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Corporate Debt Structure

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The Theory and Practice of Corporate Debt Structure

Executive Summary

This paper discusses the theory and practice of corporate debt structure, drawing on the results of a recent survey.

Theoretical Considerations

- Under perfect capital market assumptions, the structure of debt has no impact on the value of the firm
- In order for debt structure to matter, one or more of the following effects need to be obtained:
 - Reduction of taxes
 - Reduction of transaction costs
 - Provision of better information to the market
 - Reduction of agency costs
 - Improvement of access to capital markets
 - Reduction of distress costs
- Generally, volatile cashflows are costly because they increase expected tax costs and exacerbate information asymmetries
- Floating rate debt is generally cheaper than fixed rate debt but may lead to increased volatility
 - If, however, interest rates are positively correlated with cashflows and/or negatively correlated with investment needs, floating rate debt may reduce volatility by acting as a partial natural hedge
- The debt maturity decision is driven by the desire to mitigate rollover risk and a variety of other factors relating to risk transfer between debt and equity investors
- The currency mix of debt is driven by the desire to reduce the risk associated with foreign assets, cash flows and earnings as well as various market and regulatory factors such as market depth and relative taxes
- The choice between public debt and bank debt is affected by relative transaction costs and a variety of factors relating to information asymmetries

Survey Results

- Firms are very sophisticated when it comes to deciding on debt structure. More than half of the firms have specific targets for fixed/floating mix, short-term/long-term debt, average maturity, duration, and the fraction of borrowing done from the banking sector
- Pricing is the most important element when considering debt structure and the issuance of hybrids
 - Firms consider current pricing as well as current prices relative to expectations and relative to historical norms. As such, firms often take a view on future price movements when structuring their debt
 - Firms often decide on the structure of their debt without fully considering the

firm's assets. This is especially the case when firms decide on the fixed/floating mix of debt

➤ When it comes to deciding on maturity structure and debt currency mix, the structure of the firm's assets is more important, but even for those elements of debt structure, pricing factors receive a lot of weight

■ Overall, the link between academic and practitioner considerations is weaker than anticipated

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Introduction

This Paper

This paper provides an overview of current structure of debt theory together with a detailed analysis of the results of a recent corporate structure of debt survey. The paper is divided into four sections:

- **This Introduction**
- **Fundamental Concepts**
- **Theoretical & Practical Considerations**
- **Survey Findings**

This paper is not about the absolute level of debt financing – that decision is discussed in our paper [Capital Structure](#). Instead we deal with the following elements of the structure of debt financing:

- **Fixed versus Floating Mix of Debt:** How much of the debt should be at floating interest rates and how much at fixed interest rates?
- **Maturity Structure of Debt:** What should be the maturity structure of the debt?
- **Currency Mix of Debt:** What should be the currency mix of the debt?
- **Source of Debt:** What proportion of the debt should be obtained through bank loans and what proportion through capital markets?
- **Hybrid Securities:** How do hybrid securities fit into a firm's capital structure?

Note that these topics cannot be considered in isolation. Nor can the decision on the optimal level of debt be considered in isolation of the question on debt structure.

Global Survey of Corporate Financial Policies & Practices

The empirical evidence in this paper is drawn from a survey conducted during mid 2005 by Professors Henri Servaes of London Business School and Peter Tufano of Harvard Business School. The project was originated and sponsored by Deutsche Bank AG with the Global Association of Risk Professionals (GARP) acting as secondary sponsor.

334 companies globally participated with responses distributed widely by geography and by industry. Further details of the sample can be found in the note "Survey Questions and Sample" which is available at www.dbbonds.com/lsg/reports.jsp.

Related Papers

In addition to this paper, five other papers drawing on the results of the survey include:

- CFO Views
- Corporate Capital Structure
- Corporate Liquidity
- Corporate Dividend Policy
- Corporate Risk Management

All these papers are available at www.dbbonds.com/lsg/reports.jsp. The website also contains a streaming video of Professors Servaes and Tufano presenting an overview of the results at a Deutsche Bank hosted conference.

Notation and Typographical Conventions

The symbol \bar{x} denotes the mean of a dataset, while \tilde{x} denotes the median. N denotes the size of the dataset. All questions in the survey were optional and some questions were not asked directly, depending on the answers to previous questions. Therefore, the number of responses, N , to different questions varies and is shown for each question. Items in *italics* indicate that the term appeared as one of the answer options in the survey question. Items underlined indicate a reference to one of the other papers in this series. Due to rounding, the numbers in some figures may not add up to the 100% or the total shown.

Unless otherwise stated, all data in this document is drawn from the results of the Global Survey of Corporate Capital Structure and Risk Management.

Fundamental Concepts

For completeness, in this section we provide a brief overview of fundamental concepts that are critical to fully appreciate the impact of changing different facets of a firm's debt structure on its risk profile. Readers who are familiar with the theories of the term structure of interest rates, credit spreads and exchange rates are advised to skip this section.

A more comprehensive coverage of this material, together with references to the primary literature, can be found in most introductory finance textbooks. See, for example, Brealey and Myers (2005).

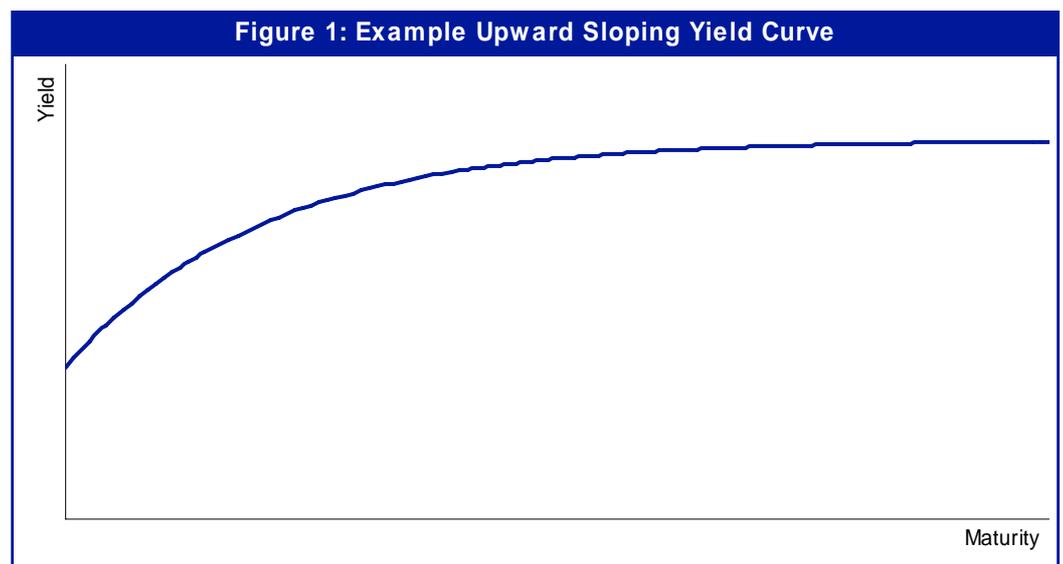
Yield Curves

In order to understand maturity and fixed/floating decisions, it is important to understand some of the basics of yield curves.

The yield on a bond is the effective annual rate of interest on the bond.¹ This will be different from the coupon on that bond if the bond is not trading at par.

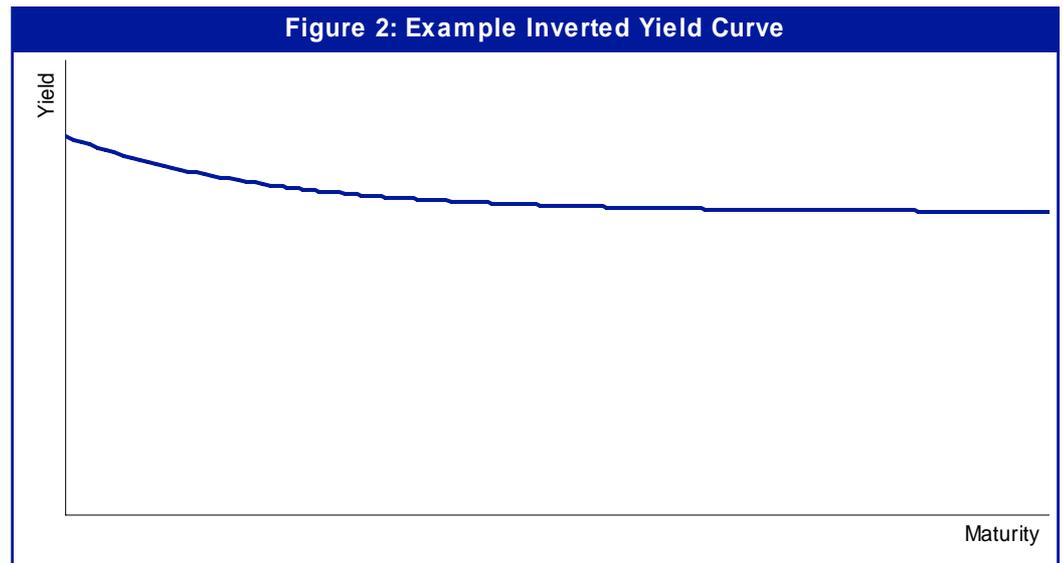
A yield curve is a plot of yields earned on a certain asset class against maturities. A yield curve can be created for any segment of the market—from treasury debt, to AAA corporate debt to non-investment grade corporate debt. Often yield curves plot the yields on coupon bonds against maturities, but in its purest form, the yield curve should reflect the rate of return earned on zero-coupon bonds of the specific maturity. If that is the case, investors can see exactly what return they can expect on their investment, without any reinvestment risk.

The shape of the yield curve varies over time. The most common shape is upward sloping (see Figure 1), which suggests that investments of longer maturities earn higher rates of return than investments in shorter maturities.



However, yield curves are sometimes downward sloping, albeit that there is often a slight increase in the slope over short horizons. These yield curves are called inverted yield curves (see Figure 2).

¹ More formally, the yield is the Internal Rate of Return on the bond.



The slope of the yield curve varies over time, and on occasion, it is virtually flat.

What explains the shape of the yield curve? Three theories have been forwarded.

Pure Expectations Theory

The pure expectations theory suggests that yield curves reflect investor expectations about future short-term interest rates. Investors are indifferent between long-term investments or rolling over a series of short-term investments, because they result in the same expected return.

Thus, if a two-year zero coupon bond is yielding 5%, and a one-year zero coupon bond is yielding 3%, this implies that investors must expect short-term interest rates to rise, so that at the end of two years, they earn the same rate of return whether investing for two years now or rolling over the one-year investment.

The expected increase in interest rates is easy to compute, simply divide the two-year return by the return in the first year, and the result is the one-year return required when rolling over a one-year investment at the end of the first year:

$$\frac{(1+5\%)^2}{(1+3\%)} - 1 = \frac{1.1025}{1.03} - 1 = 7.04\%$$

Thus, according to the expectations theory, in the above example, short-term (1 year) interest rates will increase from 3% now to 7.04% one year from now.

If the pure expectations theory holds, then the yield curve should be flat, on average. If it is upward sloping, on average, this implies that investors would always expect short-term interest rates in the future to be higher than short-term interest rate today, which cannot always be the case. Given that yield curves throughout the world are generally more upward sloping than downward sloping (inverted), the pure expectations theory of the yield curve cannot fully explain its behavior.

Liquidity Preference Theory

According to the liquidity preference theory, long-term interest rates not only reflect expectations of future short-term interest rates (as in the pure expectations theory), but also include a premium required by long-term investors to induce them to hold the instruments.

The liquidity preference theory asserts that if investors can earn the same return holding a sequence of short-term bonds as holding a long-term bond, they will prefer to hold short-term investments. This may appear counterintuitive because the return on a long-term investment can be locked in, while the return on a sequence of short-term investments is more uncertain. However, there is a countervailing factor, which is that the value of long-term investments is much more susceptible to changes in interest rates than the value of short-term investments. Thus, if investors are forced to liquidate the long-term investment prematurely, they can only do so at greater risk.

The implication of the liquidity preference theory is that investors charge a premium for longer-term investments, a so-called liquidity or term premium². Companies that want to borrow long-term are forced to pay this premium. The liquidity preference theory can explain why yield curves are upward sloping, on average.

The Preferred Habitat Theory

Finally, the preferred habitat theory (sometimes called market segmentation theory) suggests that certain groups of investors prefer short-term investments, while others prefer long-term investments, and that interest rates in both markets behave somewhat independently.

Of course, if the markets are too much 'out of line,' investors are willing to change their preferred habitat.

The general interpretation of the preferred habitat theory is that more investors prefer short-run investing, so that debt issuers have to pay a premium to attract investors to long maturity issues.³ This theory can also explain the traditional, upward-sloping shape of the yield curve.

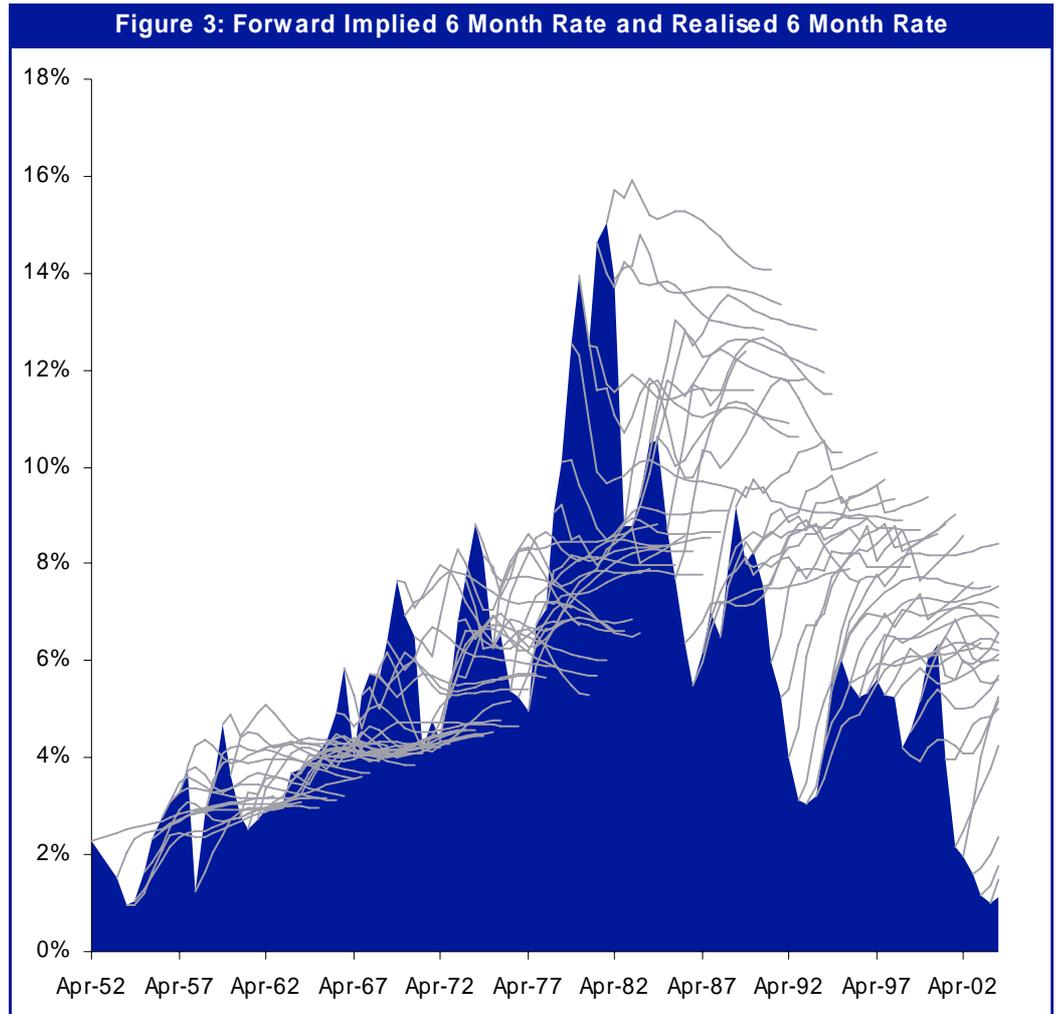
Which Theory Is Correct?

Of the three theories, the preferred habitat and the liquidity preference theories have gained the widest acceptance.

