debt, convertible debt, and equity from 1997-2007. "% of # issues of year" is calculated by one security's yearly issues over another security's yearly issues. For example, in 1997, "% of # issues of year" for cvt/debt is 50% which is calculated by 1/2 (thes numbers sre from Table 2).

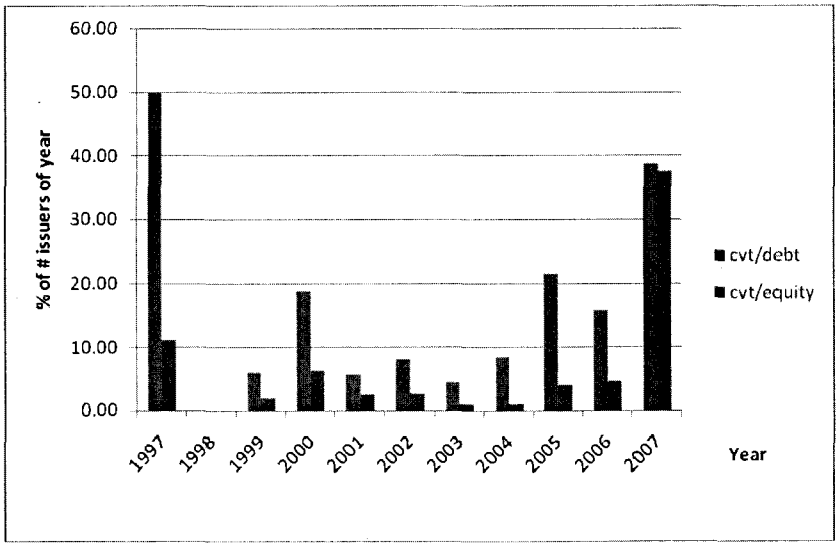

Table 1 US New security issues universe 1997-2007

This table reports information on the US new security issues universe including all debt, convertible debt, and equity issues from 1997-2007. Panel A provides a breakdown by year and describes the distribution in terms of issue amount and number of issues. Panel B provides a breakdown by security types.

Panel A: breakdown by year

	Total Amount ($mil)			Proportional distribution of issue amount		# of Issues			Proportional distribution of #of issues	
Year	cvt	debt	equity	cvt/debt	cvt/equity	cvt	debt	equity	cvt/debt	cvt/equity
1997	5,666.60	91,766.90	35,656.90	6.17	15.89	30	588	433	5.10	6.93
1998	4,947.10	109,659.60	40,160.20	4.51	12.32	16	574	299	2.79	5.35
1999	14,854.10	122,156.70	68,791.60	12.16	21.59	21	453	364	4.64	5.77
2000	19,677.20	67,257.80	60,535.10	29.26	32.51	32	293	325	10.92	9.85
2001	15,930.90	217,196.10	37,565.60	7.33	42.41	27	622	257	4.34	10.51
2002	841.10	118,738.60	34,354.80	0.71	2.45	5	298	224	1.68	2.23
2003	3,991.30	72,246.80	40,089.00	5.52	9.96	9	205	306	4.39	2.94
2004	560.00	33,483.90	39,462.30	1.67	1.42	2	111	315	1.80	0.63
2005	1,475.00	36,502.80	36,898.40	4.04	4.00	6	95	238	6.32	2.52
2006	3,090.00	86,447.50	33,172.80	3.57	9.31	8	147	232	5.44	3.45
2007	23.00	64,920.00	32,588.80	0.04	0.07	23	145	159	15.86	14.47
Total	71,056.30	1,020,376.70	459,275.50			179	3,531.00	3,152.00		

Panel B: Breakdown by security type

	Amt	%amt	Freq	%freq
cvt	71,056.30	0.05	179.00	0.03
debt	1,020,376.70	0.66	3,531.00	0.51
equity	459,275.50	0.30	3,152.00	0.46
Total	1,550,708.50	1.00	6,862	1.00

· Table 2 US New security issues sample 1997-2007

This table reports information on the US new security issues sample including all debt, convertible debt, and equity issues from 1997-2007. Panel A provides a breakdown by year and describes the distribution in terms of issue amount and number of issues. Panel B provides a breakdown by security types.

Panel A Breakdown by year

	Total Amount ($mil)			Proportional distribution of issue amount		# of Issues			Proportional distribution of #of issues	
Year	cvt	debt	equity	cvt/debt	cvt/equity	cvt	debt	equity	cvt/debt	cvt/equity
1997	90.00	675.00	1,677.74	13.33	5.36	1	2	9	50.00	11.11
1998	0.00	34,426.00	13,134.55	0.00	0.00	0	61	93	0.00	0.00
1999	377.30	41,963.20	25,360.28	0.90	1.49	2	33	110	6.06	1.82
2000	2,550.30	28,607.30	20,826.19	8.91	12.25	6	32	98	18.75	6.12
2001	1,052.30	46,295.90	11,294.37	2.27	9.32	2	35	81	5.71	2.47
2002	540.00	37,651.20	13,037.80	1.43	4.14	2	25	74	8.00	2.70
2003	35.00	20,320.00	15,251.94	0.17	0.23	1	22	100	4.55	1.00
2004	260.00	11,345.60	16,028.02	2.29	1.62	1	12	103	8.33	0.97
2005	455.00	25,268.30	10,889.91	1.80	4.18	3	14	74	21.43	4.05
2006	1,465.00	26,791.50	9,994.69	5.47	14.66	3	19	64	15.79	4.69
2007	5,672.50	34,617.90	8,466.17	16.39	67.00	12	31	32	38.71	37.50
Total	12,497.40	307,961.90	145,961.65			33	286	838		

Panel B: Breakdown by security type

	Amt	%amt	Freq	%freq
cvt	12,497.40	0.03	33	0.03
debt	307,961.90	0.66	286	0.25
equity	145,961.65	0.31	838	0.72
Total	466,420.95	1.00	1,157	1.00

Table 3 Sample distribution by industry

SIC	Industry	Convertible N	Convertible % of 33	Debt N	Debt % of 286	Equity N	Equity % of 838
1	Agricultural Production Crops			1	0.35	3	0.36
7	Agricultural Services					2	0.24
8	Forestry					2	0.24
10	Metal Mining			2	0.70	3	0.36
12	Coal Mining					4	0.48
13	Oil And Gas Extraction	2	6.06	20	6.99	61	7.28
14	Mining And Quarrying Of Nonmetallic Minerals			1	0.35		
15	Building Construction General	2	6.06	13	4.55	7	0.84
16	Heavy Construction					2	0.24
17	Construction Special Trade Contractors					1	0.12
20	Food And Kindred Products			16	5.59	6	0.72
22	Textile Mill Products			1	0.35	3	0.36
23	Apparel And Other Finished Products			1	0.35	8	0.95
24	Lumber And Wood Products, Except Furniture			3	1.05	1	0.12
25	Furniture And Fixtures			4	1.40	1	0.12
26	Paper And Allied Products			11	3.85	4	0.48
27	Printing, Publishing, And Allied Industries			7	2.45	11	1.31
28	Chemicals And Allied Products	5	15.15	35	12.24	118	14.08
29	Petroleum Refining And Related Industries			2	0.70	1	0.12
30	Rubber And Miscellaneous Plastics Products			5	1.75	8	0.95
31	Leather And Leather Products					4	0.48
32	Stone, Clay, Glass, And Concrete Products			1	0.35	3	0.36
33	Primary Metal Industries			1	0.35	15	1.79
34	Fabricated Metal Products	1	3.03	4	1.40	10	1.19
35	Industrial And Commercial Machinery			17	5.94	33	3.94
36	Electronic & Electrical Equipment (Except Computer equipment)	1	3.03	4	1.40	7	0.84
37	Transportation Equipment	1	3.03	10	3.50	19	2.27
38	Measuring, Analyzing, And Controlling Instruments	1	3.03	1	0.35	25	2.98
39	Miscellaneous Manufacturing Industries			6	2.10	6	0.72
40	Railroad Transportation			13	4.55	5	0.60
41	Local And Suburban Transit And Interurban Highway Transportation					1	0.12
42	Motor Freight Transportation And Warehousing					10	1.19
44	Water Transportation			1	0.35	4	0.48
45	Transportation By Air			6	2.10	7	0.84
47	Transportation Services					2	0.24
48	Communications	1	3.03	4	1.40	15	1.79
49	Electric, Gas, And Sanitary Services			1	0.35	9	1.07
50	Wholesale Trade-durable Goods			5	1.75	6	0.72
51	Wholesale Trade-non-durable Goods			4	1.40	11	1.31

Table 3 (continued)

SIC	Industry	Convertible N	Convertible % of 33	Debt N	Debt % of 286	Equity N	Equity % of 838
52	Building Materials, Hardware, etc.			4	1.40		
53	General Merchandise Stores			5	1.75	5	0.60
55	Automotive Dealers And Gasoline Service Stations	2	6.06			8	0.95
56	Apparel And Accessory Stores			2	0.70	13	1.55
57	Home Furniture, Furnishings, And Equipment Stores	1	3.03			8	0.95
58	Eating And Drinking Places			5	1.75	6	0.72
59	Miscellaneous Retail			5	1.75	25	2.98
70	Hotels, Rooming Houses, Camps, And Other Lodging Places					8	0.95
72	Personal Services			1	0.35	5	0.60
73	Business Services	1	3.03	7	2.45	20	2.39
75	Automotive Repair, Services, And Parking			3	1.05		
76	Miscellaneous Repair Services					1	0.12
78	Motion Pictures			1	0.35	6	0.72
79	Amusement And Recreation Services	1	3.03	1	0.35	8	0.95
80	Health Services	2	6.06	4	1.40	13	1.55
82	Educational Services					4	0.48
83	Social Services					1	0.12
87	Engineering, Accounting, Research, Management, And Related Services					32	3.82
	High-tech	12	36.36	33	11.54	233	27.80
Total		33	100	286	100	838	100

Table 4 Sample selection

The following table illustrates our sample creation process for US. New issues securities including convertible bonds, debts, and equity issues during 1997-2007 period.

Process	Convertibles	Debt	Equity
from SDC (by issues)	179	3,531	3,152
from SDC (by unique firms)	153	673	2,578
after excluding dual & triple issues*	53	645	2,171
after merging with CRSP	47	640	2,057
after merging with CompuStat	34	437	1,382
after excluding missing "Years since IPO"	33	286	838

*Note:

(1) Dual issues example: in Aug, 2001, Walt Disney Co. issued 7.375% bonds due in May, 2019 and 2.125% convertible senior notes due in Apr, 2008.

(2) Triple issues example: in May, 1999, Adelphia Communications Corp issued 7.875% senior notes due in May, 2009, 3.25% convertible notes due in May, 2003, and US$ 760,750,000 Class A shares in NASDAQ.

Table 5 Variable descriptions

This table provides the definitions of all variables. "X" presents the related models involved for the corresponding variables.

Panel A: Firm-specific Variables

ID	Variables	Definition	Proxy	Indication of Related Cost	Pecking-order Model	Agency Model	Sequential Model
1	Consecutive Issues	Dummy variable, 1 for firms that have more than 2 issues of the same security type during same year; 0 otherwise.	Tendency				
2	Mkt_book	Market Value of equity/(Total Assets - Total Long-Term Debt)	Growth option	Debt, Equity	X	X	
3	CF_TA	Cash Flow/Total Assets	Profitability	Debt			X
4	ROA	Return on Total Assets	Profitability				
5	Positive Dummy	Dummy variable, 1 if CF_TA is equal or larger than 0, 0 otherwise.					
6	Negative Dummy	Dummy variable, 1 if CF_TA is less than 0, 0 otherwise.					
7	Leverage	Total Long Term Debt/ Total Assets	Financial cost of distress	Debt	X		X
8	Tax shield	Total Tax Paid/ Total Assets pre the announcement	Tax benefit	Inverse Debt			
9	Firm _size	Ln(total assets)	Information Asymmetry	Inverse Debt, Inverse Equity			
10	Relative issue size	Total Issue Amt/MV equity	Information Asymmetry	Equity	X		
11	LN_RIS	Ln(Total Issue Amt/MV equity)	Information Asymmetry		X		
12	Volatility	Daily stock return standard deviation during the period (-240,-40)	Information Asymmetry (uncertainty about future firm value)	Debt	X		X
13	Stock Ret	Average daily stock return during the period (-75,-1)	Information Asymmetry	Inverse Equity		X	
14	YSIPO	number of years since firm's IPO date					
15	YSFounded	number of years since firm is founded					
16	High_tech	Dummy variable, 1 for high-tech firms, 0 otherwise. (according to the American Electronics Association's classification)					
17	Bubble	Dummy variable, 1 if the issue date is in between 1999 and, 0 otherwise.					
18	Post_Bubble	Dummy variable, 1 if the issue date is after year 2001, 0 otherwise.					

Table 5 (continued)

Panel B: Control Variables

ID	Variables	Definition	Proxy	Indication of Related Cost
1	TB Yield	US 5-yr treasury bond yield (average value over the three months preceding the announcement month)	Macroeconomic condition	Debt
2	Market Ret	Average daily stock market index return during the period (-60,-1)	Macroeconomic condition	Inverse Equity
3	Leading Indicator	US leading indicator index (average value over the three months preceding the announcement month)	Macroeconomic condition	Inverse Debt, Inverse Equity

Table 6 Sample descriptive statistics

This table reports mean and median in full sample, high-tech and non-tech sub-samples by each model. I distinguish between high-tech and non-tech firms following the classification by American Electronics Association. For each panel, I report the number of observations as well as the mean and median. In addition, I report p-values for a t-test for the equality of means and a Wilcoxon test for the equality of medians across groups. ***, **, and * indicates statistical significance at the 1 percent, 5 percent, and 10 percent level, respectively.

Panel A	Entire Sample							Equality Tests					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(1) vs. (2)	(3) vs. (4)	(5) vs. (6)	(3) vs. (7)	(5) vs. (7)	(3) vs. (5)
	Debt-like security	Equity-like security	Debt	Debt-like convertible	Equity	Equity-like convertible	Convertible						
	N=309	N=848	N=286	N=23	N=838	N=10	N=33	Model 1	Model 2	Model 3		Model 4	
Variable				Mean Median St Dev.						Means (P-value) Medians (P-value)			
consecutive_issues	0.0252	0.0288	0.0264	0.0000	0.0290	0.0000	0.0000	(0.6071)	(<.0001)***	(<.0001)***	(<.0001)***	(<.0001)***	(0.7142)
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	(0.6191)	(0.3691)	(0.4761)	(0.5079)	(0.3458)	(0.7209)
	0.1568	0.1673	0.1603	0.0000	0.1679	0.0000	0.0000						
Mkt_Book	2.9534	2.6059	2.9878	2.2133	2.6095	2.1505	2.1906	(0.0062)***	(0.1037)	(0.5721)	(0.06)*	(0.3086)	(0.0035)***
	2.2096	1.5366	2.2267	1.6732	1.5409	0.6721	1.5054	(<.0001)***	(0.0161)**	(0.9568)	(0.0051)***	(0.4243)	(<.0001)***
	2.7104	3.3638	2.7181	2.4647	3.3650	3.2683	2.7470						
CF_TA*positive dummy	0.0738	0.0612	0.0738	0.0731	0.0616	0.0537	0.0674	(0.0021)***	(0.9527)	(0.5961)	(0.5135)	(0.5441)	(0.0036)***
	0.0688	0.0287	0.0688	0.0701	0.0292	0.0374	0.0618	(<.0001)***	(0.8079)	(0.5562)	(0.4638)	(0.0585)	(<.0001)***
	0.0694	0.0926	0.0701	0.0562	0.0930	0.0447	0.0532						
CF_TA*negative dummy	-0.0040	-0.0922	-.0003	-0.0720	-.0932	-0.0309	-0.0599	(<.0001)***	(0.0441)**	(0.0772)*	(0.025)**	(0.2112)	(<.0001)***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	(<.0001)***	(<.0001)***	(0.2572)	(0.0254)**	(0.394)	(<.0001)***
	0.0404	0.2270	0.0040	0.1650	0.2282	0.0977	0.1481						
Leverage	0.2430	0.2135	0.2411	0.2847	0.2124	0.3693	0.3106	(0.0011)***	(0.3152)	(0.0868)*	(0.0831)*	(0.0164)**	(0.0016)***
	0.2217	0.1234	0.2218	0.2102	0.1212	0.2842	0.2662	(<.0001)***	(0.386)	(0.0354)*	(0.0892)*	(0.0249)**	(<.0001)***
	0.1477	0.2650	0.1440	0.2105	0.2647	0.2736	0.2310						
Tax_Shield	0.0086	0.0041	0.0088	0.0048	0.0041	0.0026	0.0041	(<.0001)***	(0.0197)**	(0.5005)	(0.001)***	(0.9836)	(<.0001)***
	0.0076	0.0010	0.0077	0.0036	0.0010	0.0016	0.0033	(<.0001)***	(0.0013)**	(0.7412)	(0.0039)***	(0.277)	(<.0001)***
	0.0074	0.0191	0.0073	0.0078	0.0191	0.0072	0.0076						
Firm_size	8.6936	5.2731	8.7611	7.2691	5.2604	7.1759	7.2407	(<.0001)***	(0.0015)***	(0.0001)***	(<.0001)***	(<.0001)***	(<.0001)***
	8.7135	5.2298	8.7500	7.6060	5.2143	7.4813	7.5437	(<.0001)***	(<.0001)***	(0.0001)***	(0.0004)***	(<.0001)***	(<.0001)***
	1.4245	1.6606	1.3528	2.0648	1.6567	1.0627	1.8022						
Relative_issue_size	0.1579	0.4235	0.1542	0.2374	0.4250	0.2333	0.2359	(<.0001)***	(0.0024)***	(0.0003)***	(0.0006)***	(<.0001)***	(<.0001)***
	0.0895	0.2326	0.0862	0.2537	0.2339	0.1989	0.2206	(<.0001)***	(<.0001)***	(0.5908)	(0.0043)***	(0.7594)	(<.0001)***
	0.1774	0.5056	0.1784	0.1332	0.5071	0.1688	0.1453						

Table 6 (continued)

Panel A	Entire Sample							Equality Tests					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(1) vs. (2)	(3) vs. (4)	(5) vs. (6)	(3) vs. (7)	(5) vs. (7)	(3) vs. (5)
	Debt-like security N=309	Equity-like security N=848	Debt N=286	Debt-like convertible N=23	Equity N=838	Equity-like convertible N=10	Convertible N=33	Model 1	Model 2	Model 3		Model 4	
Variable				Mean Median St Dev.						Means (P-value) Medians (P-value)			
Volatility	0.0163	0.0296	0.0155	0.0354	0.0296	0.0312	0.0339	(<.0001)***	(<.0001)***	(0.5886)	(<.0001)***	(0.0827)*	(<.0001)***
	0.0119	0.0222	0.0110	0.0341	0.0220	0.0269	0.0334	(<.0001)***	(<.0001)***	(0.0919)*	(<.0001)***	(0.0067)***	(<.0001)***
	0.0153	0.0307	0.0146	0.0181	0.0308	0.0116	0.0161						
Stock_ret	0.0007	0.0037	0.0006	0.0028	0.0037	0.0008	0.0021	(<.0001)***	(0.0013)***	(0.0028)***	(0.0055)***	(0.0031)***	(<.0001)***
	0.0007	0.0032	0.0007	0.0025	0.0033	0.0008	0.0022	(<.0001)***	(<.0001)***	(0.01119)**	(0.9946)	(0.4172)	(<.0001)***
	0.0022	0.0058	0.0021	0.0034	0.0058	0.0034	0.0035						
YSIPO	24.79	12.50	25.12	20.14	12.47	14.53	18.23	(<.0001)***	(0.0186)**	(0.1216)	(<.0001)***	(0.0002)***	(<.0001)***
	25.50	11.00	26.00	16.00	11.00	13.00	15.00	(<.0001)***	(0.0051)***	(0.0603)	(<.0001)***	(<.0001)***	(<.0001)***
	9.5150	7.0872	9.3642	10.5178	7.1067	4.7938	9.3133			0.23			
High_tech	0.1437	0.3204	0.1287	0.4667	0.3206	0.2941	0.4043	(<.0001)***	0.0011***	(0.8198)	(0.0005)***	(0.2578)	(<.0001)***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	(<.0001)***	(<.0001)***	(0.8158)	(0.0842)*	(0.0887)	(<.0001)***
	0.3510	0.4667	0.3351	0.5074	0.4668	0.4697	0.4961						
Bubble	0.2919	0.2861	0.2930	0.2667	0.2865	0.2353	0.2553	(0.774)	(0.7559)	(0.637)	(0.5745)	(0.6337)	(0.7493)
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	(0.7731)	(0.7564)	(0.6417)	(0.6112)	(0.815)	(0.7482)
	0.4550	0.4520	0.4555	0.4498	0.4522	0.4372	0.4408						
Post_Bubble	0.4000	0.4854	0.3922	0.5667	0.4860	0.4118	0.5106	(<.0001)***	(0.0729)*	(0.5563)	(0.1261)	(0.7417)	(<.0001)***
	0.0000	0.0000	0.0000	1.0000	0.0000	0.0000	1.0000	(<.0001)***	(0.0568)*	(0.5422)	(0.9222)	(0.3764)	(<.0001)***
	0.4903	0.4999	0.4886	0.5040	0.4999	0.5073	0.5053						