Looking back over time we can see that the actual progression of interest rates, also supports either the liquidity preference or preferred habitat theory. In Figure 3 below we show forward curves over more than 50 years and the actual evolution of the 6 month rate. The thin grey line on the far left shows the forward curve (derived from US Treasuries data) as it was at the end of April 1952. The thin grey line immediately to its right shows the forward curve as it was at the end of April 1953. Under expectations theory, these lines can be considered to be forecasts of the 6 month rate. The dark blue shaded area shows the realization of the 6 month rate.

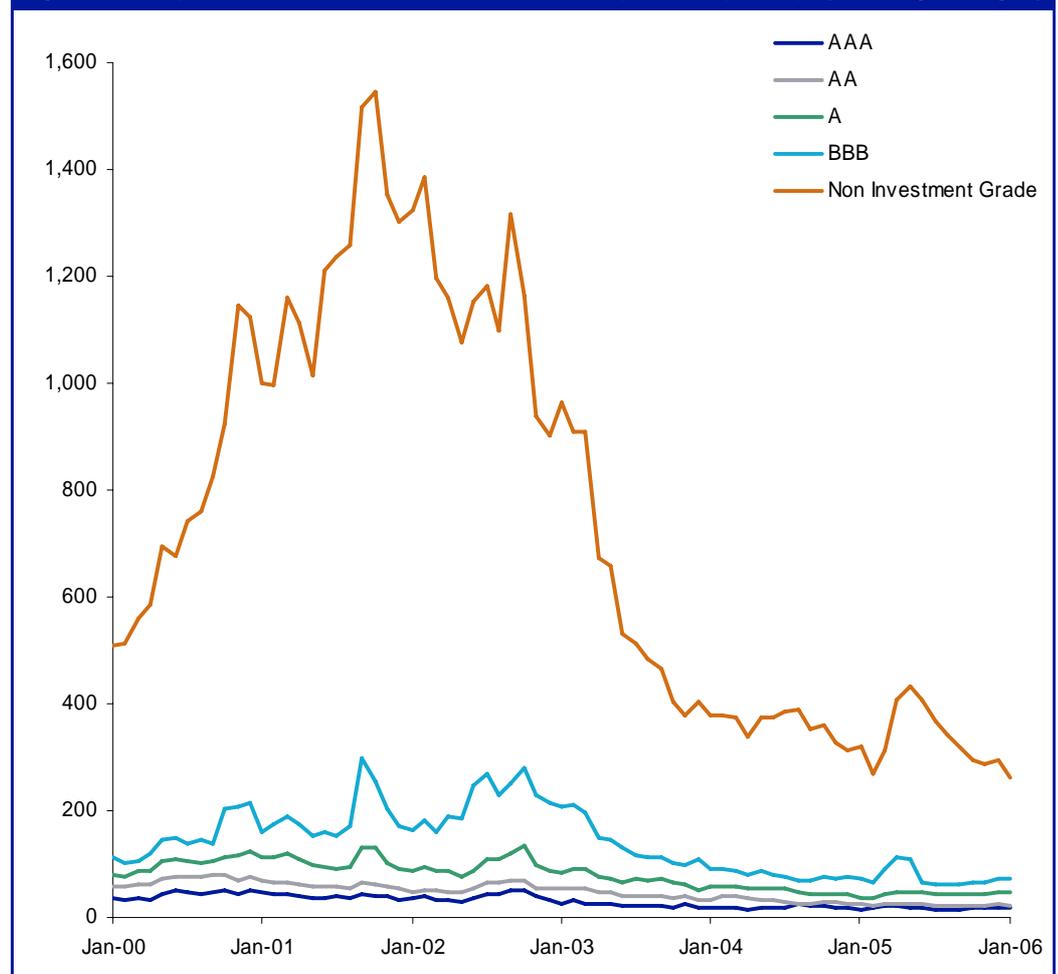
² Since longer term investors are affected more by interest rate movements the liquidity premium is an increasing function of debt maturity.

³ In this theory the difference between expected interest rates and the forward curve is not necessarily an increasing function of maturity.



Credit Risk vs. Interest Rate Risk

The discussion above is about the exposure of investors to changes in the general level of interest rates. Of course, with any investment other than highly rated government debt, investors are also exposed to changes in the credit quality of the issuer. Figure 4 shows the increase in yield over comparable government debt (the benchmark) that corporate borrowers of different ratings have to pay. This difference is often called the credit spread.

Figure 4: Corporate Debt Yield Over Benchmark (Credit Spread) by Rating Category

Source: Deutsche Bank iBoxx Indices

Note that, while credit spreads may change over time, higher rated issuers usually pay lower spreads.

The credit risk can be separated from the interest rate risk through the issuance of floating rate debt. When a firm issues floating rate debt, the firm is exposed to interest rate risk, while investors remain exposed to changes in the firm's credit risk.

The ability to divide these risks partly affects the previous discussion on the premium charged by investors for holding long-dated securities. When an investor purchases a long-dated bond with a floating interest rate, this investor still has much more exposure to the credit risk of a firm than an investor purchasing a short-dated bond. Investors will therefore continue to require a premium for holding long-dated securities, even if they are protected against price changes through interest rate movements.

The Term Premium and the Credit-Risk Premium

The above discussion suggests that investors require two premia for holding long-dated, fixed rate securities:

- **Term Premium:** For holding long-dated securities
- **Credit Risk Premium:** For holding riskier securities

On average, across all bonds issued, these premia should be fair. By fair, we mean that they reflect the fair price for the additional risk taken by the investor. If this is not the case, investors would switch to those securities that offer a high premium, thereby driving up the price and reducing the premium offered. This argument does not imply that the choice between fixed and floating rate debt and short-term and long-term debt is a matter of indifference, however.

Exchange Rate Determination

Covered interest rate parity says that expected movements in exchange rates are driven by differences in interest rates between two countries. Specifically:

$$\mathbf{E}(s) = s \frac{1 + r_D}{1 + r_F}$$

where s is the current exchange rate (expressed as the number of units of domestic currency you need to buy one unit of foreign currency), $\mathbf{E}(s)$ is the expected exchange rate, r_D is the domestic interest rate and r_F is the foreign currency interest rate. This theory is well supported by long-term academic evidence.

Example

Assume that you are a corporation based in Norway and are considering borrowing, unhedged, in US Dollars. Assume that the current Norwegian Krone–US Dollar rate is 6.7000 (i.e., 1 Dollar is worth 6.7 Krone). Also assume that interest rate in Norway is 3% and the interest rate in the USA is 5%. The expected exchange rate in one year is then 6.5724 [=6.7000×(1+3%)/(1+5%)].

Note that if covered interest rate parity holds then there is no advantage in borrowing in currencies with low interest rates. The expected appreciation of the foreign currency will neutralize the upfront benefit of lower initial interest expense.

Theoretical & Practical Considerations

In this section we discuss various aspects of debt structure and the theoretical and practical arguments that have been put forward.

The Impact of Derivatives

In this paper we generally consider the structure of debt after the impact of any related derivatives. For example, a firm that issues a fixed rate bond but enters into an interest rate swap would be considered to have issued floating rate debt for our purposes. In efficient capital markets there is no difference and in practice we would encourage firms to choose the option that is cheapest overall.

The only factor that makes the fixed rate bond + swap structure different from the floating rate bond structure is credit risk associated with the swap counterparty. This risk is normally low.

Irrelevance

To understand how debt structure may affect shareholder value, it is important to understand under what circumstances it does not matter.

As a starting point in the analysis, let's consider a very simplified scenario in which:

- There are no taxes
- Corporate executives have the same set of information as investors
- There are no transaction costs
- Investors and markets are rational
- The firm's level of investment is fixed
- There are no costs of recontracting or bankruptcy
- The interests of managers and shareholders are aligned

We call these the *perfect capital markets* assumptions. In addition, assume that covered interest rate parity⁴ holds.

Under these conditions, the actual structure of the firm's debt is irrelevant. It does not matter whether the firm borrows fixed or floating rate, short-term or long-term, and whether the firm issues foreign currency debt or not. Nor does it matter whether the firm borrows from banks or capital markets.

With full information available, all providers of capital can charge a fair price for the securities the firms asks them to hold. If this price is fair, the actual structure of the debt does not matter.

Similarly, it does not make sense for a firm to issue debt in a foreign currency to take advantage of lower interest rates. The lower interest rates will be reflected in currency appreciation, so that when the interest and principal are repaid, the expected out-of-pocket expense for the firm is the same.

⁴ See the section Fundamental Concepts: Exchange Rate Determination for an explanation of covered interest rate parity.

Hybrid securities have no particular advantages either. Whatever the stream of promised repayments by the firm, the securities will be priced fairly in the market and investors could, in fact, replicate the value of the hybrid by dynamically trading the firm's other securities.

The market is as well informed about the prospects of the business as the management of the firm so security issuances do not provide any special information to the market. In addition, firms that have good prospects, but no internal financing available, will be able to obtain additional financing at a fair price.

When Does Debt Structure Impact Firm Value?

For debt structure to matter, we need to relax one or more of the assumptions listed in the above section on Irrelevance. In particular, one or more of the following effects need to be obtained:

- **Reduction of Taxes:** The debt structure reduces the tax burden of the firm without a proportionate increase in the tax burden of the investors. If the structure reduces the joint tax bill of the firm and its investors, the value of the firm will increase by the present value of the tax savings
- **Reduction of Transaction Costs:** The debt structure provides payoffs to investors which they cannot replicate on their own at the same cost. If investors desire to get certain payoffs in certain states of nature, and if the transaction costs of creating such payoffs are high (because of high trading costs in shares, bonds, or derivatives), then the structure can create value
- **Provision of Better Information to the Market:** If the structure allows the firm to better communicate its value to the market, this can also be value creating. Thus, this argument is not about changing the expected cash flows of the firm, but about informing the market about these expected cash flows
- **Reduction of Agency Costs:** The debt structure diminishes conflicts of interest between managers, bondholders, and shareholders. The costs of these conflicts are ultimately borne by the equityholders of the firm and if the firm can avoid these costs then there may be a value gain
- **Improvement of Access to Capital Markets:** If the debt structure allows the firm to plan better when it needs to access capital markets, or allows the firm to continue meeting its investment needs without having to access capital markets, value is created. This is the case because accessing capital markets is costly
- **Reduction of Distress Costs:** If the debt structure allows the firm to avoid direct or indirect costs of financial distress, value is created

In sum, the structure has to: reduce taxes, reduce transaction costs, reduce agency costs, provide better information to the market, improve access to capital markets or reduce distress costs. We will discuss how these elements translate into debt structure decisions.

Two other sets of considerations are important:

- **Regulatory Considerations:** In regulated industries, regulators may require firms to have a maximum level of debt or short-term debt and may frown upon certain instruments. Similarly, some instruments that may appear debt-like may receive some equity treatment from regulators. This article will not review regulatory

considerations in detail, given significant differences between jurisdictions, industry and regulatory regimes. We note that firms need to abide by them, and that these considerations may make certain instruments attractive

- **Market Sentiment and Irrational Pricing:** If certain instruments or certain maturities are not fairly priced, companies should obviously take advantage of this mispricing. If interest rates are low for a certain maturity or in a certain currency (relative to what they should be, given exchange rate expectations), firms should tilt their borrowing towards the areas where the mispricing is observed. Similarly, if rating agencies irrationally care about certain aspects of a firm's debt structure, and downgrade firms that do not follow their advice, companies have little choice but to alter their policies. Again, this article will not deal with market sentiment and irrational pricing, except to note that firms should take advantage of these cases when possible. It is important to note, however, that firms should not lock in long-term obligations that could have negative cash flow consequences, just to cater to the current market sentiment, because the sentiment may change very quickly.

Costs of Cashflow Volatility

As outlined in more detail in our paper on [Risk Management](#), cash flow volatility is associated with a number of problems:

- Leads to costs of financial distress
- Makes it more difficult for the firm to continue making investments and pay dividends because it will force the firm to access capital markets more frequently and with less advance warning
- Reduces the debt capacity of the firm
- In jurisdictions with progressive tax rates on corporate income, cash flow volatility leading to earnings volatility increases the tax payments of the firm
- Makes it more difficult to communicate with investors
- Negatively affects the quality of daily decision making

In addition, cash flow volatility will also lead to increase volatility in EPS. If equity investors do not have all the information about the firm, they may look to the EPS number and the volatility thereof to try to gauge the health of the firm. While there is no theoretical support for this behavior, it is not uncommon to observe it in practice.

These consequences of increased cash flow volatility need to be taken into when deciding on debt structure, as some structures will lead to more volatility than others.

Fixed/Floating Mix of Debt

In this section we consider the decision of whether to employ fixed or floating rate debt. The deep and liquid swap markets in most countries mean that firms can issue whichever type of debt is cheaper in the market and swap into their preferred structure.

Correlation under Pure Expectations Theory

We start by assuming that fixed and floating rate debt have the same expected cost which will allow us to focus purely on the role of volatility.

It is tempting to conclude that if fixed and floating rate debt have the same expected cost, fixed rate debt dominates because it avoids all the unpleasant consequences associated with greater cash flow volatility. However, such a conclusion is not warranted because it does not consider the interaction between the volatility of interest payments and the volatility of the business. It is crucial to take into account both the liability side of the balance sheet and the asset side.

If corporate earnings are positively related to interest rates, then firms have a natural hedge in their ability to service floating rate debt. Debt service is high exactly when funds are available and, more importantly, low when funds are short. Under these circumstances, floating rate debt reduces the costs associated with cashflow volatility and, hence, is beneficial. In fact, in many instances, cash flows would be *more* volatile with fixed rate borrowing.

However, thinking about the correlation between profits and interest rates is not sufficient. It is also crucial to think about the correlation between interest rates and investment opportunities. The best scenario to support floating rate debt is one where this correlation is negative; in that case, the high interest burden will not prevent the firm from investing, because investment needs are weak.

In sum, floating rate debt is generally beneficial in terms of volatility if the correlation between interest rates and profits is positive and/or the correlation between interest rates and profits is negative. If the correlations are the other way around, then fixed rate debt dominates from a volatility perspective.

Correlation under Liquidity Preference Theory

The above discussion assumes that the expected cost is the same for floating rate debt and fixed rate debt. If floating rate debt has a cost advantage, on average, as documented above, then this is just another element to consider. Some firms may prefer floating rate debt because it is cheaper *and* serves as a natural hedge, leading to reduced cash flow volatility. Other firms may prefer floating rate debt, even if it leads to increased cash flow volatility, as long as the costs associated with the increased volatility are outweighed by the cost advantage of floating rate debt. These could be firms with lower levels of debt who are less affected by the volatility of interest rates. Still other firms will prefer fixed rate debt because the extra cost associated with fixed debt outweighs the costs of increased cash flow volatility.

The following list summarizes the factors and their impact on the choice of fixed/floating debt:

- Cost advantage: Floating rate
- Natural hedge: Floating rate
- High costs of cash flow volatility and no natural hedge: Fixed rate

Natural hedge implies a positive correlation between interest rates and profits and/or a negative correlation between investment needs and profits.

Evaluation of Treasury Function

If the treasury department of a corporation is evaluated based on the extent to which interest rates can be locked in, then there is not much a decision to be made: fixed rate debt dominates.

It is also possible that the treasury department is evaluated based on the total interest paid, perhaps in the short-run. In that case, even if interest rates are expected to increase, the firm may choose to issue floating rate debt because it will lower interest payments in the short-run.

Maturity Structure of Debt

As mentioned previously, investors generally want a higher level of compensation for holding longer-dated investments, because they are taking more risk. If the risk is fairly priced, firms should be indifferent between issuing short-dated or long-dated debt. However, several important considerations affect the decision.

Information

If firms are better informed about their prospects than the market, they will select the maturity structure which best fits this information set. Firms who believe that their prospects will deteriorate will use long-term debt to lock in the current spread, while firms who believe that their prospects will improve will use short-term debt because their credit spreads will be lower in the future.

Of course, the market will take into account this decision making process, and charge a higher interest rate for firms who issue long-term debt. As a result, firms with good prospects are paying too high a price for long-term debt and they should issue shorter maturities.⁵

The above discussion suggests a negative relationship between firm quality and debt maturity structure. However, when firms are of extremely low quality or when very little is known about the firms, they may not be able to access the public debt market altogether. Instead, they may have to borrow from banks, and bank debt is generally more short-term. This argument is further discussed below, where we review the choice between public debt and bank debt.

Rollover (Event) Risk

The above discussion suggests that high quality firms should borrow only short-term, with 100% of the debt maturing virtually on an annual basis. This is a risky strategy, however, because it assumes that it is always possible to access the debt market. However, because of unforeseen circumstances, credit may dry up and it may be difficult to roll-over the debt. This could be because of macro-economic events, such as the Asian crisis, which affects the level of liquidity in the markets, or because a bad news event about the firm temporarily affects its ability to issue debt. If the firm cannot roll-over its debt, this could lead to a liquidity crisis and financial distress.⁶ Firms should therefore make sure that their debt maturities are spread out. However, higher quality firms can afford to spread the debt across shorter maturities than lower quality firms.

Underinvestment

When a firm takes on a new project, which increases firm value, two groups of claimholders on the firm benefit. Most of the gain goes to the equityholders of the firm, but some accrues to debtholders as well. This is the case because, holding everything else constant, an increase in firm value reduces the probability of default. If the firm has

⁵ See Flannery (1986) for a further discussion of this argument.

⁶ See Diamond (1991a) for a more detailed analysis of this argument.

a lot of growth opportunities, relative to the value of its assets in place, it is possible that the transfer of wealth to debtholders is so large that the firm will decide not to take the project in the first place (see Myers, 1977). One solution to this problem is to issue short-term debt, which matures before the firm has to make its investment decisions. Of course, an alternative is simply to issue less debt, as discussed in our paper on [Capital Structure](#).

Risk Taking

The previous argument suggests that debt financing (and especially long-term debt financing) may lead firms to forego projects that add value to the firm, because the benefit accrues to debtholders. The reverse argument is also possible. It is possible for firms to take projects which destroy value, but are in the best interest of shareholders, because they increase firm risk so that the debtholders are the ones who lose out. Again, this is especially the case if the debt-financing is long-term, because the sensitivity of the value of the debt to changes in the risk of the firm is larger for longer term financing.

Cash Flow Matching

We discussed rollover risk earlier, when we argued that this risk can be mitigated through the issuance of longer-term debt. A related argument is that of cash flow matching or maturity matching, which suggests that firms should match the maturity of their assets with the maturity of their liabilities. This will avoid rollover risk to some extent. This can only be undertaken if the maturity of the assets can be determined easily.

Currency Mix of Debt

As discussed previously, when capital markets are perfect and covered interest rate parity holds, the exact currency mix of the firm's debt does not matter, because the pricing in all currencies is fair. In this section we relax some of those assumptions.

Relative Taxes

In an international setting, the effect of different tax rates in different countries is likely to have a strong impact on the currency mix of debt. Generally, firms should issue debt and hence lower the tax bill in countries where tax rates are high.⁷ We note, however, that:

- The location of the entity (e.g., foreign subsidiary) issuing the debt is more relevant than the currency of the debt. It may, however, be convenient to issue the debt in the currency of the reporting entity that gets the tax deduction
- If the decision to issue debt in a certain currency is related to its tax advantages, such decision should not be made in isolation, but as part of the firm's overall tax optimization strategy

Reducing Cashflow Volatility

If firms have liabilities in the same currency as their assets then the amount of foreign currency translation is reduced and the overall effect of exchange rate volatility on

⁷ Subject to thin capitalization regulations, foreign tax credits and double taxation agreements. A discussion of these issues is beyond the scope of this paper.

cashflow and earning volatility is reduced. This reduces all the costs of volatility we described previously. Obviously, the value of the foreign asset is equal to the present value of the foreign cash flows. Thus, hedging foreign cash flows with foreign currency debt is the same as hedging the market value of the asset.

From a purely economic perspective it makes sense to hedge market values and not book values, because book values do not reflect the value of the cash flows generated by the asset.⁸ However, when the market value of an asset exceeds its book value the accounting treatment of the hedges may complicate matters.

Hedging the book value of a foreign asset through the issuance of the same amount of debt in that currency is called net investment hedging⁹. Variations in the book value of the asset are equal to variations in the book value of the debt. As a result, there is generally no balance sheet or EPS volatility.

If the amount of debt does not cover the book value of the assets, the firm has to mark-to-market the excess book value, and adjust the equity account on its balance sheet with the difference. This generally leads to balance sheet volatility, but no EPS volatility. On the other hand, if the amount of debt exceeds the book value of assets, the firm also has to mark-to-market the excess, and this time, the adjustment is usually made via the P&L statement, thereby making profits, and hence EPS, more volatile. Firms may therefore decide not to hedge the full market value of a foreign asset if this value exceeds book value.

The issue of hedging foreign currency cashflows is obviously complicated if those cashflows are uncertain.

Overcoming Capital Controls

It may be the case that profits from a certain jurisdiction cannot be repatriated to the home country, either because this would lead to additional taxation in that jurisdiction or the firm's home jurisdiction or because of capital controls. One way to avoid having profits in that jurisdiction is to locate a large fraction of the firm's overall debt in that jurisdiction.¹⁰

Again, this is not really an argument for denominating debt in a foreign currency or for swapping it into that currency. It is about the location of the entity that is legally obliged to make the interest payments. It may, however, be practical to issue the debt in the functional currency of the entity that services the debt, especially if the foreign currency is not fully fungible.

Depth of the Capital Market and Investor Access

In some currencies, it may not be possible to raise substantial amounts of money because the markets are not very deep. If that is the case, issuing debt in another currency may be the only option available. Of course, it may be possible to swap the debt back into local currency.

⁸ Under most accounting standards the market value and book value of acquisitions are likely to be same at the inception of the investment, making that an ideal time to hedge.

⁹ Partial net investment hedging is also possible.

¹⁰ Subject to thin capitalization requirements.

EPS Volatility

As mentioned previously, when foreign cash flows are not hedged, they could increase the volatility of cash flows and EPS. While EPS volatility should have no consequences for the share price in a rational market, if it does or if managers believe it does, it may lead firms to decide on foreign currency denominated debt. However, those who use this argument should be aware of the fact that the volatility of the exchange rate is often much smaller than the volatility of EPS.

Evaluation of Treasury Function

If the treasury department of a corporation is evaluated based on the extent to which interest rates can be locked in, then there is not much a decision to be made: domestic debt dominates because the foreign interest payments are subject to exchange rate fluctuations.

Sources of Debt

In perfect capital markets, the identity of the provider of funds does not matter: the cost of obtaining funds from capital markets and from banks is the same because all parties have the same information. If there is a difference in cost, holding everything else constant, firms should obviously borrow from the lowest cost source. However, it is often not possible to hold everything else constant.

Borrowing Flexibility

It may not be possible to obtain certain terms from bank financing. Banks are generally reluctant to lend money at long maturities or at fixed interest rates. If this is indeed the case, borrowing from capital markets may be the only option. On the other hand, it is much easier to obtain financing that is non-standard from banks because they can individually (or as a syndicate) negotiate specific items.

Transaction Costs

Transaction costs make capital market debt less attractive, especially for small amounts of capital, because the fixed costs of accessing capital markets make up a larger fraction of the amount raised. Other types of costs, which can be classified as transaction costs, may also be important. It may be quicker to obtain bank financing than to go through the process of accessing capital markets. Firms may also be required to obtain a rating when accessing capital markets. This requirement can further slow down the process.

Asymmetric Information

The information gap between capital markets and the firm may also impact the choice of lender. If firms have good future prospects, but the market is not aware of those, debt raised from capital markets may well be more expensive than it should be. It may not be possible for the firm to convey this positive information to the capital markets, either because it is not credible or because it would affect the competitive advantage of the business. However, it may be possible to convey such positive information to a financial institution because of the one-to-one relation between the institution and the firm. This possibility has two implications:

- The cost of borrowing from the bank may be lower than from capital markets because there is less of an information asymmetry
- The fact that the firm has borrowed from the bank may be a positive sign to the financial markets

Consistent with this view, James (1987), Mikkelson and Partch (1986), and Lummer and McConnell (1989) document that firms have a positive stock price response when they announce that they obtained new credit lines.

Bank financing may have one further advantage. Banks not only obtain privileged information at the outset of the relationship. They also monitor their borrowers and may be much quicker to spot potential problems than other capital market participants. This monitoring service has benefits for all of the firm's investors.

The above discussion implies that bank debt may be particularly useful for firms with a lower credit rating and greater asymmetric information, especially if they have good prospects. Higher quality firms and firms that have a smaller information gap with the market are therefore more likely to borrow from capital markets, because the benefits of bank financing are smaller, and there is a cost associated with this monitoring [see Denis and Mihov (2003) for a more detailed discussion]. In the process of monitoring the firm, the bank may also obtain private information about the firm. The bank may then be able to employ this privileged access to take advantage of the firm by charging higher interest rates. The firm cannot simply take its business elsewhere, because such a move would be seen by capital markets as a sign that the firm's current bank does not want to continue the relationship. In sum, the bank is able to extract rents from the firm because of its privileged link [see Rajan (1992)]. This argument implies that firms should avoid relying too much on a single bank to provide their financing.

Asymmetric Information and Covenants

Banks often insist that the firm meet a number of stringent covenants as part of the lending agreement. This may well be to the advantage of the firm. By agreeing to limit future behavior, the firm may be able to lower the cost of financing. However, these covenants may prevent the firm from taking certain actions, and some firms would prefer not to have such strict covenants. The solution to such problem may be to go for capital markets debt instead of bank debt.

Liquidation and Renegotiation

Another reason why we would expect lower quality borrowers to employ bank debt is because liquidation and renegotiation costs are higher when the firm has capital markets debt. It is more costly to negotiate with a large number of public bondholders. Moreover, when renegotiating with public bondholders, firms face a holdout problem: while it may well be in the best interest of all bondholders as a group to renegotiate the terms of the bond, this may not be the case for individual bondholders. These bondholders may therefore refuse to renegotiate and 'hold out' instead.

Underinvestment Problem

Bank debt may also help overcome the underinvestment problem discussed above. If the benefits of a new investment project are likely to accrue to debtholders, firm managers may decide not to undertake the project. The alternative would be to renegotiate the terms of the debt contract with the debtholders. This will be very difficult

if there are many public debtholders, but could work if the debt financing is provided by banks.

Hybrid Securities

Any security with payoff patterns not traditionally described by the normal payoff structures of plain debt or equity can be considered a hybrid. The general idea behind a hybrid is that it contains features of both debt and equity. The simplest is convertible debt, which is debt convertible at the option of the bondholder into a number of shares of the firm.

Discussing all the possible features of hybrid securities is beyond the scope of this paper. This section will therefore focus on the considerations that are important when thinking about hybrids from a finance theoretical perspective.

In perfect capital markets and when covered interest rate parity holds, it should be clear that there is no need to construct a particular payoff pattern to suit firms or investors. All the instruments are fairly priced and the financing choice is therefore irrelevant. Investors can always create any payoff structure they want (at no transaction cost). We therefore need to seek out which imperfections can be overcome with certain types of securities.

Taxes

One of the major advantages of debt financing is that it can reduce the firm's tax bill. However, debt financing can also lead to costs of financial distress. If a security can be designed to maintain the tax benefits of debt financing while reducing financial distress costs, this structure can be beneficial.

Asymmetric Information

As discussed several times in this article, there are substantial costs associated with the information gap between the firm and its investors. These costs are due to the fact that securities are sensitive to changes in firm value, which may affect their pricing. If a security can be developed which is less sensitive to information changes, it may well be beneficial. Convertible debt, for instance, is a security that shows little sensitivity to changes in firm risk. If the firm is riskier than expected, the equity portion becomes more valuable. If the firm is safer than expected, the debt portion becomes more valuable. Thus, when capital markets are uncertain about the future risk of a firm, convertible debt may well be the answer. This argument can also be employed when considering the conflict of interest between equityholders and bondholders. When firms take decisions that increase firm risk, holding everything else constant, equityholders benefit. When firms take decisions that reduce firm risk, holding everything else constant, debtholders benefit. A potential lender to the firm may therefore be worried that the firm will take more risk than originally anticipated. This worry may lead to higher interest rates. Alternatively, given that the value of convertible bond shows little sensitivity to changes in interest rates, firms can issue convertible debt to assure future lenders that they will not unduly increase firm risk.

Asymmetric information can also affect the firm's access to capital markets. This causes a problem if a firm is not cash-rich, but has to issue debt securities that require substantial commitments of future cash flows. If a firm can issue a debt security, without

having to employ cash to service it, this may be beneficial. Hybrids can be structured to reduce the cash required to service the debt, especially in the first years of the issue.

Regulation

Firms that are regulated need to keep certain amounts of capital for regulatory reasons. The classification of these securities into debt and equity type securities may not be related to their actual payoff structure. Firms may be able to issue hybrid securities to take advantage of this situation.

Rating Agencies

The above argument applies more generally to rating agencies. If these agencies are willing to give firms equity credit for certain instruments, even though the payoff structure of these instruments is more debt-like, firms can take advantage of this situation.

Transaction Costs

The previous discussion focused on hybrid securities from the perspective of companies. An alternative perspective is also possible. If investors like to obtain certain payoff patterns because they fit with their consumption needs, they can always create them by combining traditional securities. However, this could be quite costly. If hybrid securities can be structured in a way that appeals to investors and reduces their transaction costs, these structures may also be beneficial for corporations.

When Pricing Is Not Fair

If new securities come about that are not well understood by capital markets participants, it is possible that they expect a required rate of return different from a fair rate. Obviously, if the required rate is lower than the fair rate, firms should take advantage of the situation. If the required rate of return is higher, firms may still consider issuing a particular security if the extra cost is outweighed by the benefits discussed above.

Market Timing

Although there is no theoretical justification for doing so, firms may alter their debt structure decisions based on expectations about movements in interest rates, credit spreads or exchange rates. For example, a firm considering its fixed/floating mix could compare:

- **Current versus Historical Fixed/Floating Spreads:** Firms may compare current spreads between fixed and floating rate debt to historical spreads, and decide to issue the type of debt which is 'cheap' relative to historical norms
- **Current Fixed/Floating Spread:** Firms may compare the current spread between fixed and floating rate debt to the spreads they expect and decide to issue the type of debt which is 'cheap' relative to expectations
- **Expectations of Fixed/Floating Spread:** Firms may look at expectations of future interest rates to determine whether they should 'lock in' a fixed rate for a long period of time because interest rates are expected to increase or whether they should 'go floating' to take advantage of lower interest rates to come

All of these decisions reflect attempts to predict future rates based on current and historical market conditions. Firms may make similar comparisons for credit spreads at different maturities and exchange rates.

Firms should be careful when making decisions based on such analyses, speculative in nature. Firms should only 'take a view' when they believe that they are better informed than capital markets in general. While this may be possible for credit spreads, it will rarely be the case for interest rates and exchange rates.

Summary

- Under perfect capital market assumptions, the structure of debt has no impact on the value of the firm
- In order for debt structure to matter, one or more of the following effects need to be obtained:
 - Reduction of taxes
 - Reduction of transaction costs
 - Provision of better information to the market
 - Reduction of agency costs
 - Improvement of access to capital markets
 - Reduction of distress costs
- Generally, volatile cashflows are costly because they increase expected tax costs and exacerbate information asymmetries
- Floating rate debt is generally cheaper than fixed rate debt but may lead to increased volatility
 - If, however, interest rates are positively correlated with cashflows and/or negatively correlated with investment needs, floating rate debt may reduce volatility by acting as a partial natural hedge
- The debt maturity decision is driven by the desire to mitigate rollover risk and a variety of other factors relating to risk transfer between debt and equity investors
- The currency mix of debt is driven by the desire to reduce the risk associated with foreign assets, cash flows and earnings as well as various market and regulatory factors such as market depth and relative taxes
- The choice between public debt and bank debt is affected by relative transaction costs and a variety of factors relating to information asymmetries

Survey Results

In this section we present the results of the survey pertaining to corporate debt structure.