Table 6 (continued)

Panel B	High-Tech Sub-Sample							Equality Tests					
	(1) Debt-like security N=43	(2) Equity-like security N=239	(3) Debt N=33	(4) Debt-like convertible N=10	(5) Equity N=237	(6) Equity-like convertible N=2	(7) Convertible N=12	(1) vs. (2) Model 1	(3) vs. (4) Model 2	(5) vs. (6) Model 3	(3) vs. (7)	(5) vs. (7) Model 4	(3) vs. (5)
Variable				Mean Median St Dev.						Means (P-value) Medians (P-value)			
consecutive_issues	0.0412	0.0228	0.0482	0.0000	0.0230	0.0000	0.0000	(0.3839)	(0.0448)**	(<.0001)***	(0.0448)**	(<.0001)***	(0.3029)
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	(0.2776)	(0.404)	(0.7318)	(0.3313)	(0.5042)	(0.1702)
	0.1999	0.1495	0.2155	0.0000	0.1500	0.0000	0.0000						
Mkt_Book	2.6945	2.7480	2.8297	1.8928	2.7623	0.7634	1.5955	(0.8361)	(0.0729)*	(0.0074)***	(0.0067)***	(0.005)***	(0.8103)
	2.2601	1.5283	2.5285	1.7789	1.5538	0.3337	1.4121	(0.0024)***	(0.0656)*	(0.5703)	(0.0029)***	(0.9539)	(0.002)***
	2.1857	3.5060	2.2470	1.6185	3.5137	0.9608	1.5356						
CF_TA*positive dummy	0.0735	0.0601	0.0695	0.0927	0.0604	0.1077	0.0952	(0.2123)	(0.2964)	(0.2872)	(0.1894)	(0.0576)*	(0.4438)
	0.0705	0.0000	0.0590	0.0850	0.0000	0.1077	0.0886	(0.0107)	(0.1878)	(0.1563)	(0.1154)	(0.0078)***	(0.0592)*
	0.0702	0.1117	0.0722	0.0594	0.1123	0.0340	0.0550						
CF_TA*negative dummy	-0.0100	-0.0923	-0.0025	-0.0460	-0.0936	0.0000	-0.0383	(<.0001)***	(0.3688)	(<.0001)***	(0.3697)	(0.1877)	(<.0001)***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	(<.0001)***	(0.4211)	(0.3314)	(0.5247)	(0.0985)	(<.0001)***
	0.0611	0.2164	0.0119	0.1454	0.2176	0.0000	0.1327						
Leverage	0.2272	0.1464	0.2269	0.2291	0.1470	0.0032	0.1943	(0.0005)***	(0.9524)	(<.0001)***	(0.4185)	(0.194)	(0.002)***
	0.1917	0.0195	0.1853	0.2086	0.0195	0.0032	0.2059	(<.0001)***	(0.2909)	(0.2771)	(0.8685)	(0.0144)**	(<.0001)***
	0.1662	0.2638	0.1766	0.0903	0.2641	0.0046	0.1183						
Tax_Shield	0.0066	0.0031	0.0070	0.0042	0.0031	0.0105	0.0052	(0.002)***	(0.0904)*	(0.4998)	(0.3132)	(0.2487)	(<.0001)***
	0.0061	0.0005	0.0070	0.0040	0.0005	0.0105	0.0040	(<.0001)***	(0.0916)*	(0.1828)	(0.172)	(0.1603)	(<.0001)***
	0.0061	0.0188	0.0063	0.0044	0.0189	0.0105	0.0055						
Firm_size	8.9623	4.8024	9.3238	6.8925	4.7884	8.3391	7.1150	(<.0001)***	(0.0008)***	(0.0908)*	(0.0005)***	(0.0003)***	(<.0001)***
	9.0491	4.6687	9.3858	6.7328	4.6669	8.3391	7.3427	(<.0001)***	(<.0001)***	(0.0205)**	(<.0001)***	(<.0001)***	(<.0001)***
	1.5491	1.5510	1.2015	1.7413	1.5376	0.7569	1.6940						
Relative_issue_size	0.1623	0.4216	0.1455	0.2619	0.4237	0.1401	0.2298	(<.0001)***	(0.0051)***	(0.0008)***	(0.0189)**	(<.0001)***	(<.0001)***
	0.1041	0.2265	0.0877	0.3029	0.2286	0.0779	0.2609	(<.0001)***	(0.0008)***	(0.43)	(0.0015)***	(0.9968)	(<.0001)***
	0.1688	0.5239	0.1704	0.1216	0.5252	0.0930	0.1251						

Table 6 (continued)

Panel B	High-Tech Sub-Sample							Equality Tests					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(1) vs. (2)	(3) vs. (4)	(5) vs. (6)	(3) vs. (7)	(5) vs. (7)	(3) vs. (5)
	Debt-like security	Equity-like security	Debt	Debt-like convertible	Equity	Equity-like convertible	Convertible						
	N=43	N=239	N=33	N=10	N=237	N=2	N=12	Model 1	Model 2	Model 3		Model 4	
				Mean						Means (P-value)			
				Median						Medians (P-value)			
Variable				St Dev.									
Volatility	0.0196	0.0382	0.0167	0.0367	0.0383	0.0346	0.0361	(<.0001)***	(0.0007)***	(0.5635)	(<.0001)***	(0.5873)	(<.0001)***
	0.0150	0.0300	0.0132	0.0342	0.0300	0.0357	0.0342	(<.0001)***	(<.0001)***	(0.7)	(<.0001)***	(0.4321)	(<.0001)***
	0.0173	0.0352	0.0156	0.0170	0.0353	0.0127	0.0157						
Stock_ret	0.0010	0.0048	0.0008	0.0022	0.0048	0.0007	0.0018	(<.0001)***	(0.2119)	(0.0627)*	(0.2731)	(0.0036)***	(<.0001)***
	0.0010	0.0043	0.0008	0.0020	0.0044	0.0013	0.0018	(<.0001)***	(0.2103)	(0.089)*	(0.2546)	(0.0122)**	(<.0001)***
	0.0027	0.0063	0.0025	0.0039	0.0063	0.0035	0.0038						
YSIPO	24.22	12.55	24.53	23.07	12.52	15.25	21.33	(<.0001)***	(0.6648)	(0.3996)	(0.2725)	(0.0029)***	(<.0001)***
	24.00	11.00	25.00	22.50	11.00	15.00	21.50	(<.0001)***	(0.4445)	(0.2451)	(0.1472)	(0.0001)***	(<.0001)***
	9.8962	6.6693	9.5708	11.3576	6.6801	5.5603	10.7375						
Bubble	0.2680	0.4223	0.2651	0.2857	0.4253	0.0000	0.2105	(0.002)***	(0.8797)	(<.0001)***	(0.6167)	(0.0406)**	(0.0027)***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	(0.0037)***	(0.8724)	(0.0552)*	(0.6244)	(0.0614)*	(0.005)***
	0.4452	0.4943	0.4440	0.4688	0.4947	0.0000	0.4189						
Post_Bubble	0.4330	0.3795	0.4217	0.5000	0.3793	0.4000	0.4737	(0.3216)	(0.6059)	(0.9369)	(0.6917)	(0.438)	(0.4633)
	0.0000	0.0000	0.0000	0.5000	0.0000	0.0000	0.0000	(0.3105)	(0.5863)	(0.9244)	(0.6812)	(0.4038)	(0.4533)
	0.4981	0.4856	0.4968	0.5189	0.4856	0.5477	0.5130						

Table 6 (continued)

Panel C	Non-Tech Sub-Sample							Equality Tests					
	(1) Debt-like security N=266	(2) Equity-like security N=609	(3) Debt N=253	(4) Debt-like convertible N=13	(5) Equity N=601	(6) Equity-like convertible N=8	(7) Convertible N=21	(1) vs. (2) Model 1	(3) vs. (4) Model 2	(5) vs. (6) Model 3	(3) vs. (7)	(5) vs. (7) Model 4	(3) vs. (5)
Variable				Mean Median St Dev.						Means (P-value) Medians (P-value)			
consecutive_issues	0.0225	0.0316	0.0231	0.0000	0.0319	0.0000	0.0000	(0.2344)	(0.0003)***	(<.0001)***	(0.0003)***	(<.0001)***	(0.2646)
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	(0.2683)	(0.5387)	(0.5299)	(0.4162)	(0.4175)	(0.2976)
	0.1484	0.1750	0.1505	0.0000	0.1757	0.0000	0.0000						
Mkt_Book	2.9968	2.5390	3.0111	2.4937	2.5374	2.7285	2.5944	(0.0015)***	(0.512)	(0.863)	(0.5161)	(0.9285)	(0.0011)***
	2.2031	1.5387	2.2169	1.5760	1.5409	1.0011	1.5151	(<.0001)***	(0.104)	(0.7285)	(0.0287)**	(0.4173)	(<.0001)***
	2.7881	3.2937	2.7819	3.0486	3.2912	3.7367	3.2963						
CF_TA*positive dummy	0.0738	0.0617	0.0743	0.0591	0.0621	0.0402	0.0522	(0.0056)***	(0.2994)	(0.1409)	(0.0459)**	(0.3455)	(0.0062)***
	0.0688	0.0376	0.0695	0.0515	0.0386	0.0358	0.0379	(<.0001)***	(0.526)	(0.8102)	(0.2183)	(0.2652)	(<.0001)***
	0.0693	0.0826	0.0699	0.0514	0.0829	0.0369	0.0467						
CF_TA*negative dummy	-0.0031	-0.0922	0.0000	-0.0906	-0.0930	-0.0386	-0.0717	(<.0001)***	(0.0832)*	(0.2069)	(0.0448)**	(0.543)	(<.0001)***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	(<.0001)***	(<.0001)***	(0.4778)	(<.0001)***	(0.2461)	(<.0001)***
	0.0365	0.2318	0.0000	0.1807	0.2329	0.1093	0.1576						
Leverage	0.2455	0.2432	0.2430	0.3284	0.2416	0.4507	0.3763	(0.8227)	(0.2528)	(0.0257)**	(0.0204)**	(0.0195)**	(0.8884)
	0.2289	0.1901	0.2285	0.3131	0.1882	0.3840	0.3501	(<.0001)***	(0.2989)	(0.0082)**	(0.0083)***	(<.0001)***	(<.0001)***
	0.1447	0.2602	0.1391	0.2662	0.2598	0.2293	0.2544						
Tax_Shield	0.0089	0.0045	0.0090	0.0053	0.0045	0.0008	0.0035	(<.0001)***	(0.1833)	(0.087)*	(0.0062)***	(0.595)	(<.0001)***
	0.0077	0.0014	0.0079	0.0036	0.0014	0.0006	0.0029	(<.0001)***	(0.0245)**	(0.3054)	(0.0001)***	(0.7758)	(<.0001)***
	0.0075	0.0192	0.0074	0.0098	0.0192	0.0056	0.0086						
Firm_size	8.6519	5.4820	8.6847	7.5651	5.4707	6.9174	7.3116	(<.0001)***	(0.0936)*	(0.0019)***	(0.0023)***	(0.0001)***	(<.0001)***
	8.6404	5.5200	8.7003	7.9058	5.5106	6.5504	7.6362	(<.0001)***	(0.0114)**	(0.0043)***	(<.0001)***	(<.0001)***	(<.0001)***
	1.4013	1.6655	1.3553	2.3073	1.6652	0.9626	1.8940						
Relative_issue_size	0.1572	0.4243	0.1555	0.2159	0.4256	0.2721	0.2400	(<.0001)***	(0.117)	(0.0141)**	(0.0108)**	(<.0001)***	(<.0001)***
	0.0873	0.2361	0.0862	0.2085	0.2361	0.2284	0.2130	(<.0001)***	(0.0082)	(0.9518)	(<.0001)***	(0.9735)	(<.0001)***
	0.1789	0.4969	0.1797	0.1429	0.4985	0.1808	0.1596						

Table 6 (continued)

Panel C	Non-Tech Sub-Sample							Equality Tests					
	(1) Debt-like security N=266	(2) Equity-like security N=609	(3) Debt N=253	(4) Debt-like convertible N=13	(5) Equity N=601	(6) Equity-like convertible N=8	(7) Convertible N=21	(1) vs. (2) Model 1	(3) vs. (4) Model 2	(5) vs. (6) Model 3	(3) vs. (7)	(5) vs. (7) Model 4	(3) vs. (5)
Variable				Mean Median St Dev.						Means (P-value) Medians (P-value)			
Volatility	0.0158	0.0255	0.0153	0.0343	0.0255	0.0297	0.0323	(<.0001)***	(0.0014)***	(0.2339)	(<.0001)***	(0.0398)**	(<.0001)***
	0.0111	0.0193	0.0105	0.0325	0.0190	0.0266	0.0283	(<.0001)***	(<.0001)***	(0.07)*	(<.0001)***	(0.8527)	(<.0001)***
	0.0149	0.0274	0.0144	0.0195	0.0275	0.0115	0.0164						
Stock_ret	0.0006	0.0032	0.0006	0.0034	0.0032	0.0009	0.0023	(<.0001)***	(0.0018)***	(0.0379)**	(0.0122)**	(0.1539)	(<.0001)***
	0.0007	0.0029	0.0006	0.0026	0.0029	0.0005	0.0024	(<.0001)***	(<.0001)***	(0.0518)*	(0.0028)***	(0.0105)**	(<.0001)***
	0.0021	0.0055	0.0021	0.0030	0.0055	0.0035	0.0034						
YSIPO	24.89	12.48	25.21	17.40	12.46	14.27	16.08	(<.0001)***	(0.0057)***	(0.2383)	(<.0001)***	(0.0252)**	(<.0001)***
	26.00	11.00	26.00	13.00	11.00	12.00	12.50	(<.0001)***	(0.0024)***	(0.1504)	(<.0001)***	(0.0069)***	(<.0001)***
	9.4537	7.2551	9.3432	9.2102	7.2783	4.7559	7.6833						
Bubble	0.2958	0.2219	0.2972	0.2500	0.2210	0.3333	0.2857	(0.0007)***	(0.6833)	(0.4472)	(0.8987)	(0.4664)	(0.0006)***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	(0.0004)***	(0.6839)	(0.3512)	(0.8972)	(0.1426)	(0.0003)***
	0.4568	0.4157	0.4574	0.4472	0.4151	0.4924	0.4600						
Post_Bubble	0.3945	0.5353	0.3879	0.6250	0.5363	0.4167	0.5357	(<.0001)***	(0.0799)*	(0.4395)	(0.1427)	(0.9955)	(<.0001)***
	0.0000	1.0000	0.0000	1.0000	1.0000	0.0000	1.0000	(<.0001)***	(0.0559)*	(0.4082)	0.1187)	(0.0957)*	(<.0001)***
	0.4892	0.4989	0.4877	0.5000	0.4989	0.5149	0.5079						

Table 7 Binary regressions: debt-like securities vs. equity-like securities

This table reports results for a binary regression of Model 1, debt-like securities vs. equity-like securities from 1997 to 2007 as well as two sub-sample based on high-tech issues and non-tech issues. The dependent variable is the security type, and is assigned a value of 1 for equity-like securities; 0 for otherwise. Definitions for all variables are given in Table 5. The percentage of concordant, the sample size and the pseudo R-squares are reported in the last three rows. ***, **, and * indicates statistical significance at the 1 percent, 5 percent, and 10 percent level, respectively.

Panel A		(1)			(2)		
		Full	High-tech	Non-tech	Full	High-tech	Non-tech
		Coefficient	*Coefficient*	*Coefficient*	*Coefficient*	*Coefficient*	*Coefficient*
Independent variables	Expected sign	(P value)	(P value)	(P value)	(P value)	(P value)	(P value)
Intercept		11.5543***	15.3036***	11.6215***	11.9894***	16.0185***	11.9823***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
consecutive_issues		0.7426	-1.3704	1.2679**	0.7462	-1.355	1.2619**
		(0.1318)	(0.1434)	(0.0366)	(0.1327)	(0.1535)	(0.0378)
Mkt_Book		0.0364	0.1267	0.0406	0.0375	0.1241	0.0394
		(0.2169)	(0.1785)	(0.2264)	(0.2115)	(0.1877)	(0.2485)
CF_TA*positive dummy		-1.8145**	0.7276	-4.3258***	-1.7966**	0.6561	-4.2945***
		(0.0151)	(0.5175)	(0.0018)	(0.016)	(0.5611)	(0.002)
CF_TA*negative dummy		0.7883	2.054**	0.7076	0.6707	2.0623**	0.5372
		(0.3402)	(0.0321)	(0.5466)	(0.4237)	(0.0318)	(0.6484)
ROA*positive dummy							
ROA*negative dummy							
Leverage	+	-0.4053	-2.4063***	-0.0906	-0.4513	-2.3463***	-0.1042
		(0.3776)	(0.0056)	(0.8639)	(0.3276)	(0.0055)	(0.8454)
Tax_Shield	-	-14.1443**	-36.1531	-10.3491	-13.9173**	-37.2308	-10.3297
		(0.0191)	(0.1175)	(0.1515)	(0.0223)	(0.1096)	(0.1495)
Firm_size		-1.1204***	-1.2407***	-1.1563***	-1.1122***	-1.2351***	-1.1601***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
Relative_issue_size	-	0.6285*	0.7562	0.5189			
		(0.0888)	(0.3036)	(0.2046)			
LN_RIS					0.1681	0.231	0.1028
					(0.1071)	(0.3627)	(0.3847)
Volatility	+	3.7723	2.6219	5.0282	4.0024	3.5086	5.1163
		(0.3953)	(0.7405)	(0.358)	(0.3687)	(0.6545)	(0.3508)
Stock_ret	+	166***	351.9***	149.7***	165.8***	345.6***	150.5***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
YSIPO		-0.0986***	-0.2017***	-0.0877***	-0.098***	-0.1995***	-0.0873***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
YSFounded							
High_tech		0.1341			0.1226		
		(0.5596)			(0.5941)		
Bubble		0.7996***	0.1355	0.8489***	0.8102***	0.2263	0.8558***
		(0.0013)	(0.8251)	(0.0034)	(0.0011)	(0.7098)	(0.0032)
Post_Bubble		0.5594*	-0.3654	0.7462**	0.5495*	-0.398	0.7461**
		(0.0511)	(0.6031)	(0.0239)	(0.0559)	(0.5745)	(0.0244)
Mkt_ret	+	-0.2501	-6.2778	0.3104	-0.2348	-5.9626**	0.3106
		(0.8069)	(0.0173)	(0.7916)	(0.819)	(0.0226)	(0.7918)
TB_yield	+	-36.3146***	-38.5589	-38.0228***	-37.2842***	-43.5039	-38.6587***
		(0.0017)	(0.1642)	(0.0051)	(0.0013)	(0.1227)	(0.0045)
Leading_indicator		-0.3479***	-0.221	-0.2113	-0.3566***	-0.2381	-0.209
		(0.0026)	(0.1515)	(0.2243)	(0.0022)	(0.1206)	(0.2318)
Concordant (%)		96.2	96.2	95.5	96.2	98.7	95.5
Pseudo R^2 (%)		62.7	75.4	60.3	62.6	75.4	60.3
# obs. debt-like		309	43	266	294	43	251
# obs. equity-like		848	239	609	848	235	613
# total obs.		1157	282	875	1142	274	868

Table 7 (continued)