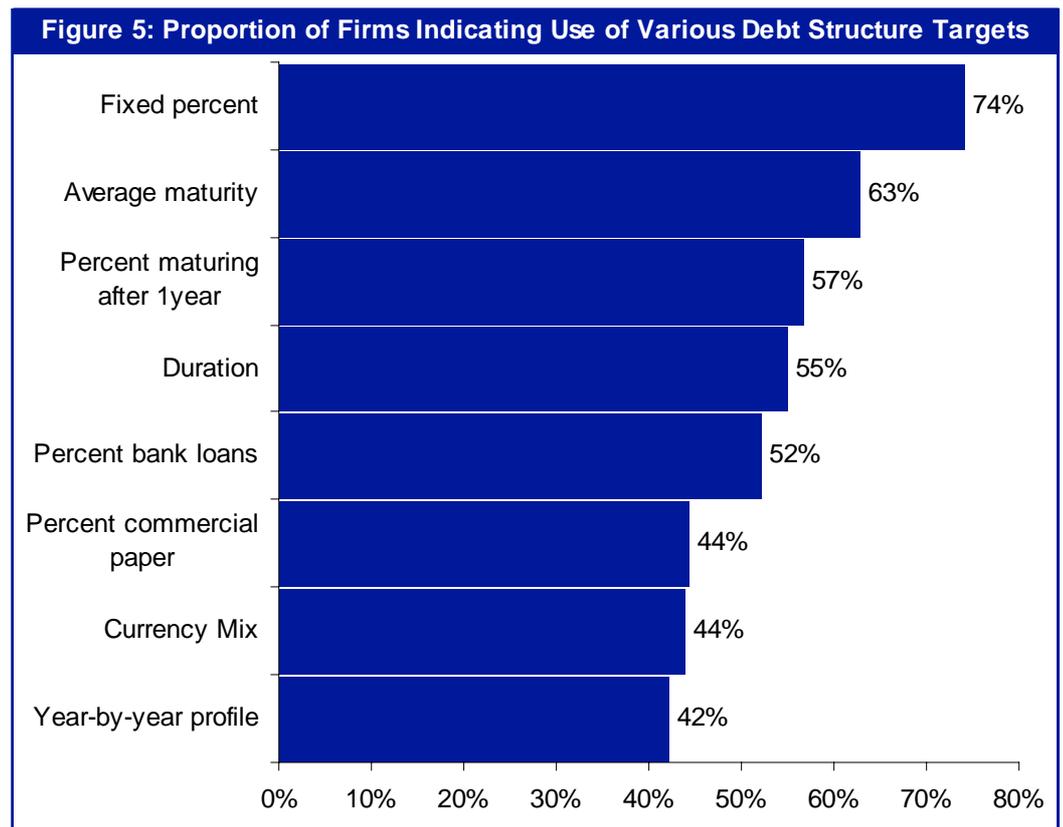
Framing the Questions

The discussion of Theoretical and Practical Considerations lists a variety of reasons why the structure of debt is important for corporations. To help in the interpretation of the results, it may be useful to think about the factors that are important in the decision making process from two perspectives:

- **The Risk Management Perspective:** Assumes the pricing is fair. The decision on the debt structure depends on factors that generally deal with the interaction between the debt structure and the rest of the firm. The decision on the structure of the debt depends on the nature of the assets of the firm. The liability manager approaches the problem from a firm wide point of view
- **The Investment Management Perspective:** This perspective assumes that the pricing is not fair or, if it is fair, it assumes that the pricing does not affect the rest of the business. This is more of an investment management perspective, where the pricing of individual securities is the most important factor and interaction between debt structure and the firm does not matter

What Do Firms Target?

We start by asking companies which elements of debt structure they target. Figure 5 presents the results.



Q4.1: "For which of the following do you have target ranges and what are those ranges (post derivatives)?" N = 178.

The most striking finding is that companies are extremely sophisticated when it comes to thinking about debt structure. All of the elements of debt structure we proposed are being targeted by a substantial fraction of the respondents. The element of debt structure for which the largest fraction of firms set a target is the fixed/floating mix, with 74% of all respondents indicating that they target this element. Next is the average maturity with 63% of the respondents having a target, followed by the fraction of debt maturing after one year (57%), and duration (55%). The fraction of borrowing from banks is targeted by 52% of all firms. The remaining three elements are targeted by a substantial minority of the firms. The currency mix is targeted by 44% of all companies, and so is the amount of borrowing in the commercial paper market. Finally, 42% of all companies have specific targets for the year-by-year maturity profile of their debt.

These findings indicate that corporations construct very specific guidelines as to how their debt should be managed. The next section documents what some of these guidelines are, while subsequent sections examine in detail how companies make decisions on four critical elements of debt structure. This is followed by an analysis of the use of hybrids.

What Are The Targets?

For six out of the eight elements discussed above, we asked companies to specify what their targets are. These elements are:

- Fixed/floating mix of debt
- Percentage of debt maturing after one year
- Fraction of borrowing from banks

- Fraction of borrowing in the commercial paper market
- Average maturity of the debt
- Targeted duration of the debt

For two of the elements, the currency mix of debt and the year-by-year profile of maturing debt, it is not possible to ask for such details because they cannot be summarized concisely. However, we will address the factors that go into deciding on these elements in the next section.

Regarding the targets, we asked companies to provide the specific target as well as the minimum and maximum of their target range. For those companies that did not specify a target, but specified a range, we assumed that the target was the mid-point of the range. Figure 6 shows the average minimum, the average target and the average maximum.

Figure 6: Target Levels

Target	Minimum	Target	Maximum
Fixed percent	40%	52%	65%
Percent maturing after 1 year	46%	53%	60%
Percent bank loans	45%	50%	57%
Percent commercial paper	13%	17%	22%
Average maturity	4.8 years	6.2 years	7.9 years
Duration	3.9 years	5.6 years	7.6 years

Q4.1: "For which of the following do you have target ranges and what are those ranges (post derivatives)?" N = 178.

Regarding the mix of fixed and floating rate debt, firms target 52% fixed debt. The average of the low-end of the range is 40%, while the average of the high-end is 65%. This indicates that firms allow a fair amount of flexibility around their target.

Firms want 53% of their debt to mature after one year, with a minimum of 46% and a maximum of 60%. Again, this implies a reasonable degree of flexibility, but the range is certainly tighter than for the amount of fixed-rate and floating-rate debt.

In terms of bank borrowing versus borrowing from other sources, firms target 50% bank debt, ranging from 45% to 57%. This range is narrower than for the amount of fixed rate debt and the amount of long-term debt.

Firms target 17% of their borrowing from the commercial paper market, ranging from 13% to 22%.

The target for average maturity is 6.2 years, while it is 5.6 years for average duration. The target maturity ranges from 4.8 years to 7.9 years, while the target duration ranges from 3.9 years to 7.6 years.

Given that firms target an average maturity of 6.2 years, but only want 53% of their debt to be long-term debt, the average targeted maturity of their long-term debt is more than 10 years.

What Factors Are Important in Setting the Targets?

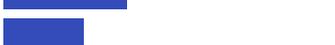
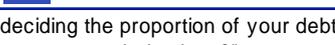
We asked companies how they decide on the mix of fixed and floating rate debt, the maturity and currency mix of their debt, and the choice between bank debt, private debt and capital market debt. We listed a variety of potential factors and firms ranked the factors from 0 (Not Important) to 5 (Very important).

Fixed/floating Mix of Debt

We start by considering how firms decide on the mix between fixed and floating rate debt.

The following figure lists the factors that affect this decision, together with the fraction of firms that rank each of the potential factors as a 4 or 5 on a scale ranging from 0 to 5. This is the fraction of firms that consider a factor to be “important”.

Figure 7: Factors Determining the Fixed/Floating Mix of Debt

Factors	% 4 or 5	% 4 or 5	N
Current long term rates v expectations		40%	215
Current long term rates v historical norm		37%	215
Floating cheaper on average		36%	220
Interest size relative to operations		33%	210
Fix-floating spread v expectations		31%	213
Rate volatility relative to operations		29%	209
Correlation of operations and rates		27%	216
Fix-floating spread v historical norm		26%	212
Floating rate => volatile EPS		25%	222
Ability to access markets		24%	209
Accounting consequences		16%	213
Risk to capex and dividends		15%	216
Counterparty credit exposures		10%	205
Other companies in my industry		6%	213

Q4.2: "How important are the following factors in deciding the proportion of your debt that should be Fixed Rate versus Floating Rate including the impact of interest rate derivatives?"
Scale is Not Important (0) to Very Important (5).

No single factor receives support from more than 50% of the firms. This indicates that there is a substantial degree of heterogeneity among firms in terms of what elements they believe are important in their choice of interest rate exposure. The two factors that receive the most support are a comparison of the current level of long-term interest rates to expectations (40% of the respondents consider this important) and to the historical norm (37%). Given this focus on long-term rates, this suggests that firms decide on the fixed-floating mix and maturity structure together. If long-term rates are low relative to what they have been or are expected to be, firms prefer to lock in fixed rate debt.

Generally “investment management” considerations, which emphasize pricing and expected movements in interest rates, dominate “risk management” considerations,

which emphasize the relationship between assets and liabilities. Figure 8 below shows the most important factors from Figure 7 above broken into the two perspectives.

Figure 8: Factors Determining the Fixed/Floating Mix of Debt

Investment Management Perspective			Risk Management Perspective		
Factors	% 4 or 5	Rank	Factors	% 4 or 5	Rank
Current long term rates v expectations	40%	1	Interest size relative to operations	33%	4
Current long term rates v historical norm	37%	2	Rate volatility relative to operations	29%	6
Floating cheaper on average	36%	3	Correlation of operations and rates	27%	7
Fix-floating spread v expectations	31%	5	Floating rate => volatile EPS	25%	9
Fix-floating spread v historical norm	26%	8	Ability to access markets	24%	10
			Accounting consequences	16%	11
			Risk to capex and dividends	15%	12

Q4.2: "How important are the following factors in deciding the proportion of your debt that should be Fixed Rate versus Floating Rate including the impact of interest rate derivatives?"

Scale is Not Important (0) to Very Important (5).

Two factors receive little support:

- Limitations due to counterparty credit exposures (10%)
- What other companies in the same industry are doing (6%)

The last result is perhaps surprising. When it comes to the level of debt, firms believe that what competitors are doing is of substantial importance,¹¹ but this is not the case for the fixed/floating mix. This may partly be the case because, from a competitive perspective, debt structure is less important than the level of debt. Alternatively, firms may not consider what other companies in their industry are doing because such data are generally not available. If that is the case, the results of this survey will help companies in their benchmarking exercise.

Overall, when firms make decisions on fixed/floating mix, they often consider the liabilities by themselves without considering how these decisions interact with the assets and cash flows of the business. Sometimes this is purely about pricing, but in a number of cases, firms are actually comparing rates relative to expectations and to historical norms. This suggests that the investment management perspective often dominates the risk management perspective. We would urge firms to be cautious when following this approach.

It is, of course, possible that the risk management perspective is employed to set the target level and target range, while the investment management perspective allows firms to take a view on where they want to be in this range. Nevertheless, given that the target range is very broad (40%–63%), this still provides the investment management view a lot of leeway.

When we look at the responses across regions, the general conclusion holds: firms are more likely to consider elements of pricing to be important in their fixed/floating decision, rather than risk management elements. The one area where the difference between the two perspectives is the smallest is Japan.

¹¹ In our paper [Capital Structure](#) we report that 20% of firm consider the level of competitors' debt to be "important" (i.e., 4 or 5).

Maturity Structure of Debt

Figure 9 lists the factors that firms consider when deciding on the maturity structure of their debt, together with the fraction of firms that rank these factors to be important or very important (i.e., give it a 4 or 5).

Figure 9: Factors Determining Maturity Structure of Debt

Factors	% 4 or 5	% 4 or 5	N
Mitigate maturity concentrations		48%	217
Assets and liabilities matching		33%	212
Market depth		33%	209
Expected slope of the yield curve		30%	208
Current slope of yield curve		29%	210
Absolute credit spreads		24%	209
Current versus expected credit risk		19%	207
Credit spreads relative to history		16%	208
Evaluated on the total interest paid		14%	216
Long-term debt => riskier projects		12%	203
Mispricing of debt		12%	208
Evaluated on the interest volatility		8%	215
Other companies in industry		7%	203

Q4.3: "How important are the following factors in deciding on the Maturity Structure of your debt?"
Scale is Not Important (0) to Very Important (5).

By far the most important reason is that firms choose their maturity structure such that not too much debt matures during a particular period in time: 48% of all respondents consider this to be important. Clearly, these firms are worried about the inability to roll over their debt, and having a large fraction of debt mature at a particular point in time could therefore cause a liquidity crisis, which could put the future of the firm at risk. The second most important factor is maturity matching. One third of the respondents use the maturity of their assets to decide on the maturity of their liabilities. This is consistent with the view that firms may underinvest if they have to make investment decisions before their debt matures.

Both of these factors support the risk management perspective, according to which the structure of the liabilities depends on the assets of the firm. Other factors related to the risk management perspective are further down the list. 19% of the participants consider their expected credit risk when deciding on debt maturity: when they believe their prospects will improve, they borrow short-term; if they feel their prospects will deteriorate, they borrow long-term. What is surprising, however, is that 38% of all respondents do not feel that this factor is important at all, by giving it a score of 0 or 1 (not reported in Figure 11). The final risk management factor receives little support: only 12% of the global CFOs feel that the conflicts that arise between the firm and its bondholders when the firm has long-dated debt are important enough to affect debt maturity choice. Two interpretations of this finding are possible. First, these firms feel that it is difficult to change the risk profile of the firm to take advantage of bondholders, perhaps because of covenants. Second, the firms do not have sufficient debt for risk-changing tactics to matter.

All other factors mentioned by respondents ignore the interaction between maturity structure and the rest of the firm. They focus on pricing, market characteristics, the term-spread, or the evaluation of the treasury function.

After the first two risk management factors discussed earlier, the next most important factor is market depth, i.e., the ability to borrow large amounts at specific maturities. We do not believe that firms are ever seriously constrained in borrowing, except for very long maturities or when they already have large amounts of debt. However, imbalances in demand and supply at different maturities may have an impact on pricing, and firms may therefore decide to borrow at different maturities to take advantage of these imbalances. From a finance-theoretic perspective, this is obviously not a relevant consideration, but the fact that it ranks third in terms of importance in our survey, does suggest that it has a lot of merit in practice.

Next in terms of importance are measures of the term spread, i.e., the extra cost required for long-term versus short-term borrowing. Thirty percent of the survey respondents consider the expected slope of the yield curve to be important in their maturity decision, while 29% look at the current slope in making their decision. Obviously, by doing this, firms are taking a view on what they believe to be a fair term spread. This factor is followed by the absolute credit spread at different maturities, which is listed as important by 24% of the firms in the survey. Another 16% list the credit spreads at different maturities, relative to their historical levels as important. All of these considerations are purely based on pricing.

The remaining factors receive very little support from practitioners. Few firms are concerned about differences in debt mispricing at different maturities, the fact that the treasury function is evaluated based on the extent to which interest payments can be locked in, or what other firms in the industry are doing.

In sum, when it comes to deciding on the maturity of their debt, most firms do take a firm wide perspective and consider the interaction of the maturity structure with the rest of the business. However, factors related to market depth and the term spread are also important.

When we study the response across different regions, a small number of differences emerge. Making sure that maturities are spread out is the most important factor everywhere, except in Germany. Firms in Germany consider the expected slope of the yield curve to be the most important factor, followed jointly by the current slope and maturity concerns. It is not clear to us why this particular difference emerges, especially because firms in Western Europe outside of Germany adhere to the global rank order.

Currency Mix of Debt

Before asking companies what factors they consider to be important when thinking about issuing debt into a foreign currency or swapping it into a foreign currency, we wanted to make sure that we only dealt with companies that had, at the very least, considered this option. We therefore asked all companies whether they had issued debt into a foreign currency, swapped into a foreign currency or considered doing so. If not, we did not inquire any further into the factors that were important in making the decision. 57% of all respondents did indicate that they had issued or swapped into a foreign currency or considered it. The high was 90% in Latin America, and the low was 46% in Germany.

Figure 10 lists the relevant factors and the fraction of companies considering these factors to be important or very important.

Figure 10: Factors Determining Currency Mix of Debt

Factors	% 4 or 5	% 4 or 5	N
Relative interest rates		54%	125
Access to deeper capital markets		53%	125
Foreign cashflow or investment exposure		52%	122
Relative credit spreads		45%	122
Expected exchange rate movements		33%	126
Tax treatment of interest deductions		26%	121
Accounting implications		26%	121
Laws and regulations		24%	122
Tax on repatriated income or cash flows		19%	120
Other companies in industry		8%	119

Q4.5: "How important were the following factors in your decision to issue debt in foreign currencies or swap your local debt into foreign currencies?"
Scale is Not Important (0) to Very Important (5).