Panel B		(3)			(4)		
		Full Coefficient	High-tech Coefficient	Non-tech Coefficient	Full Coefficient	High-tech Coefficient	Non-tech Coefficient
Independent variables	Expected sign	(P value)	(P value)	(P value)	(P value)	(P value)	(P value)
Intercept		12.8449***	12.5958***	13.3664***	13.2404***	19.7338***	13.4687***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
consecutive_issues		2.653***	10.7231	2.663***	0.7108	2.8554	1.132*
		(0.0005)	(0.9744)	(0.0016)	(0.1968)	(0.1727)	(0.0833)
Mkt_Book		0.0254	-0.0784	0.024	0.1436***	0.0184	0.1552***
		(0.4121)	(0.2707)	(0.5231)	(<.0001)	(0.8479)	(0.0002)
CF_TA*positive dummy		-0.7202	-0.4432	-0.9637			
		(0.3941)	(0.6153)	(0.4599)			
CF_TA*negative dummy		1.005	1.0037	1.0893			
		(0.2413)	(0.3485)	(0.378)			
ROA*positive dummy					-0.1259***	-0.1813**	-0.1298***
					(<.0001)	(0.0118)	(<.0001)
ROA*negative dummy					0.0178	0.1847**	-0.0332
					(0.7746)	(0.0386)	(0.7083)
Leverage	+	-0.0863	-0.93	0.1183	-0.6369	-0.4845	-0.618
		(0.8228)	(0.1289)	(0.8155)	(0.2018)	(0.6797)	(0.2886)
Tax_Shield	-	-39.3132***	-10.2999	-42.7329***	4.2593	49.8611	3.8702
		(<.0001)	(0.5438)	(<.0001)	(0.6062)	(0.1319)	(0.6536)
Firm_size		-1.4305***	-1.338***	-1.4857***	-1.2553***	-1.5166***	-1.2789***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
Relative_issue_size	-	0.1181	-0.0167	0.1531	0.4146	0.6802**	0.1546
		(0.6698)	(0.9784)	(0.6485)	(0.2365)	(0.0385)	(0.1761)
LN_RIS							
Volatility	+	4.2173	3.6942	5.6669	9.6614*	-10.9062	14.0907**
		(0.3023)	(0.5856)	(0.2748)	(0.0743)	(0.2995)	(0.0288)
Stock_ret	+	207.7***	245.5***	194.7***	212.6***	285.3***	172.1***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
YSIPO					-0.0883***	-0.1714***	-0.0798***
					(<.0001)	(<.0001)	(<.0001)
YSFounded		-0.0163***	-0.0423***	-0.0135***			
		(<.0001)	(<.0001)	(0.0001)			
High_tech		0.5598***			-0.4884**		
		(0.0084)			(0.0442)		
Bubble		0.5202*	1.1853*	0.3675	0.6098**	1.7374***	0.4156
		(0.0562)	(0.0694)	(0.2486)	(0.0119)	(0.0082)	(0.1303)
Post_Bubble		0.5375*	0.6138	0.5473	0.2439	-1.6526**	0.3754
		(0.0661)	(0.3528)	(0.1157)	(0.3824)	(0.0333)	(0.2317)
Mkt_ret	+	0.225	0.2968	0.5842	-0.0303	2.8207	0.3286
		(0.8347)	(0.8882)	(0.6558)	(0.9765)	(0.3448)	(0.7771)
TB_yield	+	-36.7742***	-12.371	-42.7247***	-45.0057***	-64.3919**	-43.4511***
		(0.0008)	(0.5332)	(0.0017)	(0.0001)	(0.0438)	(0.0013)
Leading_indicator		-0.8162***	-1.1388***	-0.3195	-0.4896***	-1.3102***	-0.1113
		(<.0001)	(<.0001)	(0.1145)	(0.0004)	(<.0001)	(0.5446)
Concordant (%)		96.1	98.4	95.4	96.1	99	95.4
Pseudo R^2 (%)		61.4	70.4	59.1	62.6	80.4	60
# obs. debt-like		254	42	212	358	51	307
# obs. equity-like		937	311	626	739	192	547
# total obs.		1191	353	838	1097	243	854

Table 8 Binary regressions: debt vs. debt-like convertibles

This table reports results for a binary regression of Model 2, debt vs. debt-like convertibles from 1997 to 2007 as well as two sub-sample based on high-tech issues and non-tech issues. The dependent variable is the security type, and is assigned a value of 1 for debt-like convertibles; 0 for otherwise. Definitions for all variables are given in Table 5. The percentage of concordant, the sample size and the pseudo R-squares are reported in the last three rows. ***, **, and * indicates statistical significance at the 1 percent, 5 percent, and 10 percent level, respectively.

Panel A		(1)			(2)		
		Full Coefficient	High-tech Coefficient	Non-tech Coefficient	Full Coefficient	High-tech Coefficient	Non-tech Coefficient
Independent variables	Expected sign	(P value)	(P value)	(P value)	(P value)	(P value)	(P value)
Intercept		-20.5924	-12.6892	-27.728***	-22.9238	-14.2861	-30.0959***
		(0.8243)	(0.924)	(<.0001)	(0.8096)	(0.9328)	(<.0001)
consecutive_issues		-11.3393	-7.604	-9.6557	-10.9522	-4.0674	-10.0603
		(0.9584)	(0.9711)	(0.4937)	(0.9636)	(0.9869)	(0.5166)
Mkt_Book		-0.2668**	1.4284	-0.8987***	-0.146	0.3209	-0.8785***
		(0.0166)	(0.262)	(0.0001)	(0.1583)	(0.564)	(0.0003)
CF_TA*positive dummy		6.2815**	7.146	7.9865**	3.3064	13.5191	6.3925*
		(0.0357)	(0.6533)	(0.0194)	(0.2367)	(0.3554)	(0.0509)
CF_TA*negative dummy		-24.8227	19.2607	-67.5166	-22.7506	-9.1909	-68.5106
		(0.1175)	(0.4382)	(0.9966)	(0.1147)	(0.7483)	(0.9968)
ROA*positive dummy							
ROA*negative dummy							
Leverage	+	5.6921***	13.7317	7.7668***	4.2322***	-0.6763	7.4798***
		(<.0001)	(0.2446)	(<.0001)	(<.0001)	(0.8874)	(<.0001)
Tax_Shield	-	-25.7378	-260.6	76.2468**	-9.8575	-265.5	95.5376***
		(0.3789)	(0.2147)	(0.0259)	(0.73)	(0.1341)	(0.0041)
Firm_size		-0.1149	-2.1611	-0.1077	0.1471	-0.6101	0.0411
		(0.4429)	(0.1342)	(0.4943)	(0.3463)	(0.4373)	(0.8038)
Relative_issue_size	-	-5.6614***	-22.6094	-2.7247			
		(0.0004)	(0.1808)	(0.122)			
LN_RIS					0.0337	0.4312	0.1213
					(0.9003)	(0.7409)	(0.6598)
Volatility	+	26.9857**	153.7	27.1842**	21.6403*	79.9931	27.5371**
		(0.0151)	(0.1744)	(0.0289)	(0.0538)	(0.2893)	(0.0318)
Stock_ret	+	356***	494.5	432.6***	350.6***	392.4	404***
		(0.0006)	(0.2282)	(0.0002)	(0.0007)	(0.2439)	(0.0006)
YSIPO		-0.0222	-0.0182	-0.0531**	-0.0285	0.0904	-0.0645***
		(0.2538)	(0.8523)	(0.0103)	(0.1388)	(0.3929)	(0.0017)
YSFounded							
High_tech		2.062***			1.6959***		
		(<.0001)			(<.0001)		
Bubble		9.9022	6.3873	5.3707	10.3606	7.3665	5.9335
		(0.915)	(0.9616)	(0.3342)	(0.9133)	(0.9653)	(0.2912)
Post_Bubble		12.5224	13.2372	10.5942*	12.7296	10.0006	11.0603*
		(0.8926)	(0.9206)	(0.0586)	(0.8935)	(0.9529)	(0.0509)
Mkt_ret	+	8.8258**	-15.4747	20.0215***	6.8329**	-3.4703	18.3201***
		(0.0118)	(0.362)	(0.0005)	(0.038)	(0.7619)	(0.0019)
TB_yield	+	110.8***	280.5	291.8***	104.3***	108.7	308.5***
		(0.0004)	(0.1491)	(<.0001)	(0.0007)	(0.3211)	(<.0001)
Leading_indicator		1.211***	0.7615	2.2312***	1.2082***	0.0139	2.4404***
		(<.0001)	(0.2975)	(<.0001)	(<.0001)	(0.9854)	(<.0001)
Concordant (%)		93.3	93.3	97.4	92.9	91.6	92.1
Pseudo R^2 (%)		61.8	58.8	71.7	59.8	54.5	71.4
# obs. debt		281	32	249	281	32	249
# obs. debt-like cvt		24	10	14	24	10	14
# total obs.		305	42	263	305	42	263

Table 8 (continued)

Panel B		(3)			(4)		
		Full Coefficient	High-tech Coefficient	Non-tech Coefficient	Full Coefficient	High-tech Coefficient	Non-tech Coefficient
Independent variables	Expected sign	(P value)	(P value)	(P value)	(P value)	(P value)	(P value)
Intercept		-9.7099	110.5*	-15.253	-20.9304	39.002***	-37.0363
		(0.9026)	(0.071)	(0.6637)	(0.7979)	(<.0001)	(0.4464)
consecutive_issues		-9.4776	0	-11.4689	-11.815	-34.5852***	-12.9642
		(0.9891)	.	(0.9759)	(0.9479)	(0.0043)	(0.9367)
Mkt_Book		-0.3055*	2.1747	-1.209***	-0.3842***	-5.0878***	-1.2631***
		(0.06)	(0.7038)	(<.0001)	(0.0027)	(0.0068)	(<.0001)
CF_TA*positive dummy		5.4614*	167.2	18.2086***			
		(0.0987)	(0.6899)	(<.0001)			
CF_TA*negative dummy		-23.0433	-276.2	-68.112			
		(0.4432)	(0.8029)	(0.9331)			
ROA*positive dummy					0.1167*	0.7428	0.2443***
					(0.0749)	(0.1544)	(0.0016)
ROA*negative dummy					-0.0443	20.7424***	-0.6165***
					(0.6677)	(<.0001	(<.0001)
Leverage	+	1.9738	-193.5***	6.1852***	4.8738***	186.9***	7.0196***
		(0.1338)	(<.0001)	(0.0003)	(<.0001)	(<.0001)	(<.0001)
Tax_Shield	-	-45.4017	-1388	42.1813	-6.942	844.1***	59.5402
		(0.1635)	(0.1974)	(0.2122)	(0.8424)	(<.0001)	(0.1256)
Firm_size		-0.9876***	-11.1062	-0.8334***	-0.2233	-14.0537***	-0.1649
		(<.0001)	(0.5953)	(0.001)	(0.1158)	(<.0001)	(0.3034)
Relative_issue_size	-	-5.0736***	288*	-7.1289***	-4.9054***	1.6524	-2.5719*
		(0.0004)	(0.0957)	(0.0002)	(0.0009)	(0.848)	(0.0841)
LN_RIS							
Volatility	+	49.5094***	-330.6	72.635***	24.6884**	187.8	15.0425
		(<.0001)	(0.429)	(<.0001)	(0.0312)	(0.1483)	(0.202)
Stock_ret	+	541***	2503.7	811.2***	344.3***	546.8	614.7***
		(<.0001)	(0.1734)	(<.0001)	(0.0001)	(0.6887)	(<.0001)
YSIPO					-0.0269	0.0781	-0.071***
					(0.1678)	(0.6399)	(0.0039)
YSFounded		0.00511	0.3889	0.0216**			
		(0.536)	(0.6293)	(0.0278)			
High_tech		1.5186***			1.87***		
		(0.0005)			(<.0001)		
Bubble		9.492	-5.603	6.6541	10.89	34.3869**	10.2065
		(0.9048)	(0.9464)	(0.8488)	(0.894)	(0.0215)	(0.8329)
Post_Bubble		10.6578	-61.0352	8.9718	13.2883	8.5302	17.5073
		(0.8931)	(0.6151)	(0.7972)	(0.8708)	(0.334)	(0.7175)
Mkt_ret	+	2.3454	32.1172	7.1445*	9.4627***	-52.6556*	25.8625***
		(0.4678)	(0.5689)	(0.0695)	(0.0075)	(0.0824)	(<.0001)
TB_yield	+	58.085*	-1024.7	123.3***	125.1***	459.5	354.2***
		(0.0613)	(0.6638)	(0.0044)	(<.0001)	(0.2507)	(<.0001)
Leading_indicator		0.6991***	-9.9146**	1.0257***	1.2484***	-5.4243***	2.1037***
		(<.0001)	(0.013)	(<.0001)	(<.0001)	(<.0001)	(<.0001)
Concordant (%)		91.1	97.2	97.6	92.2	91.9	97
Pseudo R^2 (%)		56.8	60.5	66.5	56.6	59.2	63.4
# obs. debt		237	36	203	312	36	276
# obs. debt-like cvt		17	6	9	24	11	13
# total obs.		254	42	212	336	47	289

Table 9 Binary regressions: equity vs. equity-like convertibles

This table reports results for a binary regression of Model 3, equity vs. equity-like convertibles from 1997 to 2007 as well as the sub-sample based on non-tech issues, the high-tech issues results are provided in Appendix. The dependent variable is the security type, and is assigned a value of 1 for equity-like convertibles; 0 for otherwise. Definitions for all variables are given in Table 5. The percentage of concordant, the sample size and the pseudo R-squares are reported in the last three rows. ***, **, and * indicates statistical significance at the 1 percent, 5 percent, and 10 percent level, respectively.

Panel A		(1)		(2)	
		Full Coefficient	Non-tech Coefficient	Full Coefficient	Non-tech Coefficient
Independent variables	Expected sign	(P value)	(P value)	(P value)	(P value)
Intercept		-22.7611	-21.1256	-23.3781	-21.6992
		(0.5559)	(0.6302)	(0.5311)	(0.6146)
consecutive_issues		-10.516	-9.9944	-10.2266	-9.9206
		(0.9038)	(0.9171)	(0.9089)	(0.9189)
Mkt_Book		-0.027	-0.0345	-0.0103	-0.0198
		(0.4097)	(0.3564)	(0.7512)	(0.5977)
CF_TA*positive dummy		-5.6641**	-10.9501***	-5.4641**	-10.7241***
		(0.0108)	(0.0002)	(0.0151)	(0.0003)
CF_TA*negative dummy		-0.716	-0.726	-0.5281	-0.3999
		(0.3022)	(0.3884)	(0.4395)	(0.6253)
ROA*positive dummy					
ROA*negative dummy					
Leverage	-	2.8416***	3.005***	2.6811***	2.8777***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)
Tax_Shield	+	7.0881	4.9683	5.3878	3.1189
		(0.2932)	(0.4668)	(0.4414)	(0.6548)
Firm_size		0.5313***	0.4919**	0.6057***	0.554***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)
Relative_issue_size	+	-1.2423**	-1.3591**		
		(0.0183)	(0.0244)		
LN_RIS				-0.0118	-0.0698
				(0.9373)	(0.6857)
Volatility	-	4.5109	3.285	5.4624*	4.1694
		(0.1411)	(0.3675)	(0.0697)	(0.2472)
Stock_ret	-	-111.2***	-77.1742**	-125.2***	-89.3263***
		(0.0002)	(0.0248)	(<.0001)	(0.0086)
YSIPO		0.00679	0.0115	0.00672	0.0108
		(0.6284)	(0.4903)	(0.6378)	(0.5253)
YSFounded					
High_tech		-0.6318*		-0.6368*	
		(0.0709)		(0.069)	
Bubble		9.5785	9.9767	9.5103	9.9328
		(0.8041)	(0.8201)	(0.7988)	(0.8176)
Post_Bubble		10.5237	10.2665	10.3999	10.1561
		(0.7853)	(0.8149)	(0.7804)	(0.8136)
Mkt_ret	-	-6.5466***	-7.1658***	-6.6006***	-7.2113***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)
TB_yield	-	96.5901***	72.89***	93.3478***	67.7085***
		(<.0001)	(0.0008)	(<.0001)	(0.0016)
Leading_indicator		2.0713***	1.7473***	2.0825***	1.7592***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)
Concordant (%)		88	85.4	87.6	85.1
Pseudo R^2 (%)		49.7	40.1	49.2	39.3
# obs. equity		822	594	822	594
# obs. equity-like cvt		10	8	10	8
# total obs.		832	602	832	602

Table 9 (continued)

Panel B		(3)		(4)	
		Full Coefficient	Non-tech Coefficient	Full Coefficient	Non-tech Coefficient
Independent variables	Expected *sign*	(P value)	(P value)	(P value)	(P value)
Intercept		-20.8038	-18.1786	-21.7229	-21.1356
		(0.5159)	(0.6365)	(0.6935)	(0.6588)
consecutive_issues		-9.7594	-9.8337	-10.3986	-9.8597
		(0.8792)	(0.8957)	(0.923)	(0.918)
Mkt_Book		0.0678**	0.0497	-0.01	-0.01
		(0.0126)	(0.125)	(0.7719)	(0.8034)
CF_TA*positive dummy		-2.5467	-7.7264***		
		(0.1401)	(0.0062)		
CF_TA*negative dummy		-0.556	-0.4152		
		(0.3903)	(0.6439)		
ROA*positive dummy				-0.0853**	-0.0853***
				(0.0256)	(0.0552)
ROA*negative dummy				-0.1389***	-0.1389***
				(0.0003)	(0.0019)
Leverage	-	1.638***	2.1763***	2.623***	2.623***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)
Tax_Shield	+	-2.2946	-9.4621	1.9698	1.9698
		(0.7989)	(0.2613)	(0.7887)	(0.818)
Firm_size		0.6194***	0.4862***	0.4408***	0.4408***
		(<.0001)	(<.0001)	(<.0001)	(0.0005)
Relative_issue_size	+	-1.1413**	-1.6641***	-1.1771**	-1.1771*
		(0.0149)	(0.0074)	(0.039)	(0.0763)
LN_RIS					
Volatility	-	-3.3407	-5.0791	1.6811	1.6811
		(0.3543)	(0.2951)	(0.6146)	(0.6654)
Stock_ret	-	-243.5***	-230.5***	-91.9208***	-91.9208**
		(<.0001)	(<.0001)	(0.0043)	(0.0141)
YSIPO				0.002	0.002
				(0.8851)	(0.9012)
YSFounded		-0.00877*	-0.00031		
		(0.0814)	(0.9566)		
High_tech		-1.0695***		-10.1377	
		(0.001)		(0.7728)	
Bubble		9.2331	9.646	9.6415	9.0542
		(0.773)	(0.8019)	(0.8611)	(0.8499)
Post_Bubble		9.9056	9.4851	10.4585	9.8712
		(0.7569)	(0.8051)	(0.8495)	(0.8365)
Mkt_ret	-	1.6353	0.8087	-8.2067***	-8.2067***
		(0.3496)	(0.7062)	(<.0001)	(<.0001)
TB_yield	-	56.5346***	25.2185	87.2741***	87.2741***
		(0.0005)	(0.2052)	(<.0001)	(0.0001)
Leading_indicator		2.1756***	1.6579***	1.7041***	1.7041***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)
Concordant (%)		82.1	78.2	86.3	86.1
Pseudo R^2 (%)		40.7	36.5	43.7	40.4
# obs. equity		927	619	950	686
# obs. equity-like cvt		6	5	11	9
# total obs.		933	624	961	695

Table 10 Multi-nominal regressions: convertibles vs. debt vs. equity

This table reports results for a multi-nominal regression of Model 4, convertibles vs. debt vs. equity from 1997 to 2007 as well as two sub-sample based on high-tech issues and non-tech issues. The dependent variable is the security type, and is assigned a value of 0 for convertibles, 1 for debt, 2 for equity. Definitions for all variables are given in Table 5. The sample size and the pseudo R-squares are reported in the last three rows. ***, **, and * indicates statistical significance at the 1 percent, 5 percent, and 10 percent level, respectively.

Panel A			(1)				
		cvt vs. debt			cvt vs. equity		
Independent variables	Expected sign	Full Coefficient (P value)	High-tech Coefficient (P value)	Non-tech Coefficient (P value)	Expected sign	Full Coefficient (P value)	High-tech Coefficient (P value)	Non-tech Coefficient (P value)
Intercept		16.3238	12.5433	16.4046		27.6967	32.0006	27.5587
		(0.8294)	(0.8567)	(0.8447)		(0.7147)	(0.645)	(0.7421)
consecutive_issues		11.478	11.5904	10.5657		12.1094	9.0001	11.7984
		(0.9235)	(0.9345)	(0.9479)		(0.9193)	(0.9491)	(0.9418)
Mkt_Book		0.0321	-0.0371	0.0241		0.0826**	0.0689	0.084*
		(0.4715)	(0.7737)	(0.6402)		(0.0438)	(0.5389)	(0.0779)
CF_TA*positive dummy		1.6453	-1.065	6.1011**		0.154	0.2082	1.819
		(0.4354)	(0.4802)	(0.0384)		(0.9413)	(0.8607)	(0.5299)
CF_TA*negative dummy		32.8786	3.2485	96.0617		2.6991	0.6407	3.2718***
		(0.73)	(0.4414)	(0.4697)		(0.113)	(0.6711)	(0.0001)
ROA*positive dummy								
ROA*negative dummy								
Leverage	-	-3.3679***	-1.5902	-3.5998***	+	-3.0575***	-2.4594*	-3.1113***
		(<.0001)	(0.3122)	(<.0001)		(<.0001)	(0.0501)	(<.0001)
Tax_Shield	+	-1.329	61.8119**	-6.1207	-	-16.6493*	-37.7109	-15.9632
		(0.894)	(0.0408)	(0.6149)		(0.0576)	(0.1823)	(0.129)
Firm_size		0.4743***	0.7002***	0.5081***		-0.7566***	-1.1275***	-0.7139***
		(<.0001)	(0.0002)	(<.0001)		(<.0001)	(<.0001)	(<.0001)
Relative_issue_size	+	2.1008***	2.4763	2.9016***	-	2.3194***	1.6953	3.0647***
		(0.0045)	(0.1025)	(0.0019)		(0.0008)	(0.2236)	(0.0005)
LN_RIS	+							
Volatility	-	-21.4901***	-16.5643	-26.5153***	+	-11.6769***	-14.9219	-12.3968***
		(<.0001)	(0.172)	(<.0001)		(0.0016)	(0.1287)	(0.0023)
Stock_ret	-	-162.3***	12.9301	-218.2***	+	58.5655*	420.2***	0.1401
		(<.0001)	(0.8662)	(<.0001)		(0.0783)	(<.0001)	(0.9973)
YSIPO		0.0498***	0.0416*	0.0621***		-0.0483***	-0.1692***	-0.0306*
		(0.0002)	(0.076)	(0.0002)		(0.0002)	(<.0001)	(0.0581)
YSFounded								
High_tech		-0.7521**				-0.2851		
		(0.0251)				(0.3507)		
Bubble		-10.7912	-10.4721	-10.954		-9.9407	-9.1779	-10.1014
		(0.8867)	(0.8801)	(0.8959)		(0.8956)	(0.8948)	(0.904)
Post_Bubble		-13.3593	-12.7714	-13.5137		-12.5168	-13.3442	-12.4702
		(0.86)	(0.854)	(0.8718)		(0.8688)	(0.8475)	(0.8816)
Mkt_ret	-	-2.4244	1.1572	-1.5747	+	-1.974	-2.2546	-0.8056
		(0.2312)	(0.7554)	(0.5199)		(0.3161)	(0.5428)	(0.7335)
TB_yield	-	-108.5***	-125.1***	-118.1***	+	-134.2***	-150.3***	-144.8***
		(<.0001)	(0.0004)	(<.0001)		(<.0001)	(<.0001)	(<.0001)
Leading_indicator		-1.5946***	-1.0119***	-2.1893***		-1.5448***	-1.278***	-1.5006***
		(<.0001)	(<.0001)	(<.0001)		(<.0001)	(<.0001)	(<.0001)
Pseudo R^2 (%)		63.4	78.9	60.7				
# obs. Cvt		33	12	21				
# obs. Debt		286	33	253				
# obs. Equity		838	237	601				
# total obs.		1157	282	875				