Three factors stand out:

- Relative interest rates (considered important by 54% of the firms)
- Access to deeper capital markets (53%)
- Foreign cash flow or investment exposure (52%)

Very few firms consider this last factor to be unimportant. In fact, if we compute the average response on a 6-point scale (from 0 to 5), foreign cash flow or investment exposure actually becomes the top factor. It is surprising, however, that considerations other than cash flow or investment exposure receive so much weight. In addition, to relative interest rates, a substantial fraction of firms (45%) consider relative credit spreads to be important, while one third mention expected exchange rate movements. Thus, only one of the top five factors takes a firm wide risk management type perspective. The other factors consider the liabilities by themselves.

The tax treatment of interest deductions, accounting implications, and laws and regulations are important factors for about a quarter of the firms, while 19% consider the tax on repatriated income of cash flows to be important. Finally, what other companies in the industry are doing does not seem to matter much. This latter result mimics the findings for the fixed/floating mix and the maturity structure of the debt.

Taken as a whole, the results on currency mix provide a mixed picture as to whether firms take a firm-wide approach or an investment management approach. Having foreign cash flow and/or investment exposure is clearly very important. But pricing considerations and market size also matter a lot, and firms admit that expected exchange rate movements are also important when they consider issuing debt in a foreign currency.

There are substantial differences in importance of factors across different regions. Figure 11 lists the ranking of the factors in each region.

Figure 11: Factors Determining Currency Mix of Debt - Regional Ranking

Target	All	Asia excluding Japan	Germany	Japan	Latin America	North America	Western Europe excluding Germany
Relative interest rates	1	1	2	1	3	1	3
Access to deeper capital markets	2	4	4	3	1	5	1
Foreign cashflow or investment exposure	3	5	1	6	2	2	2
Relative credit spreads	4	2	2	2	7	3	5
Expected exchange rate movements	5	3	5	4	5	8	8
Tax treatment of interest deductions	6	6	6	9	6	5	6
Accounting implications	6	8	8	6	7	3	3
Laws and regulations	8	6	6	5	7	9	7
Tax on repatriated income or cashflows	9	8	9	6	4	5	9
Other companies in industry	10	10	9	10	10	9	10

Q4.5: "How important were the following factors in your decision to issue debt in foreign currencies or swap your local debt into foreign currencies?"

Scale is Not Important (0) to Very Important (5). The regions Australia & New Zealand and Eastern Europe, Middle East & Africa are excluded because the sample sizes are too small

See Appendix III, Q4.5 for a breakdown of N by region.

In Asia, excluding Japan, relative interest rates are most important, followed by relative credit spreads and expected exchange rate movements. These are all factors purely related to pricing. Next in line is access to deeper capital markets. Foreign cash flow and investment exposure is only fifth in terms of importance. Price related factors also dominate in Japan—foreign cash flow and investment exposure ranks only sixth. It is surprising that Asian companies are less concerned about hedging foreign exposures than companies elsewhere, especially in light of the Asian crisis which left a number of firms with significant exposure to naked foreign currency debt.

Hedging foreign exposures is important in Europe, North America and Latin America. This discrepancy in responses between companies in Asia and companies elsewhere clearly warrants further investigation.

Not surprisingly, given the size of the capital market in North America, accessing deeper capital markets is relatively unimportant for companies from this region. In Latin America, on the other hand, accessing larger capital markets is the top reason for issuing foreign currency debt.

Except for the result on access to deeper capital markets, which can be explained by the size of the capital market of the home region, understanding why there are substantial differences across regions in the factors that affect the decision to issue foreign currency debt clearly requires more analysis.

Source of Debt

In this section we investigate how firms decide on whom to borrow from. Figure 12 lists all the factors in order of importance, where a factor is considered important if firms give it a 4 or 5 on a scale from 0 to 5.

Figure 12: Factors Determining Source of Debt

Factors	% 4 or 5	% 4 or 5	N
Relative credit spreads		63%	228
Access to deeper capital markets		56%	227
Covenants		53%	225
Transaction costs		47%	225
Documentation and disclosure		41%	224
Speed of execution		40%	225
Customization of borrowing terms		33%	215
Prior experience		32%	219
Signals to capital markets		31%	222
Need to obtain a rating		28%	225
Signal to competitors and customers		18%	217
Other companies in industry		9%	220
Other companies in rating category		8%	217

Q4.6: "How important are the following factors in your choice between bank debt, privately placed debt, and publicly issued debt?"
Scale is Not Important (0) to Very Important (5).

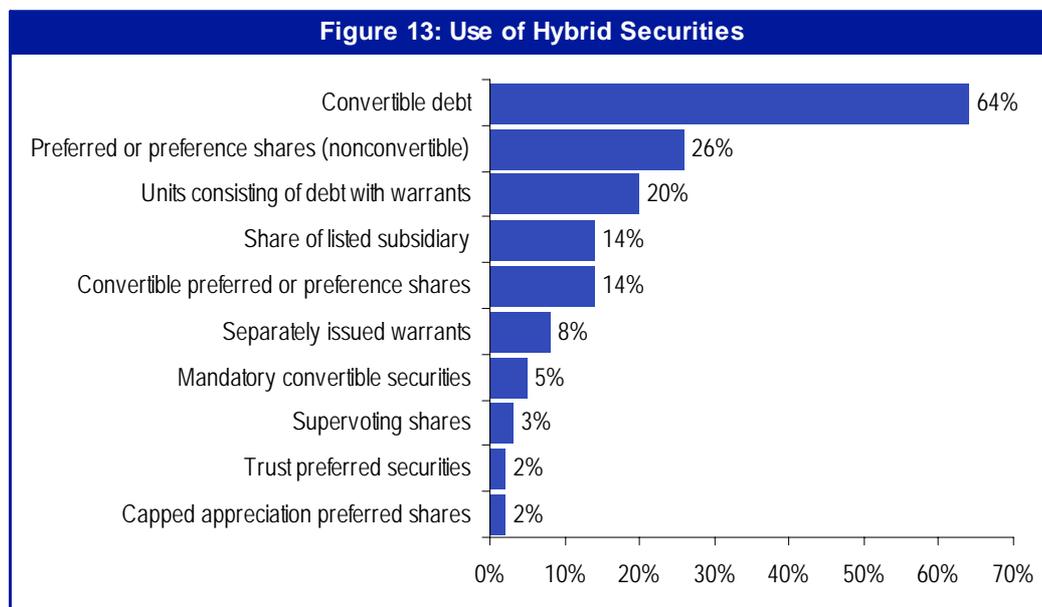
The relative credit spread is the most important factor; above everything else, firms choose to borrow where it is cheapest, with 63% of the survey participants indicating that this factor is important. Access to a larger capital market or a new investor base is considered important by 56% of all respondents. The covenants associated with the type of borrowing are important for 53% of respondents. Thus, firms are concerned that covenants, often associated with bank financing, may well limit their freedom to take decisions in the future. Next in line are a series of direct and indirect transaction costs. The direct transaction costs are considered to be important by 47% of the survey participants, the documentation and disclosure requirements are listed by 41% of the participants, while the speed of execution is important for 40% of the respondents.

One third of the firms value the ability to customize borrowing terms, which is generally a hallmark of bank borrowing. Prior experience is listed by 32% of the firms as being important, while 31% are concerned with the signal provided to capital markets. Finally, 28% mention the need to obtain a rating as an important consideration. Relatively unimportant are the signal provided to customers and competitors, and especially the behavior of other companies with the same rating or in the industry.

In sum, there is some support for the theoretical factors previously discussed, but it is certainly not overwhelming. Firms are mainly concerned with cost and access to larger capital markets, factors with less theoretical relevance. They do care about the covenants and measures of direct and indirect transaction costs, consistent with the theoretical discussion. The signal sent to capital markets receives only modest support as a factor that firms take into account in deciding where to go for debt financing.

Hybrid Securities

The final elements of debt structure we report on is actually broader than the previous elements in that it deals with hybrid structures, which contain elements of both debt and equity instruments. The goal of this section is to document what fraction of firms have issued hybrid securities and why they have done so. 74 firms indicated that they have at least one type of hybrid security in their capital structure. Of those 74, the following figure illustrates the types of securities being employed.



Q3.10: "Has your firm issued equities or equity-related securities with the following features?" N = 66.

Convertible bonds are by far the most popular hybrid; 64% of all firms that issued hybrids have employed convertible bonds. This is followed by preferred or preference shares, which are employed by 26% of all hybrid users, and debt with warrants employed by 20% of hybrid users. Two other structures are used by 10% or more of the hybrid issuers: convertible preferreds or preference shares (14%) and the separate issue of subsidiary shares (14%). All other structures, some of which are newly developed products, are used only sporadically. This does not imply that these products do not have features that appeal to a broader set of companies, but simply that they have been developed relatively recently.

We now turn to the factors firms take into account when deciding on the issuance of hybrid securities. The following figure lists the factors we proposed, together with the average response on a 6 point scale, where 0 indicates not important and 5 indicates very important. We also list the fraction of respondents who assign a factor a score of 4 or 5.

Figure 14: Factors Determining Hybrid Usage

Factors	\bar{x}	\bar{x}	% 4 or 5	N
Attractive pricing as an issuer		3.0	53%	60
Seeking to broaden base of investors		2.6	44%	57
Risk-return preferences of new investors		2.3	30%	57
Rating Agencies equity credit		2.1	26%	58
Accounting considerations		1.8	17%	58
Limited capacity for regular equity		1.7	17%	54
Tax considerations		1.6	14%	56
Constraints from existing investors		1.6	18%	55
Regulatory considerations		1.5	13%	56
Listing requirements		1.4	14%	56
Governance preferences of new investors		1.3	13%	55

Q3.11: "If so, which factors were more important in your decision to issue multiple classes of equity securities or equity-linked securities?"

Scale is Not Important (0) to Very Important (5).

Pricing is the most important factor, with an average score of 3.0; in addition, 53% of the respondents consider pricing to be important. Thus, while there is a strong academic view that new securities will be priced fairly, this is not supported by the survey respondents. The second factor in terms importance is also one that has less academic backing, namely broadening the investor base. It receives an average score of 2.6 and 44% of the respondents believe it to be important.

Next in line is trying to meet risk-return preferences of a particular set of investors. It receives an average score of 2.3, which is not very high. However, 30% of all respondents rank it in the highest two categories, which implies that this explanation has some merit. Meeting the risk-return preferences of a particular set of investors is essentially a transaction cost type motive. Given the number of securities available, most investors are able to combine securities into a portfolio such that they can obtain any type of desired payoff structure. But doing so may be very costly and require dynamic portfolio adjustments. If a number of features desired by a certain group of investors can be combined into a single security, this may substantially reduce the transactions costs investors have to incur in order to obtain their desired payoff structure.

Getting equity credit with the rating agencies also has merit; 26% of the survey participants believe this to be an important consideration, but the average score of 2.1 is rather modest. Other factors, such as responding to constraints imposed by existing investors, tax, accounting and regulatory considerations, listing requirements or meeting governance and control preferences of new investors receive very little support.

Overall, there is only limited support for the academic views on hybrid securities, which mainly relate to transaction costs, taxes, information and regulation. Only the transaction cost argument receives modest support. Instead, firms are more concerned about pricing and broadening their investor base.

Summary

- Firms are very sophisticated when it comes to deciding on debt structure. More than half of the firms have specific targets for fixed/floating mix, short-term/long-term debt, average maturity, duration, and the fraction of borrowing done from the banking sector
- Pricing is the most important element when considering debt structure and the issuance of hybrids
 - Firms consider current pricing as well as current prices relative to expectations and relative to historical norms. As such, firms often take a view on future price movements when structuring their debt
 - Firms often decide on the structure of their debt without fully considering the firm's assets. This is especially the case when firms decide on the fixed/floating mix of debt
 - When it comes to deciding on maturity structure and debt currency mix, the structure of the firm's assets is more important, but even for those elements of debt structure, pricing factors receive a lot of weight
- Overall, the link between academic and practitioner considerations is weaker than anticipated

Appendices

Appendix I: References

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Appendix II: Detailed Results

In this Appendix we present the results of the questions asked in the Structure of Debt section, plus other relevant questions and full segmental breakdowns.

As before, the symbol \bar{x} denotes the mean of a dataset, while \tilde{x} denotes the median. N denotes the size of the dataset. All questions in the survey were optional and some questions were not asked directly, depending on the answers to previous questions. Therefore, the number of responses, N , to different questions varies and is shown for each question.

This was an anonymous survey and to further protect the confidentiality of participants, results are shown on an aggregated basis and the statistics are only displayed if there are at least 5 datapoints in the sub-sample. Sub-samples without five datapoints are marked "<5" and the statistics are shown as "na".

4.1: Debt Structure Targets by Region, Ratings and Listing

Question: For which of the following do you have target ranges and what are those ranges (post derivatives)?

4.1: Debt Structure Targets by Region, Ratings and Listing									
	Fixed-Floating	Duration	Percent Maturing in One Year	Average Maturity	Percent Commercial Paper	Percent Bank Debt	Currency Mix	Year by Year Profile	N
All	74%	55%	57%	63%	44%	52%	44%	42%	178
Region									
Asia excluding Japan	20%	17%	19%	22%	19%	20%	9%	9%	90
Australia & New Zealand	8%	5%	4%	3%	1%	1%	5%	7%	76
Eastern Europe, Middle East and Germany	1%	1%	1%	3%	1%	1%	0%	1%	76
Germany	23%	15%	15%	16%	11%	15%	14%	15%	93
Japan	7%	7%	7%	7%	4%	7%	1%	0%	84
Latin America	12%	9%	10%	12%	8%	9%	9%	9%	77
North America	25%	14%	15%	13%	14%	13%	7%	14%	85
Western Europe excluding Germany	40%	31%	31%	38%	23%	28%	31%	23%	121
Undisclosed	1%	1%	1%	1%	1%	1%	1%	0%	76
Ratings									
Investment Grade	47%	28%	32%	33%	26%	29%	27%	25%	112
Non-investment Grade	22%	14%	15%	16%	12%	14%	12%	12%	86
Not Rated	3%	3%	4%	1%	1%	1%	1%	3%	76
Undisclosed	45%	41%	38%	47%	30%	37%	29%	27%	129
Listing									
Listed	66%	44%	47%	52%	38%	45%	37%	38%	146
Not Listed	34%	32%	31%	34%	21%	26%	22%	19%	107
Undisclosed	0%	0%	0%	0%	0%	0%	0%	0%	75

4.1: Debt Structure Targets by Region, Ratings and Listing

Question: For which of the following do you have target ranges and what are those ranges (post derivatives)?

4.1: Debt Structure Targets by Region, Ratings and Listing									
	Fixed-Floating	Duration	Percent Maturing in One Year	Average Maturity	Percent Commercial Paper	Percent Bank Debt	Currency Mix	Year by Year Profile	N
All	74%	55%	57%	63%	44%	52%	44%	42%	178
Industry									
Automobiles	4%	3%	1%	1%	3%	3%	0%	0%	78
Business Services	4%	1%	1%	3%	1%	3%	4%	3%	78
Chemicals	10%	6%	7%	7%	6%	5%	5%	4%	84
Consumer	24%	24%	23%	25%	21%	20%	15%	20%	87
Consumer Finance	4%	5%	5%	4%	3%	5%	0%	0%	80
Diversified & Conglomerates	0%	1%	0%	4%	0%	0%	3%	3%	76
Health Care & Pharmaceuticals	6%	3%	4%	4%	3%	4%	3%	4%	77
Industrials and Materials	31%	25%	23%	27%	17%	23%	20%	21%	95
Media	6%	4%	4%	2%	2%	4%	5%	1%	82
Metals & Mining	5%	3%	4%	4%	4%	4%	1%	1%	79
Oil & Gas	11%	5%	11%	9%	5%	6%	8%	6%	80
Technology	11%	9%	10%	10%	5%	9%	8%	5%	80
Telecommunications	5%	4%	4%	5%	4%	4%	4%	4%	78
Transportation Services	15%	9%	8%	9%	7%	7%	9%	6%	85
Utilities	10%	5%	6%	9%	6%	6%	6%	5%	81
Undisclosed & Other	10%	8%	7%	8%	7%	8%	2%	6%	83

4.2: Factors Affecting Fixed-Floating Mix

Question: How important are the following factors in deciding the proportion of your debt that should be Fixed Rate versus Floating Rate including the impact of interest rate derivatives?