Table 10 (continued)

Panel B			(2)				
		cvt vs. debt			cvt vs. equity		
		Full Coefficient	*High-tech* Coefficient	*Non-tech* Coefficient		*Full* Coefficient	*High-tech* Coefficient	*Non-tech* Coefficient
Independent variable	Expected sign	(P value)	(P value)	(P value)	Expected sign	(P value)	(P value)	(P value)
Intercept		18.2866	13.336	18.0324		29.7033	32.4843	29.0995
		(0.8709)	(0.8385)	(0.8189)		(0.7918)	(0.6196)	(0.7118)
consecutive_issues		11.7407	11.1833	10.5014		12.3509	8.7808	11.6717
		(0.9579)	(0.9353)	(0.9519)		(0.9557)	(0.9492)	(0.9466)
Mkt_Book		-0.0165	-0.0466	-0.0196		0.0454	0.0707	0.0496
		(0.7067)	(0.7183)	(0.6974)		(0.2608)	(0.5367)	(0.2796)
CF_TA*positive dummy		1.9888	-0.6057	6.0727**		0.4933	0.328	1.9205
		(0.3399)	(0.6889)	(0.0416)		(0.8112)	(0.7792)	(0.51)
CF_TA*negative dummy		34.0133	2.8997	92.1954		2.0461	0.7095	2.3571***
		(0.66)	(0.489)	(0.4803)		(0.34)	(0.6341)	(0.0075)
ROA*positive dummy								
ROA*negative dummy								
Leverage	-	-2.6765***	-0.311	-3.1562***	+	-2.5306***	-1.9657*	-2.8111***
		(<.0001)	(0.8278)	(<.0001)		(<.0001)	(0.0793)	(<.0001)
Tax_Shield	+	-0.5173	64.2469**	-6.7501	-	-14.3305*	-36.843	-14.5916
		(0.9577)	(0.0356)	(0.538)		(0.0751)	(0.198)	(0.0863)
Firm_size		0.3365***	0.6217***	0.3825***		-0.8387***	-1.1452***	-0.7854***
		(0.0015)	(0.0018)	(0.0033)		(<.0001)	(<.0001)	(<.0001)
Relative_issue_size	+							
LN_RIS	+	-0.2789*	0.1033	-0.2821	-	-0.0586	0.2391	-0.0902
		(0.09)	(0.7709)	(0.1451)		(0.7004)	(0.4717)	(0.6118)
Volatility	-	-22.2209***	-11.8484	-27.608***	+	-11.6421***	-13.245	-12.5318***
		(<.0001)	(0.3126)	(<.0001)		(0.0014)	(0.1651)	(0.0019)
Stock_ret	-	-119.7***	-4.972	-154.1***	+	100.7***	401.2***	62.3518
		(0.0025)	(0.9487)	(0.0014)		(0.0027)	(<.0001)	(0.1251)
YSIPO		0.0516***	0.0406*	0.0664***		-0.0453***	-0.1624***	-0.0253
		(0.0001)	(0.0864)	(<.0001)		(0.0006)	(<.0001)	(0.1246)
YSFounded								
High_tech		-0.701**				-0.2577		
		(0.0359)				(0.3905)		
Bubble		-11.9588	-10.2702	-11.8465		-11.1108	-8.9133	-10.9978
		(0.9154)	(0.8752)	(0.8804)		(0.9214)	(0.8916)	(0.8889)
Post_Bubble		-14.5401	-12.6149	-14.5007		-13.727	-13.131	-13.4731
		(0.8972)	(0.847)	(0.8539)		(0.9029)	(0.8408)	(0.8642)
Mkt_ret	-	-1.995	1.6563	-2.2511	+	-1.5745	-1.7824	-1.5348
		(0.3293)	(0.6483)	(0.376)		(0.4268)	(0.6232)	(0.5316)
TB_yield	-	-109.6***	-125.4***	-114.4***	+	-135.4***	-151.1***	-139.8***
		(<.0001)	(0.0004)	(<.0001)		(<.0001)	(<.0001)	(<.0001)
Leading_indicator		-1.5727***	-1.0013***	-2.1998***		-1.5083***	-1.3092***	-1.4429***
		(<.0001)	(<.0001)	(<.0001)		(<.0001)	(<.0001)	(<.0001)
Pseudo R^2 (%)		63.2	78.8	60.4				
# obs. Cvt		33	12	21				
# obs. Debt		286	33	253				
# obs. Equity		838	237	601				
# total obs.		1157	282	875				

Table 10 (continued)

Panel C				(3)			
		cvt vs. debt			cvt vs. equity		
Independent variables	Expected sign	Full Coefficient (P value)	High-tech Coefficient (P value)	Non-tech Coefficient (P value)	Expected sign	Full Coefficient (P value)	High-tech Coefficient (P value)	Non-tech Coefficient (P value)
Intercept		10.4911	7.5984	9.7747		24.4702	22.186	24.0909
		(0.9106)	(0.9211)	(0.9222)		(0.7934)	(0.7723)	(0.8097)
consecutive_issues		8.9709	2.4395	9.0616		11.8463	8.0761	11.7369
		(0.9636)	(0.9877)	(0.9678)		(0.9519)	(0.9544)	(0.9583)
Mkt_Book		-0.034	0.0735	-0.0161		0.0114	-0.054	0.0286
		(0.4514)	(0.4721)	(0.7633)		(0.7707)	(0.5491)	(0.5282)
CF_TA*positive dummy		0.9355	0.2857	3.2181		0.4751	-0.0993	2.4032
		(0.6168)	(0.8468)	(0.2317)		(0.7909)	(0.9343)	(0.3529)
CF_TA*negative dummy		33.3826	38.2302***	166.4		2.0173	0.3334	2.5872***
		(0.6)	(<.0001)	(0.4082)		(0.11)	(0.8309)	(0.0009)
ROA*positive dummy								
ROA*negative dummy								
Leverage	-	-0.8349	2.4543*	-1.7015***	+	-1.0916***	0.412	-1.4181***
		(0.1022)	(0.0523)	(0.0086)		(0.0096)	(0.7311)	(0.0057)
Tax_Shield	+	29.3845**	8.1851	33.7438*	-	-16.8224	-15.6926	-14.9369
		(0.0286)	(0.7394)	(0.0531)		(0.1702)	(0.43)	(0.3559)
Firm_size		0.9451***	1.0391***	0.9455***		-0.6992***	-0.7635***	-0.7175***
		(<.0001)	(<.0001)	(<.0001)		(<.0001)	(<.0001)	(<.0001)
Relative_issue_size	+	2.0299***	0.4603	3.0165***	-	1.727***	0.5838	2.6761***
		(0.0015)	(0.6663)	(0.0005)		(0.0045)	(0.5451)	(0.0013)
LN_RIS	+							
Volatility	-	-20.2182***	4.2134	-26.1336***	+	-7.6126**	-1.0274	-7.6876
		(0.0001)	(0.6961)	(<.0001)		(0.0352)	(0.9079)	(0.0699)
Stock_ret	-	-200.4***	-105	-245.1***	+	69.9131**	216.3***	27.8143
		(<.0001)	(0.1441)	(<.0001)		(0.0248)	(0.0004)	(0.4787)
YSIPO								
YSFounded		0.016**	-0.00717	0.0215***		-0.00092	-0.0358***	0.00573
		(0.0043)	(0.5138)	(0.0025)		(0.8659)	(0.0003)	(0.4102)
High_tech		-0.2713				0.3664		
		(0.4026)				(0.2053)		
Bubble		-11.7435	-11.5698	-11.5606		-11.0318	-8.7975	-11.1361
		(0.9)	(0.88)	(0.908)		(0.906)	(0.9086)	(0.9114)
Post_Bubble		-13.2833	-11.4628	-13.0119		-12.4456	-9.9121	-12.2445
		(0.887)	(0.8811)	(0.8965)		(0.894)	(0.8971)	(0.9026)
Mkt_ret	-	-5.344**	-5.602	-3.1981	+	-5.1929***	-4.5363	-2.6147
		(0.0105)	(0.1249)	(0.2055)		(0.0094)	(0.1948)	(0.2806)
TB_yield	-	-57.2515***	-57.5968*	-52.6502	+	-90.1766***	-56.6995*	-93.4246***
		(0.0037)	(0.0739)	(0.0324)		(<.0001)	(0.0676)	(<.0001)
Leading_indicator		-1.1682***	-0.9121***	-1.3346***		-1.4039***	-1.7322***	-1.1339***
		(<.0001)	(0.0002)	(<.0001)		(<.0001)	(<.0001)	(<.0001)
Pseudo R^2 (%)		61.5	72.8	58.9				
# obs. Cvt		23	7	16				
# obs. Debt		237	36	201				
# obs. Equity		936	311	625				
# total obs.		1196	354	842				

Table 10 (continued)