Results of Question 4.2: Factors Affecting Fixed-Floating Mix										
	Not Important							Very Important		N
	0	1	2	3	4	5	\bar{x}	\tilde{x}		
Floating rate => volatile EPS	21%	16%	17%	21%	20%	5%	2.2	2.0	222	
Risk to cap exp and dividends	28%	24%	17%	16%	13%	2%	1.7	1.0	216	
Floating cheaper on average	10%	6%	25%	23%	24%	12%	2.8	3.0	220	
Fix-floating spread v historical norm	13%	12%	22%	27%	19%	7%	2.5	3.0	212	
Fix-floating spread v expectations	10%	12%	21%	26%	24%	7%	2.6	3.0	213	
Current long term rates v historical norm	9%	6%	17%	31%	28%	9%	2.9	3.0	215	
Current long term rates v expectations	9%	9%	16%	26%	28%	12%	2.9	3.0	215	
Correlation of operations and rates	13%	18%	20%	22%	17%	10%	2.4	2.0	216	
Interest size relative to operations	13%	12%	18%	24%	23%	10%	2.6	3.0	210	
Rate volatility relative to operations	13%	14%	19%	25%	19%	10%	2.5	3.0	209	
Counterparty credit exposures	27%	31%	17%	16%	6%	3%	1.5	1.0	205	
Other companies in my industry	34%	29%	20%	12%	4%	1%	1.3	1.0	213	
Accounting consequences	26%	19%	20%	18%	12%	5%	1.8	2.0	213	
Ability to access markets	30%	14%	17%	15%	18%	6%	2.0	2.0	209	

4.2: Factors Affecting Fixed-Floating Mix by Region

Question: How important are the following factors in deciding the proportion of your debt that should be Fixed Rate versus Floating Rate including the impact of interest rate derivatives?

Results of Question 4.2: Factors Affecting Fixed-Floating Mix by Region																														
	All			Asia excluding Japan			Australia & New Zealand			Eastern Europe, Middle East & Africa			Germany			Japan			Latin America			North America			Western Europe excluding Germany			Undisclosed		
	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N			
Floating rate => volatile EPS	2.2	2.0	222	2.6	3.0	34	2.7	3.0	6	na	na	<5	1.6	1.0	46	2.5	3.0	17	1.8	1.5	10	2.6	3.0	25	2.1	2.0	79	na	na	<5
Risk to cap exp and dividends	1.7	1.0	216	2.5	2.0	33	0.7	1.0	6	na	na	<5	1.2	1.0	47	2.2	2.5	16	2.6	3.0	9	1.6	1.0	25	1.5	1.0	75	na	na	<5
Floating cheaper on average	2.8	3.0	220	2.7	3.0	33	2.3	2.0	6	na	na	<5	2.5	3.0	48	2.8	3.0	18	3.0	4.0	9	3.5	4.0	25	2.9	3.0	76	na	na	<5
Fix-floating spread v historical norm	2.5	3.0	212	3.2	3.5	32	2.7	2.5	6	na	na	<5	1.8	2.0	46	2.9	3.0	16	3.2	3.0	9	2.6	2.0	25	2.4	2.5	74	na	na	<5
Fix-floating spread v expectations	2.6	3.0	213	3.4	4.0	33	3.3	4.0	6	na	na	<5	2.1	2.0	45	2.8	3.0	16	3.7	4.0	9	2.6	2.0	25	2.4	3.0	74	na	na	<5
Current long term rates v historical norm	2.9	3.0	215	3.3	3.0	34	2.8	2.5	6	na	na	<5	2.7	3.0	45	3.1	3.0	17	3.9	4.0	9	2.9	3.0	25	2.8	3.0	75	na	na	<5
Current long term rates v expectations	2.9	3.0	215	3.5	4.0	34	3.5	4.0	6	na	na	<5	2.3	2.0	45	3.0	3.0	16	4.2	4.0	9	2.7	3.0	25	2.9	3.0	75	na	na	<5
Correlation of operations and rates	2.4	2.0	216	3.0	3.0	33	2.0	1.5	6	na	na	<5	1.7	1.0	45	2.3	2.0	16	3.1	3.5	10	2.4	2.0	25	2.6	3.0	76	na	na	<5
Interest size relative to operations	2.6	3.0	210	3.2	3.0	34	3.2	3.0	6	na	na	<5	2.0	2.0	44	3.0	3.0	16	3.0	3.0	9	2.5	2.0	22	2.6	3.0	74	na	na	<5
Rate volatility relative to operations	2.5	3.0	209	3.2	3.0	33	2.8	3.0	6	na	na	<5	2.0	2.0	44	2.6	2.5	16	3.2	4.0	9	2.7	2.5	22	2.4	3.0	75	na	na	<5
Counterparty credit exposures	1.5	1.0	205	2.6	3.0	32	1.0	1.0	6	na	na	<5	1.1	1.0	45	2.3	2.0	16	1.9	1.0	9	1.2	1.0	22	1.3	1.0	72	na	na	<5
Other companies in my industry	1.3	1.0	213	1.5	1.0	33	1.3	1.0	6	na	na	<5	1.0	1.0	45	1.6	2.0	16	1.8	2.0	10	1.8	1.5	24	1.1	1.0	74	na	na	<5
Accounting consequences	1.8	2.0	213	2.4	3.0	33	1.3	1.5	6	na	na	<5	1.4	1.0	43	2.4	2.0	17	1.9	2.0	10	1.8	2.0	24	1.8	2.0	75	na	na	<5
Ability to access markets	2.0	2.0	209	3.2	4.0	33	2.0	2.0	6	na	na	<5	1.7	1.0	43	2.1	2.0	17	1.7	1.5	10	1.7	2.0	24	1.6	1.0	71	na	na	<5

Means and Medians in Percent

4.2: Factors Affecting Fixed-Floating Mix by Industry

Question: How important are the following factors in deciding the proportion of your debt that should be Fixed Rate versus Floating Rate including the impact of interest rate derivatives?

Results of Question 4.2: Factors Affecting Fixed-Floating Mix by Industry																																																			
	All			Automobiles			Business Services			Chemicals			Consumer			Consumer Finance			Diversified/Conglomerates			Health Care & Pharmaceuticals			Industrials and Materials			Media			Metals and Mining			Oil and Gas			Technology			Telecommunications			Transportation Services			Utilities			Undisclosed & Other		
	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N												
Floating rate => volatile EPS	2.2	2.0	222	1.4	1.0	7	3.2	3.5	6	1.8	2.0	16	2.4	3.0	35	na	na	<5	1.8	3.0	5	1.9	1.5	10	2.0	2.0	47	1.3	1.0	9	1.0	1.0	7	2.6	3.0	12	1.8	2.0	13	2.1	2.0	7	2.8	3.0	16	3.6	4.0	12	1.7	1.5	16
Risk to cap exp and dividends	1.7	1.0	216	0.7	0.0	7	1.8	1.5	6	1.2	1.0	16	2.0	2.0	33	na	na	<5	1.6	2.0	5	1.6	1.0	10	1.7	1.0	46	0.8	0.0	9	1.3	0.0	7	2.2	2.5	12	2.1	2.0	13	2.0	2.0	7	1.9	2.0	14	1.9	1.5	10	1.5	1.0	17
Floating cheaper on average	2.8	3.0	220	2.9	3.0	8	3.7	4.0	6	3.2	3.0	15	2.9	3.0	35	3.0	3.0	5	2.2	2.0	5	2.9	2.5	10	2.6	3.0	46	3.4	4.0	9	3.3	4.0	7	3.2	2.5	12	2.8	3.0	13	2.9	4.0	7	2.5	3.0	15	2.6	2.5	10	2.2	3.0	17
Fix-floating spread v historical norm	2.5	3.0	212	2.6	3.0	7	2.8	3.0	6	2.1	2.0	15	2.8	3.0	33	na	na	<5	1.4	1.0	5	2.3	2.0	10	2.5	3.0	46	2.3	2.0	9	2.0	1.5	6	3.2	3.0	12	2.9	3.0	13	2.7	3.0	7	2.1	2.0	14	3.1	3.0	9	1.8	1.0	17
Fix-floating spread v expectations	2.6	3.0	213	2.6	3.0	7	3.0	3.0	6	2.0	2.0	15	3.0	3.0	33	na	na	<5	2.8	4.0	5	2.4	3.0	10	2.4	3.0	46	2.9	3.5	10	2.1	2.0	7	3.8	4.5	12	2.6	3.0	13	2.1	2.0	7	2.6	3.0	15	2.8	3.0	9	2.5	3.0	15
Current long term rates v historical norm	2.9	3.0	215	2.9	3.0	7	2.8	3.0	6	2.8	3.0	16	3.1	3.0	34	na	na	<5	2.2	2.0	5	2.5	2.5	10	2.9	3.0	46	2.3	2.0	9	2.4	2.0	7	3.3	3.0	12	2.9	3.0	13	3.0	3.0	7	3.1	3.0	15	3.1	3.0	10	2.9	4.0	15
Current long term rates v expectations	2.9	3.0	215	2.6	3.0	7	3.2	3.0	6	2.6	3.0	16	3.1	3.0	35	na	na	<5	3.8	4.0	5	2.4	2.5	10	2.8	3.0	46	2.8	3.0	9	2.1	2.0	7	3.5	3.0	12	2.9	3.0	13	2.6	2.0	7	3.3	4.0	15	3.1	3.0	9	2.6	4.0	15
Correlation of operations and rates	2.4	2.0	216	1.9	2.0	7	3.3	4.0	6	2.3	2.0	16	2.5	3.0	35	na	na	<5	2.4	2.0	5	1.3	1.0	10	2.3	2.0	46	2.3	2.0	9	2.3	2.0	7	2.8	3.0	12	2.8	3.0	13	2.4	3.0	7	3.0	3.0	15	2.9	3.0	10	2.3	2.0	15
Interest size relative to operations	2.6	3.0	210	1.7	2.0	7	3.8	4.0	6	2.2	2.0	15	2.6	3.0	34	na	na	<5	2.8	3.0	5	1.7	1.5	10	2.3	2.0	43	2.6	2.5	10	3.3	4.0	7	3.2	3.0	12	3.0	3.0	13	3.0	3.0	7	2.9	3.0	15	3.1	3.0	9	2.4	2.5	14
Rate volatility relative to operations	2.5	3.0	209	1.9	2.0	7	3.8	4.0	6	2.0	2.0	16	2.7	3.0	32	na	na	<5	2.8	3.0	5	1.4	1.0	10	2.5	2.0	44	2.1	2.0	10	2.9	4.0	7	2.6	3.0	12	2.7	3.0	13	2.4	2.0	7	2.9	3.0	14	3.2	4.0	9	2.5	3.0	14
Counterparty credit exposures	1.5	1.0	205	1.9	2.0	8	2.0	1.5	6	1.0	1.0	15	1.4	1.0	33	na	na	<5	1.0	0.0	5	1.6	1.5	10	1.5	1.0	42	0.4	0.0	8	0.9	1.0	7	1.6	1.0	12	2.5	3.0	13	2.1	2.0	7	1.2	1.0	13	1.9	1.0	9	1.7	1.5	14
Other companies in my industry	1.3	1.0	213	1.4	1.0	7	1.0	1.0	6	1.1	1.0	15	1.3	1.0	34	na	na	<5	0.2	0.0	5	1.1	1.0	10	1.2	1.0	45	0.9	1.0	10	0.6	1.0	7	1.8	2.0	12	1.7	2.0	13	1.7	2.0	7	1.7	2.0	15	2.2	2.0	9	0.7	1.0	15
Accounting consequences	1.8	2.0	213	2.2	2.0	6	3.7	4.5	6	1.9	2.0	15	1.4	1.0	33	na	na	<5	1.4	1.0	5	2.7	2.5	10	1.8	2.0	45	1.4	1.5	10	0.7	1.0	7	1.5	2.0	12	2.3	2.0	13	1.9	2.0	7	1.7	2.0	15	2.8	2.5	10	1.4	1.0	15
Ability to access markets	2.0	2.0	209	1.8	1.0	6	2.6	2.0	5	1.6	1.0	15	1.9	2.0	33	na	na	<5	na	na	<5	1.2	1.5	10	1.8	2.0	45	2.2	2.0	9	0.9	0.0	7	1.7	1.5	12	3.2	4.0	13	2.7	3.0	7	1.5	2.0	15	2.0	2.0	9	2.1	2.0	15

Means and Medians in Percent

4.2: Factors Affecting Fixed-Floating Mix by Ratings and Listing

Question: How important are the following factors in deciding the proportion of your debt that should be Fixed Rate versus Floating Rate including the impact of interest rate derivatives?

Results of Question 4.2: Factors Affecting Fixed-Floating Mix by Ratings and Listing																											
	Ratings									Listing																	
	All			Investment Grade			Non-Investment Grade			Not Rated			Undisclosed			Listed			Not Listed			Undisclosed					
	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>
Floating rate => volatile EPS	2.2	2.0	222	2.4	2.0	75	2.6	3.0	26	2.6	3.0	5	1.9	1.5	116	2.5	3.0	149	1.5	1.0	71	na	na	<5			
Risk to cap exp and dividends	1.7	1.0	216	1.5	1.0	73	2.3	2.5	26	1.8	1.0	5	1.7	1.0	112	1.9	2.0	143	1.3	1.0	71	na	na	<5			
Floating cheaper on average	2.8	3.0	220	3.2	3.0	74	3.0	3.0	26	2.8	3.0	5	2.5	3.0	115	3.0	3.0	146	2.4	2.0	72	na	na	<5			
Fix-floating spread v historical norm	2.5	3.0	212	2.6	3.0	71	2.6	3.0	26	2.4	2.0	5	2.4	3.0	110	2.6	3.0	142	2.3	2.0	68	na	na	<5			
Fix-floating spread v expectations	2.6	3.0	213	2.6	3.0	71	2.4	3.0	25	2.4	2.0	5	2.7	3.0	112	2.6	3.0	142	2.7	3.0	69	na	na	<5			
Current long term rates v historical norm	2.9	3.0	215	3.0	3.0	72	3.0	3.0	25	3.0	3.0	5	2.8	3.0	113	3.0	3.0	143	2.7	3.0	70	na	na	<5			
Current long term rates v expectations	2.9	3.0	215	2.8	3.0	71	2.8	3.0	25	4.2	4.0	5	2.9	3.0	114	2.9	3.0	143	2.9	3.0	70	na	na	<5			
Correlation of operations and rates	2.4	2.0	216	2.7	3.0	73	2.2	2.0	25	2.8	3.0	5	2.3	2.0	113	2.6	3.0	144	2.2	2.0	70	na	na	<5			
Interest size relative to operations	2.6	3.0	210	2.8	3.0	69	2.8	3.0	24	3.0	4.0	5	2.5	3.0	112	2.8	3.0	141	2.3	2.0	68	na	na	<5			
Rate volatility relative to operations	2.5	3.0	209	2.7	3.0	69	2.9	3.0	24	2.6	3.0	5	2.4	2.0	111	2.7	3.0	138	2.2	3.0	70	na	na	<5			
Counterparty credit exposures	1.5	1.0	205	1.3	1.0	70	1.9	2.0	24	2.0	2.0	5	1.6	1.0	106	1.7	1.0	136	1.3	1.0	67	na	na	<5			
Other companies in my industry	1.3	1.0	213	1.6	1.0	71	1.9	2.0	25	1.4	1.0	5	1.0	1.0	112	1.6	1.0	141	0.8	0.0	70	na	na	<5			
Accounting consequences	1.8	2.0	213	1.9	2.0	70	2.2	2.0	25	2.6	2.0	5	1.7	1.0	113	2.1	2.0	143	1.2	0.5	68	na	na	<5			
Ability to access markets	2.0	2.0	209	1.8	2.0	71	2.4	3.0	25	2.8	4.0	5	1.9	2.0	108	2.2	2.0	140	1.5	1.0	67	na	na	<5			

Means and Medians in Percent

4.3: Factors Affecting Maturity Structure

Question: How important are the following factors in deciding on the Maturity Structure of your debt?

Results of Question 4.3: Factors Affecting Maturity Structure										
	Not Important							Very Important		<i>N</i>
	0	1	2	3	4	5	\bar{x}	\tilde{x}		
Evaluated on the interest volatility	38%	21%	18%	15%	6%	3%	1.4	1.0	215	
Evaluated on the total interest paid	26%	17%	19%	24%	11%	3%	1.9	2.0	216	
Current slope of yield curve	12%	12%	20%	27%	22%	7%	2.6	3.0	210	
Expected slope of the yield curve	13%	11%	18%	28%	21%	9%	2.6	3.0	208	
Mitigate maturity concentrations	8%	7%	15%	21%	30%	18%	3.1	3.0	217	
Mispricing of debt	23%	26%	19%	20%	10%	2%	1.8	2.0	208	
Current versus expected credit risk	18%	20%	23%	20%	15%	4%	2.1	2.0	207	
Absolute credit spreads	14%	14%	21%	27%	20%	4%	2.4	3.0	209	
Credit spreads relative to history	16%	15%	27%	26%	14%	2%	2.1	2.0	208	
Market depth	13%	11%	19%	24%	23%	9%	2.6	3.0	209	
Long-term debt => riskier projects	35%	20%	19%	14%	10%	2%	1.5	1.0	203	
Assets and liabilities matching	11%	15%	19%	22%	19%	14%	2.7	3.0	212	
Other companies in industry	31%	31%	18%	13%	4%	2%	1.4	1.0	203	

4.3: Factors Affecting Maturity Structure by Region

Question: How important are the following factors in deciding on the Maturity Structure of your debt?

Results of Question 4.3: Factors Affecting Maturity Structure by Region																														
	All			Asia excluding Japan			Australia & New Zealand			Eastern Europe, Middle East & Africa			Germany			Japan			Latin America			North America			Western Europe excluding Germany			Undisclosed		
	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N			
Evaluated on the interest volatility	1.4	1.0	215	2.6	3.0	30	1.2	1.0	6	na	na	<5	1.2	1.0	45	1.8	2.0	20	1.1	1.0	10	0.8	0.0	23	1.2	1.0	76	na	na	<5
Evaluated on the total interest paid	1.9	2.0	216	2.8	3.0	31	3.3	3.5	6	na	na	<5	1.6	1.0	45	2.0	2.0	20	1.6	1.0	10	1.5	1.0	23	1.6	2.0	76	na	na	<5
Current slope of yield curve	2.6	3.0	210	3.2	3.5	30	2.8	2.5	6	na	na	<5	2.4	2.0	43	3.0	3.0	20	2.9	3.0	8	2.9	3.0	22	2.1	2.0	76	na	na	<5
Expected slope of the yield curve	2.6	3.0	208	3.4	4.0	30	3.0	3.0	6	na	na	<5	2.6	3.0	44	2.8	3.0	20	3.4	3.0	8	2.7	3.0	23	2.0	2.0	73	na	na	<5
Mitigate maturity concentrations	3.1	3.0	217	3.7	4.0	33	2.7	2.5	6	na	na	<5	2.2	2.0	43	3.7	4.0	21	4.1	4.0	10	3.9	4.0	23	2.9	3.0	77	na	na	<5
Mispricing of debt	1.8	2.0	208	2.6	3.0	30	1.0	1.0	6	na	na	<5	1.1	1.0	42	2.3	2.0	20	2.3	2.0	9	1.7	1.0	23	1.6	1.0	74	na	na	<5
Current versus expected credit risk	2.1	2.0	207	2.8	3.0	31	1.8	1.5	6	na	na	<5	2.0	2.0	42	2.5	2.5	20	2.7	2.0	9	1.8	2.0	23	1.7	2.0	73	na	na	<5
Absolute credit spreads	2.4	3.0	209	3.2	3.0	31	2.3	3.0	6	na	na	<5	2.0	2.0	43	2.6	3.0	20	3.3	4.0	9	1.8	1.0	23	2.2	2.0	74	na	na	<5
Credit spreads relative to history	2.1	2.0	208	3.1	3.0	31	1.8	1.5	6	na	na	<5	1.9	2.0	43	2.4	2.0	20	2.9	3.0	9	1.9	2.0	23	1.8	2.0	73	na	na	<5
Market depth	2.6	3.0	209	3.2	3.0	31	3.3	3.5	6	na	na	<5	2.0	2.0	43	3.1	3.0	20	3.2	4.0	9	2.7	3.0	23	2.4	2.5	74	na	na	<5
Long-term debt => riskier projects	1.5	1.0	203	2.6	3.0	30	0.2	0.0	5	na	na	<5	1.0	1.0	42	2.2	2.0	19	2.1	2.0	9	0.9	0.0	23	1.4	1.0	72	na	na	<5
Assets and liabilities matching	2.7	3.0	212	3.7	4.0	32	2.3	2.5	6	na	na	<5	2.2	2.0	43	2.5	3.0	20	3.8	4.0	9	2.1	2.0	23	2.7	3.0	75	na	na	<5
Other companies in industry	1.4	1.0	203	2.0	2.0	30	1.0	1.0	6	na	na	<5	0.8	0.0	41	1.9	2.0	19	2.2	2.0	9	1.4	1.0	22	1.2	1.0	72	na	na	<5

Means and Medians in Percent

4.3: Factors Affecting Maturity Structure by Industry

Question: How important are the following factors in deciding on the Maturity Structure of your debt?

Results of Question 4.3: Factors Affecting Maturity Structure by Industry																																																			
	All			Automobiles			Business Services			Chemicals			Consumer			Consumer Finance			Diversified/Conglomerates			Health Care & Pharmaceuticals			Industrials and Materials			Media			Metals and Mining			Oil and Gas			Technology			Telecommunications			Transportation Services			Utilities			Undisclosed & Other		
	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N												
Evaluated on the interest volatility	1.4	1.0	215	1.3	0.5	8	2.5	2.5	6	0.9	0.0	15	1.1	0.5	34	2.2	2.0	5	1.5	0.5	6	1.3	0.5	10	1.2	1.0	45	0.6	0.0	9	1.4	1.0	7	1.8	1.5	12	2.3	3.0	13	1.5	1.0	6	1.3	1.0	14	2.1	2.0	10	1.1	1.0	15
Evaluated on the total interest paid	1.9	2.0	216	1.5	0.0	8	2.2	2.0	6	1.5	1.0	15	2.0	2.5	34	3.0	3.0	5	1.8	1.5	6	1.5	1.0	10	1.7	2.0	45	1.4	1.0	9	2.0	2.0	7	1.8	2.0	12	2.9	3.0	13	1.8	2.0	6	1.9	2.0	15	2.0	2.5	10	1.5	2.0	15
Current slope of yield curve	2.6	3.0	210	2.9	3.0	7	3.5	4.0	6	2.4	2.0	15	2.6	3.0	34	3.8	3.5	6	2.5	3.0	6	2.0	2.5	10	2.1	2.0	45	1.9	1.0	9	3.1	4.0	7	3.1	3.5	12	2.7	3.5	6	2.7	3.0	13	2.4	2.0	8	2.6	3.0	14			
Expected slope of the yield curve	2.6	3.0	208	3.4	4.0	7	2.7	2.5	6	2.7	3.0	15	2.5	3.0	33	3.8	4.0	5	3.2	4.0	5	1.8	1.5	10	2.1	2.0	44	1.9	1.5	10	3.2	4.0	6	3.2	3.0	12	2.9	3.0	13	2.5	3.0	6	3.0	3.0	13	3.0	3.0	9	2.6	3.0	14
Mitigate maturity concentrations	3.1	3.0	217	2.6	3.0	7	3.7	3.5	6	2.5	3.0	16	2.8	3.0	35	3.8	4.0	6	2.5	2.5	6	3.4	4.0	10	2.9	3.0	44	3.2	3.0	9	3.0	4.0	7	3.8	4.0	12	3.4	4.0	13	3.8	4.0	6	3.5	4.0	15	3.5	4.0	11	3.0	3.0	14
Mispricing of debt	1.8	2.0	208	1.1	1.0	7	2.0	1.5	6	1.6	1.0	15	1.5	1.0	34	2.8	3.0	6	na	na	<5	2.1	2.0	10	1.3	1.0	44	1.7	2.0	9	2.0	2.0	7	2.3	2.5	12	2.8	3.0	13	2.0	2.5	6	1.6	1.0	13	2.4	2.0	9	1.6	1.5	14
Current versus expected credit risk	2.1	2.0	207	1.9	2.0	7	2.2	2.0	6	1.5	2.0	15	2.3	2.0	33	2.6	2.0	5	na	na	<5	2.1	2.0	10	1.6	2.0	44	1.3	1.0	9	2.6	3.0	7	2.2	2.0	12	2.5	3.0	13	2.3	2.5	6	2.6	3.0	13	2.8	3.0	9	2.2	3.0	14
Absolute credit spreads	2.4	3.0	209	2.4	3.0	7	2.5	2.5	6	2.3	2.0	15	2.6	3.0	33	3.3	3.5	6	3.2	3.0	5	1.8	1.0	10	1.7	2.0	43	1.6	2.0	10	3.0	3.0	7	2.9	3.0	12	2.8	3.0	13	2.5	3.0	6	2.4	3.0	13	2.8	3.0	9	2.4	3.0	14
Credit spreads relative to history	2.1	2.0	208	1.9	2.0	7	2.3	2.5	6	2.4	2.0	15	2.3	2.0	32	2.8	3.0	5	3.0	3.0	5	1.9	2.0	10	1.6	2.0	43	1.6	2.0	10	2.4	3.0	7	2.4	2.5	12	2.8	3.0	13	2.2	2.5	6	1.9	2.0	14	2.8	3.0	9	2.1	2.0	14
Market depth	2.6	3.0	209	1.9	2.0	7	3.3	4.0	6	2.1	2.0	15	2.9	3.0	33	3.4	4.0	5	2.0	2.5	6	2.5	2.0	10	2.1	2.0	42	2.7	3.0	10	2.6	3.0	7	2.9	3.0	12	3.2	3.0	13	3.3	3.5	6	3.2	3.0	13	3.0	3.0	10	2.3	2.5	14
Long-term debt => riskier projects	1.5	1.0	203	0.9	1.0	7	1.2	0.5	6	0.8	0.0	15	1.6	1.5	32	2.4	2.0	5	0.6	0.0	5	1.2	1.0	10	1.3	1.0	43	1.3	0.0	8	1.6	1.0	7	2.2	2.0	12	2.7	3.0	13	1.8	1.5	6	1.1	1.0	12	2.3	2.0	8	1.4	1.5	14
Assets and liabilities matching	2.7	3.0	212	1.9	1.0	7	3.0	2.5	6	2.5	2.0	16	2.5	3.0	34	3.0	3.0	5	1.8	0.0	5	2.5	3.0	10	2.7	3.0	45	1.3	1.0	8	1.7	1.0	7	3.3	3.0	12	3.2	3.5	12	2.2	2.5	6	3.3	4.0	13	3.8	4.0	12	2.7	3.0	14
Other companies in industry	1.4	1.0	203	1.2	0.5	6	1.0	1.0	6	1.4	1.5	14	1.3	1.0	34	2.8	3.0	5	0.8	0.0	5	1.0	1.0	9	0.9	1.0	43	1.0	1.0	9	0.7	1.0	6	2.1	2.0	11	2.2	2.0	13	2.0	2.0	6	1.8	2.0	13	2.1	2.0	9	0.9	1.0	14

Means and Medians in Percent

4.3: Factors Affecting Maturity Structure by Ratings and Listing

Question: How important are the following factors in deciding on the Maturity Structure of your debt?

Results of Question 4.3: Factors Affecting Maturity Structure by Ratings and Listing																								
	Ratings									Listing														
	All			Investment Grade			Non-investment Grade			Not Rated			Undisclosed			Listed			Not Listed			Undisclosed		
	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N
Evaluated on the interest volatility	1.4	1.0	215	1.3	1.0	73	1.3	1.0	25	2.0	2.0	5	1.4	1.0	112	1.4	1.0	145	1.3	1.0	69	na	na	<5
Evaluated on the total interest paid	1.9	2.0	216	1.8	2.0	73	1.8	2.0	25	2.0	2.0	5	1.9	2.0	113	1.9	2.0	146	1.7	2.0	69	na	na	<5
Current slope of yield curve	2.6	3.0	210	2.8	3.0	71	2.6	3.0	23	2.6	3.0	5	2.4	3.0	111	2.8	3.0	140	2.0	2.0	69	na	na	<5
Expected slope of the yield curve	2.6	3.0	208	2.9	3.0	70	2.5	3.0	25	3.4	4.0	5	2.4	3.0	108	2.8	3.0	141	2.2	2.0	66	na	na	<5
Mitigate maturity concentrations	3.1	3.0	217	3.5	4.0	73	3.8	4.0	25	3.8	4.0	5	2.7	3.0	114	3.4	4.0	148	2.5	3.0	68	na	na	<5
Mispricing of debt	1.8	2.0	208	1.8	2.0	71	1.9	2.0	25	1.8	1.0	5	1.7	1.0	107	2.0	2.0	141	1.1	1.0	66	na	na	<5
Current versus expected credit risk	2.1	2.0	207	2.1	2.0	70	1.8	2.0	25	2.6	3.0	5	2.1	2.0	107	2.2	2.0	140	1.8	2.0	66	na	na	<5
Absolute credit spreads	2.4	3.0	209	2.7	3.0	71	1.8	2.0	25	2.6	3.0	5	2.3	2.0	108	2.5	3.0	140	2.1	2.0	68	na	na	<5
Credit spreads relative to history	2.1	2.0	208	2.4	3.0	70	1.9	2.0	25	2.6	3.0	5	2.0	2.0	108	2.3	2.0	140	1.8	2.0	67	na	na	<5
Market depth	2.6	3.0	209	3.0	3.0	71	3.3	3.0	25	3.0	4.0	5	2.2	2.0	108	3.0	3.0	140	1.8	1.5	68	na	na	<5
Long-term debt => riskier projects	1.5	1.0	203	1.2	1.0	69	1.5	1.0	24	1.8	1.0	5	1.7	1.0	105	1.6	1.0	138	1.3	1.0	64	na	na	<5
Assets and liabilities matching	2.7	3.0	212	2.6	3.0	72	2.7	3.0	25	3.0	3.0	5	2.7	3.0	110	2.7	3.0	144	2.7	3.0	67	na	na	<5
Other companies in industry	1.4	1.0	203	1.7	2.0	67	1.8	1.0	24	2.0	2.0	5	1.1	1.0	107	1.6	1.0	137	0.9	0.0	65	na	na	<5

Means and Medians in Percent

4.4: Foreign Debt Issuance by Region, Ratings and Listing

Question: Have you issued or considered issuing debt in foreign currencies or swapping your local debt into foreign currencies?

Results of Question 4.4: Foreign Debt Issuance by Region, Ratings and Listing			
	Yes	No	N
All	57%	43%	239
Region			
Asia excluding Japan	71%	29%	35
Australia & New Zealand	67%	33%	6
Eastern Europe, Middle East & Africa	na	na	<5
Germany	46%	54%	50
Japan	60%	40%	25
Latin America	90%	10%	10
North America	54%	46%	24
Western Europe excluding Germany	52%	48%	84
Undisclosed	na	na	<5
Ratings			
Investment Grade	70%	30%	81
Non-investment Grade	70%	30%	27
Not Rated	60%	40%	5
Undisclosed	45%	55%	126
Listing			
Listed	65%	35%	157
Not Listed	42%	58%	79
Undisclosed	na	na	<5

4.4: Foreign Debt Issuance by Industry

Question: Have you issued or considered issuing debt in foreign currencies or swapping your local debt into foreign currencies?

Results of Question 4.4: Foreign Debt Issuance by Industry			
	Yes	No	<i>N</i>
All	57%	43%	239
Industry			
Automobiles	56%	44%	9
Business Services	80%	20%	5
Chemicals	73%	27%	15
Consumer	44%	56%	39
Consumer Finance	67%	33%	6
Diversified & Conglomerates	60%	40%	5
Health Care & Pharmaceuticals	50%	50%	10
Industrials and Materials	56%	44%	50
Media	45%	55%	11
Metals & Mining	33%	67%	9
Oil & Gas	73%	27%	11
Technology	57%	43%	14
Telecommunications	88%	13%	8
Transportation Services	69%	31%	16
Utilities	77%	23%	13
Undisclosed & Other	39%	61%	18

4.5: Factors Affecting Currency Mix

Question: How important were the following factors in your decision to issue debt in foreign currencies or swap your local debt into foreign currencies?