Panel D			(4)				
		cvt vs. debt			cvt vs. equity		
Independent variables	Expected sign	Full Coefficient (P value)	High-tech Coefficient (P value)	Non-tech Coefficient (P value)	Expected sign	Full Coefficient (P value)	High-tech Coefficient (P value)	Non-tech Coefficient (P value)
Intercept		16.5655	13.9315	17.915		29.3448	34.9227	30.5083
		(0.8467)	(0.8502)	(0.8707)		(0.7321)	(0.636)	(0.7816)
consecutive_issues		10.8196	14.1608	11.1684		11.389	10.01	12.2257
		(0.9472)	(0.952)	(0.963)		(0.9444)	(0.966)	(0.9595)
Mkt_Book		0.0112	0.1051	0.0474		0.1292**	0.114	0.1733**
		(0.8425)	(0.4717)	(0.5081)		(0.0161)	(0.3245)	(0.0112)
CF_TA*positive dummy								
CF_TA*negative dummy								
ROA*positive dummy		0.0316	-0.3764***	0.0485		-0.0872**	-0.3904***	-0.072
		(0.45)	(0.0008)	(0.4009)		(0.031)	(<.0001)	(0.2042)
ROA*negative dummy		0.0351	-1.1244***	0.2704***		0.0516	-0.6638**	0.2097***
		(0.6486)	(<.0001)	(0.0061)		(0.4222)	(0.0138)	(0.0053)
Leverage	-	-3.4023***	-10.6271***	-4.9396***	+	-3.7453***	-9.4023***	-5.0787***
		(<.0001)	(<.0001)	(<.0001)		(<.0001)	(<.0001)	(<.0001)
Tax_Shield	+	-6.8315	187.3***	-26.1639*	-	-1.7016	140***	-20.4591
		(0.5954)	(0.0013)	(0.0629)		(0.8838)	(0.001)	(0.1067)
Firm_size		0.3749***	1.2429***	0.2384*		-0.9168***	-0.92***	-1.0255***
		(0.0008)	(<.0001)	(0.0942)		(<.0001)	(<.0001)	(<.0001)
Relative_issue_size	+	1.5167**	5.9168**	1.3675	-	1.7445**	6.9602***	1.6658
		(0.046)	(0.016)	(0.1734)		(0.0167)	(0.0044)	(0.0891)
LN_RIS	+							
Volatility	-	-26.0635***	-50.2714***	-24.4584***	+	-11.4983**	-46.9696***	-8.2491
		(<.0001)	(0.0004)	(0.0008)		(0.0341)	(<.0001)	(0.1662)
Stock_ret	-	-131***	92.6195	-138.7**	+	90.4524**	381.6***	58.5443
		(0.0041)	(0.2774)	(0.0216)		(0.0321)	(<.0001)	(0.3032)
YSIPO		0.0484***	0.0971***	0.0678***				
		(0.001)	(0.0004)	(0.0005)				
						-0.0413***	-0.1472***	-0.0156
						(0.0049)	(<.0001)	(0.4183)
High_tech		-1.1044***				-1.0185***		
		(0.0011)				(0.0016)		
Bubble		-10.8279	-14.5866	-10.7282		-10.1805	-11.0245	-10.3332
		(0.8995)	(0.8432)	(0.9223)		(0.9054)	(0.8811)	(0.9252)
Post_Bubble		-12.8921	-15.8458	-12.6966		-12.3538	-15.4345	-12.1829
		(0.8804)	(0.8298)	(0.9081)		(0.8854)	(0.8342)	(0.9118)
Mkt_ret	-	-0.1389	0.8972	0.2666	+	0.4725	1.6383	1.2232
		(0.9444)	(0.8369)	(0.9078)		(0.8097)	(0.6813)	(0.5869)
TB_yield	-	-96.3728***	-153.6***	-97.2983***	+	-131.1***	-176.5***	-136***
		(<.0001)	(<.0001)	(0.0014)		(<.0001)	(<.0001)	(<.0001)
Leading_indicator		-1.5105***	-0.875**	-1.9331***		-1.5998***	-1.1508	-1.5635***
		(<.0001)	(0.0024)	(<.0001)		(<.0001)	(<.0001)	(<.0001)
Pseudo R^2 (%)		61	80.2	58.1				
# obs. Cvt		35	13	22				
# obs. Debt		334	40	294				
# obs. Equity		1006	282	724				
# total obs.		1375	335	1040				

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Appendix

This table reports results for a binary regression of Model 3, equity vs. equity-like convertibles for high-tech sub-sample from 1997 to 2007 and may be viewed as a set of complementary results for Table 9. The dependent variable is the security type, and is assigned a value of 1 for equity-like convertibles; 0 for otherwise. Definitions for all variables are given in Table 5. The percentage of concordant, the sample size and the pseudo R-squares are reported in the last three rows. ***, **, and * indicates statistical significance at the 1 percent, 5 percent, and 10 percent level, respectively.

		(1)	(2)	(3)	(4)
		High-tech Coefficient	High-tech Coefficient	High-tech Coefficient	High-tech Coefficient
Independent variables	Expected sign	(P value)	(P value)	(P value)	(P value)
Intercept		-16.5511***	-16.6311***	-12.8975***	-14.7243***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)
consecutive_issues		0.8717	0.835	0.6461	0.7589
		(0.2099)	(0.2203)	(0.5874)	(0.3986)
Mkt_Book		0.011	0.0141	-0.0377	-0.01335
		(0.7343)	(0.6631)	(0.254)	(0.4941)
CF_TA*positive dummy		0.1857	0.171	-0.53	
		(0.7452)	(0.766)	(0.3132)	
CF_TA*negative dummy		0.0382	0.0603	0.3641	
		(0.9454)	(0.9135)	(0.5175)	
ROA*positive dummy					-0.17215
					(0.5292)
ROA*negative dummy					0.20115
					(0.7314)
Leverage	-	-0.881	-0.8916	-1.2284***	-1.0547*
		(0.1265)	(0.1193)	(0.0049)	(0.0657)
Tax_Shield	+	16.4826*	17.2929*	25.1575**	20.82005*
		(0.0745)	(0.0607)	(0.0392)	(0.0568)
Firm_size		0.2232**	0.2322***	0.018	0.1206
		(0.0101)	(0.0073)	(0.8222)	(0.4161)
Relative_issue_size	+	-0.1408		-0.6936***	-0.4172
		(0.5524)		(0.0009)	(0.2766)
LN_RIS			-0.0218		
			(0.8519)		
Volatility	-	1.8082	1.9395	-1.5312	0.1385
		(0.5745)	(0.5448)	(0.6329)	(0.6037)
Stock_ret	-	-20.1489	-21.8034	-56.513**	-38.33095
		(0.342)	(0.3076)	(0.0111)	(0.1765)
YSIPO		-0.00409	-0.00575		-0.004275
		(0.807)	(0.7324)		(0.7521)
YSFounded				-0.00446	
				(0.6972)	
High_tech					
Bubble		0.4129	0.4066	0.00751	0.210205
		(0.2824)	(0.2894)	(0.9852)	(0.6338)
Post_Bubble		0.8322*	0.8197*	-0.7829	0.02465
		(0.0891)	(0.094)	(0.2523)	(0.1707)
Mkt_ret	-	-2.4795	-2.4299	-8.3042***	-5.39185***
		(0.1361)	(0.1423)	(<.0001)	(<.0001)
TB_yield	-	36.9503**	36.1851**	-12.6626	12.14385
		(0.0214)	(0.0239)	(0.6378)	(0.3296)
Leading_indicator		26.8775***	26.8705***	79.606***	53.24175***
		(<.0001)	(<.0001)	(<.0001)	(<.0001)
Concordant (%)		100	100	100	100
Pseudo R^2 (%)		95	94.3	93	90
# obs. equity		228	228	308	264
# obs. equity-like cvt		2	2	1	2
# total obs.		230	230	309	266

Notes: Explanation of High-Technology Industry Definition

AeA, stands for American Electronics Association as in the followings, uses 45 SIC codes to define the high-technology industry. We recognize that these 45 SIC codes do not comprehensively cover the entire high-tech industry as the structure of the SIC system is limited. In an effort to produce solid statistics, AeA's definition consists of SIC codes that fall into three broad categories -- high-tech manufacturing, communications services, and software and computer-related services. It does not include broad categories if the high-tech portion does not represent a clear majority. Also, AeA's definition does not include many "related" industries, such as biotechnology, engineering services, and research and testing services.

Other industry groups not covered in AeA's definition of the high-tech industry include wholesale and retail trade of high-tech goods. The biotechnology industry also is not included because current U.S. government statistics do not allow us clearly to identify which portion is "bio" and which is "tech." The matter is further complicated because there is no clear consensus on the definition of the biotechnology industry.

The U.S. government's SIC codes do not capture temporary high-tech workers, as the SIC codes place all temporary employees together under SIC 7363, help supply services. However, a study by the National Association of Temporary and Staffing Services found that on any given day in 1997, there were nearly 2.5 million people working as temporary employees. The study found that technical workers, which include computer programmers and computer systems analysts, comprised 14 percent of the temporary help industry payroll in 1997. However, this category also includes other

temporary workers, such as designers, editors, and illustrators. Present data allow us to assume only that there are tens of thousands of high-tech temporary workers nationally, but they are not included in our statistical analysis.

List of 45 SIC Codes

AeA uses 45 SIC codes that fall into three general groupings -- high-tech manufacturing, communications services, and software and computer-related services -- to define the U.S. high-technology industry

HIGH-TECH MANUFACTURING

Computers and Office Equipment
3571 Electronic Computers
3572 Computer Storage Devices
3575 Computer Terminals
3577 Computer Peripherals
3578 Calculating and Accounting Machines
3579 Office Machines

Consumer Electronics
3651 Household Audio and Video Equipment
3652 Phonographic Records and Prerecorded Tapes and Disks

Communications Equipment
3661 Telephone and Telegraph Apparatus
3663 Radio and TV Broadcast and Communications Equipment
3669 Other Communications Equipment

Electronic Components and Accessories
3671 Electron Tubes
3672 Printed Circuit Boards
3675 Electronic Capacitors
3676 Electronic Resistors
3677 Electronic Coils, Transformers, and Inductors
3678 Electronic Connectors
3679 Other Electronic Components

Semiconductors
3674 Semiconductors and Related Devices

Industrial Electronics
3821 Laboratory Apparatus
3822 Environmental Controls
3823 Process Control Instruments
3824 Fluid Meters and Counting Devices
3825 Instruments to Measure Electricity
3826 Laboratory Analytical Instruments
3829 Other Measuring and Controlling Devices

Photonics
3827 Optical Instruments and Lenses
3861 Photographic Equipment and Lenses

Defense Electronics
3812 Search and Navigation Systems, Instruments, and Equipment

Electromedical Equipment
3844 X-Ray Apparatus and Tubes and Related Irradiation Apparatus
3845 Electromedical and Electrotherapeutic Apparatus

COMMUNICATIONS SERVICES
4812 Radiotelephone Communications
4813 Telephone Communications
4822 Telegraph and Other Message Communications
4841 Cable and Other Pay Television Services
4899 Other Communications Services

SOFTWARE AND COMPUTER-RELATED SERVICES

Software Services
7371 Computer Programming Services
7372 Prepackaged Software
7373 Computer Integrated Systems Design

Data Processing and Information Services
7374 Computer Processing and Data Preparation
7375 Information Retrieval Services
7376 Computer Facilities Management Services

Rental, Maintenance, and Other Computer-Related Services
7377 Computer Rental and Leasing
7378 Computer Maintenance and Repair
7379 Other Computer-Related Services