Results of Question 4.5: Factors Affecting Currency Mix										
	Not Important					Very Important		\bar{x}	\tilde{x}	<i>N</i>
	0	1	2	3	4	5				
Relative credit spreads	20%	7%	13%	15%	30%	16%	2.7	3.0	122	
Relative interest rates	19%	10%	6%	11%	30%	23%	2.9	4.0	125	
Expected exchange rate movements	23%	14%	10%	19%	16%	17%	2.4	3.0	126	
Tax treatment of interest deductions	21%	17%	11%	26%	17%	9%	2.3	3.0	121	
Laws and regulations	24%	19%	16%	17%	16%	8%	2.1	2.0	122	
Foreign cashflow or investment exposure	10%	6%	7%	26%	22%	30%	3.3	4.0	122	
Access to deeper capital markets	11%	14%	9%	13%	29%	24%	3.1	4.0	125	
Tax on repatriated income or cashflows	25%	22%	17%	18%	13%	7%	1.9	2.0	120	
Accounting implications	22%	14%	14%	24%	19%	7%	2.2	2.0	121	
Other companies in industry	45%	23%	13%	11%	5%	3%	1.2	1.0	119	

4.5: Factors Affecting Currency Mix by Region

Question: How important were the following factors in your decision to issue debt in foreign currencies or swap your local debt into foreign currencies?

Results of Question 4.5: Factors Affecting Currency Mix by Region																														
	All			Asia excluding Japan			Australia & New Zealand			Eastern Europe, Middle East & Africa			Germany			Japan			Latin America			North America			Western Europe excluding Germany			Undisclosed		
	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N			
Relative credit spreads	2.7	3.0	122	4.1	4.0	23	na	na	<5	na	na	<5	1.9	1.0	21	3.6	4.0	12	2.5	2.5	8	2.5	2.0	13	2.2	2.0	38	na	na	<5
Relative interest rates	2.9	4.0	125	4.7	5.0	23	na	na	<5	na	na	<5	1.9	1.0	21	4.1	4.0	14	3.4	4.0	8	3.4	4.0	13	2.1	2.0	39	na	na	<5
Expected exchange rate movements	2.4	3.0	126	4.4	5.0	23	na	na	<5	na	na	<5	1.6	1.0	22	3.2	3.0	13	2.9	3.0	9	2.5	3.0	13	1.5	1.0	39	na	na	<5
Tax treatment of interest deductions	2.3	3.0	121	3.1	3.0	22	na	na	<5	na	na	<5	1.0	0.0	21	2.3	3.0	12	3.1	3.0	8	2.8	3.0	13	2.0	2.0	38	na	na	<5
Laws and regulations	2.1	2.0	122	3.0	3.0	22	na	na	<5	na	na	<5	0.9	0.0	21	3.0	3.0	13	2.5	2.0	8	1.4	1.0	13	1.8	2.0	38	na	na	<5
Foreign cashflow or investment exposure	3.3	4.0	122	3.9	4.0	21	na	na	<5	na	na	<5	3.2	4.0	21	2.9	3.0	12	3.9	4.0	9	3.0	3.0	13	3.3	4.0	39	na	na	<5
Access to deeper capital markets	3.1	4.0	125	4.0	4.0	22	na	na	<5	na	na	<5	1.8	1.0	21	3.3	4.0	13	3.9	4.0	9	2.3	2.0	13	3.1	4.0	40	na	na	<5
Tax on repatriated income or cashflows	1.9	2.0	120	2.9	3.0	21	na	na	<5	na	na	<5	0.5	0.0	21	2.4	3.0	12	3.5	3.5	8	2.5	2.0	13	1.5	1.0	38	na	na	<5
Accounting implications	2.2	2.0	121	3.0	3.0	21	na	na	<5	na	na	<5	1.2	1.0	21	2.4	3.0	12	2.4	2.0	8	2.5	3.0	13	2.3	3.0	39	na	na	<5
Other companies in industry	1.2	1.0	119	2.7	3.0	21	na	na	<5	na	na	<5	0.2	0.0	21	1.5	1.5	12	1.8	1.5	8	0.8	1.0	13	0.8	0.0	37	na	na	<5

Means and Medians in Percent

4.5: Factors Affecting Currency Mix by Industry

Question: How important were the following factors in your decision to issue debt in foreign currencies or swap your local debt in foreign currencies?

Results of Question 4.5: Factors Affecting Currency Mix by Industry																																																			
	All			Automobiles			Business Services			Chemicals			Consumer			Consumer Finance			Diversified/Conglomerates			Health Care & Pharmaceuticals			Industrials and Materials			Media			Metals and Mining			Oil and Gas			Technology			Telecommunications			Transportation Services			Utilities			Undisclosed & Other		
	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N												
Relative credit spreads	2.7	3.0	122	na	na	<5	na	na	<5	2.2	2.5	10	2.9	4.0	16	na	na	<5	na	na	<5	0.8	0.0	5	2.4	3.0	25	na	na	<5	na	na	<5	2.9	2.5	8	3.3	4.0	8	2.8	3.5	6	2.6	2.5	10	2.8	3.0	8	3.0	4.0	6
Relative interest rates	2.9	4.0	125	3.6	4.0	5	na	na	<5	1.3	1.5	10	3.0	4.0	17	na	na	<5	na	na	<5	1.4	0.0	5	2.8	4.0	25	na	na	<5	na	na	<5	4.0	4.5	8	3.6	4.0	8	3.7	4.0	6	3.3	4.0	10	2.9	3.0	9	3.8	4.5	6
Expected exchange rate movements	2.4	3.0	126	na	na	<5	na	na	<5	1.2	0.0	10	2.4	2.0	17	na	na	<5	na	na	<5	0.8	0.0	5	2.6	3.0	25	na	na	<5	na	na	<5	3.0	3.0	8	3.1	3.5	8	3.7	4.5	6	2.5	3.0	11	2.8	2.0	9	3.6	4.0	7
Tax treatment of interest deductions	2.3	3.0	121	na	na	<5	na	na	<5	1.7	1.5	10	3.1	3.5	16	na	na	<5	na	na	<5	1.0	0.0	5	2.3	3.0	25	na	na	<5	na	na	<5	3.3	3.0	8	2.4	2.0	8	3.0	3.5	6	1.7	2.0	10	2.5	2.5	8	2.8	3.5	6
Laws and regulations	2.1	2.0	122	na	na	<5	na	na	<5	1.7	1.5	10	2.3	2.0	16	na	na	<5	na	na	<5	0.6	0.0	5	2.2	2.0	26	na	na	<5	na	na	<5	2.4	3.0	8	2.4	2.0	8	3.0	3.5	6	1.6	1.5	10	2.0	1.5	8	2.5	2.5	6
Foreign cashflow or investment exposure	3.3	4.0	122	na	na	<5	na	na	<5	2.9	3.0	10	3.2	4.0	17	na	na	<5	na	na	<5	3.2	3.0	5	3.3	4.0	26	na	na	<5	na	na	<5	4.0	4.5	8	2.8	3.5	8	3.0	3.0	6	3.5	3.5	10	4.1	4.5	8	4.3	5.0	6
Access to deeper capital markets	3.1	4.0	125	3.8	5.0	5	na	na	<5	2.4	2.5	10	3.2	4.0	17	na	na	<5	na	na	<5	1.6	1.0	5	2.4	3.0	25	na	na	<5	na	na	<5	3.3	4.0	8	3.8	4.0	8	4.0	4.0	6	2.8	2.5	10	3.9	4.0	9	3.0	3.5	6
Tax on repatriated income or cashflows	1.9	2.0	120	na	na	<5	na	na	<5	0.9	1.0	10	2.1	2.5	16	na	na	<5	na	na	<5	1.4	1.0	5	1.9	2.0	25	na	na	<5	na	na	<5	3.4	3.5	8	2.6	2.5	8	2.8	3.0	6	1.0	1.0	9	2.5	2.5	8	2.2	2.5	6
Accounting implications	2.2	2.0	121	na	na	<5	na	na	<5	1.5	1.0	10	2.0	2.0	16	na	na	<5	na	na	<5	2.0	1.0	5	2.3	2.0	26	na	na	<5	na	na	<5	2.8	2.5	8	2.9	3.5	8	3.0	3.0	6	1.4	0.0	9	3.5	3.5	8	2.3	2.5	6
Other companies in industry	1.2	1.0	119	na	na	<5	na	na	<5	0.5	0.0	10	1.1	1.0	16	na	na	<5	na	na	<5	0.2	0.0	5	0.9	0.0	25	na	na	<5	na	na	<5	1.6	1.5	8	2.3	2.0	8	2.3	2.0	6	1.3	1.0	9	2.1	2.5	8	1.2	1.0	6

Means and Medians in Percent

4.5: Factors Affecting Currency Mix by Ratings and Listing

Question: How important were the following factors in your decision to issue debt in foreign currencies or swap your local debt into foreign currencies?

Results of Question 4.5: Factors Affecting Currency Mix by Ratings and Listing																										
	Ratings									Listing																
	All			Investment Grade			Non-investment Grade			Not Rated			Undisclosed			Listed			Not Listed			Undisclosed				
	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}	<i>N</i>	\bar{x}	\tilde{x}
Relative credit spreads	2.7	3.0	122	2.8	3.0	54	2.8	3.5	18	na	na	<5	2.7	3.0	47	2.8	3.0	93	2.6	2.5	28	na	na	<5		
Relative interest rates	2.9	4.0	125	2.6	3.0	55	3.4	4.0	18	na	na	<5	3.1	4.0	49	3.0	4.0	95	2.6	3.0	29	na	na	<5		
Expected exchange rate movements	2.4	3.0	126	1.8	1.0	56	3.4	4.0	18	na	na	<5	2.8	3.0	49	2.4	3.0	95	2.5	2.5	30	na	na	<5		
Tax treatment of interest deductions	2.3	3.0	121	2.0	2.0	54	3.1	3.0	18	na	na	<5	2.3	3.0	46	2.3	3.0	93	2.2	3.0	27	na	na	<5		
Laws and regulations	2.1	2.0	122	1.7	2.0	54	3.0	3.0	18	na	na	<5	2.1	2.0	47	2.1	2.0	95	2.0	2.0	26	na	na	<5		
Foreign cashflow or investment exposure	3.3	4.0	122	3.3	4.0	54	3.4	3.5	18	na	na	<5	3.4	4.0	47	3.4	4.0	94	3.2	3.0	27	na	na	<5		
Access to deeper capital markets	3.1	4.0	125	3.4	4.0	56	3.0	3.5	18	na	na	<5	2.7	3.0	48	3.2	4.0	95	2.8	4.0	29	na	na	<5		
Tax on repatriated income or cashflows	1.9	2.0	120	1.8	1.5	54	2.7	3.0	18	na	na	<5	1.8	1.0	45	1.9	2.0	92	2.1	2.0	27	na	na	<5		
Accounting implications	2.2	2.0	121	2.3	3.0	54	2.7	3.0	18	na	na	<5	2.0	2.0	46	2.4	3.0	93	1.8	2.0	27	na	na	<5		
Other companies in industry	1.2	1.0	119	1.1	1.0	53	1.8	1.0	18	na	na	<5	1.0	1.0	45	1.2	1.0	92	1.0	1.0	26	na	na	<5		

Means and Medians in Percent

4.6 Factors Affecting Source of Debt

Question: How important are the following factors in your choice between bank debt, privately placed debt, and publicly issued debt?

Results of Question 4.6 Factors Affecting Source of Debt									
	Not Important					Very Important			
	0	1	2	3	4	5	\bar{x}	\tilde{x}	<i>N</i>
Relative credit spreads	5%	7%	6%	19%	34%	29%	3.6	4.0	228
Access to deeper capital markets	8%	5%	8%	22%	33%	23%	3.4	4.0	227
Documentation and disclosure	8%	9%	16%	26%	31%	10%	2.9	3.0	224
Speed of execution	6%	6%	16%	32%	31%	10%	3.1	3.0	225
Covenants	7%	4%	8%	28%	35%	18%	3.3	4.0	225
Need to obtain a rating	24%	12%	16%	19%	20%	9%	2.2	2.0	225
Customization of borrowing terms	8%	14%	18%	26%	23%	11%	2.7	3.0	215
Prior experience	12%	17%	19%	19%	24%	8%	2.5	3.0	219
Signal to competitors and customers	22%	25%	22%	13%	15%	4%	1.8	2.0	217
Signals to capital markets	15%	13%	17%	24%	23%	8%	2.5	3.0	222
Transaction costs	5%	5%	14%	30%	31%	16%	3.2	3.0	225
Other companies in industry	26%	30%	19%	17%	7%	1%	1.5	1.0	220
Other companies in rating category	27%	28%	20%	18%	7%	1%	1.5	1.0	217

4.6: Factors Affecting Source of Debt by Region

Question: How important are the following factors in your choice between bank debt, privately placed debt, and publicly issued debt?

Results of Question 4.6: Factors Affecting Source of Debt by Region																														
	All			Asia excluding Japan			Australia & New Zealand			Eastern Europe, Middle East & Africa			Germany			Japan			Latin America			North America			Western Europe excluding Germany			Undisclosed		
	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N			
Relative credit spreads	3.6	4.0	228	4.0	4.0	33	3.0	3.5	6	na	na	<5	3.3	4.0	47	4.0	4.0	24	4.4	4.5	10	4.1	4.0	22	3.2	3.0	81	na	na	<5
Access to deeper capital markets	3.4	4.0	227	3.8	4.0	33	3.5	3.5	6	na	na	<5	3.4	4.0	47	3.1	3.0	24	4.3	4.0	10	3.8	4.0	22	3.0	3.0	80	na	na	<5
Documentation and disclosure	2.9	3.0	224	3.0	3.0	33	2.7	3.0	6	na	na	<5	2.9	3.0	47	3.3	3.0	23	2.9	3.0	10	3.0	4.0	22	2.7	3.0	78	na	na	<5
Speed of execution	3.1	3.0	225	3.6	4.0	33	3.0	3.0	6	na	na	<5	2.8	3.0	47	3.3	3.0	24	2.9	3.0	10	3.3	3.5	22	2.8	3.0	78	na	na	<5
Covenants	3.3	4.0	225	3.7	4.0	33	3.2	3.5	6	na	na	<5	2.7	3.0	47	3.6	4.0	23	4.1	4.0	10	4.0	4.0	22	3.2	3.0	79	na	na	<5
Need to obtain a rating	2.2	2.0	225	3.1	3.0	32	2.0	2.0	6	na	na	<5	2.1	2.0	47	2.5	2.5	24	1.9	2.0	10	1.2	1.0	22	2.3	2.0	79	na	na	<5
Customization of borrowing terms	2.7	3.0	215	3.6	4.0	30	1.8	1.5	6	na	na	<5	2.3	2.5	44	3.2	3.0	23	2.9	3.0	10	2.3	2.0	22	2.7	3.0	76	na	na	<5
Prior experience	2.5	3.0	219	3.2	3.0	31	1.5	1.0	6	na	na	<5	1.9	2.0	46	2.6	3.0	23	3.1	3.5	10	2.9	3.0	22	2.5	2.0	77	na	na	<5
Signal to competitors and customers	1.8	2.0	217	3.1	4.0	31	0.8	1.0	6	na	na	<5	1.7	1.0	47	2.3	2.0	22	2.0	1.0	9	1.3	1.0	22	1.5	1.0	76	na	na	<5
Signals to capital markets	2.5	3.0	222	3.4	4.0	31	2.2	3.0	6	na	na	<5	2.7	3.0	47	3.0	3.0	23	3.1	3.0	10	1.9	1.0	22	2.1	2.0	78	na	na	<5
Transaction costs	3.2	3.0	225	3.6	4.0	33	2.8	3.0	6	na	na	<5	3.1	3.0	47	3.7	4.0	24	3.5	3.5	10	2.7	2.5	22	3.1	3.0	78	na	na	<5
Other companies in industry	1.5	1.0	220	2.4	3.0	33	0.7	0.5	6	na	na	<5	1.1	1.0	46	2.0	2.0	23	1.6	1.0	10	1.6	1.0	22	1.3	1.0	76	na	na	<5
Other companies in rating category	1.5	1.0	217	2.4	3.0	32	1.0	0.5	6	na	na	<5	1.2	1.0	46	2.2	3.0	23	1.8	1.5	10	1.6	1.0	22	1.2	1.0	74	na	na	<5

Means and Medians in Percent

4.6: Factors Affecting Source of Debt by Industry

Question: How important are the following factors in your choice between bank debt, privately placed debt, and publicly issued debt?

Results of Question 4.6: Factors Affecting Source of Debt by Industry																																																			
	All			Automobiles			Business Services			Chemicals			Consumer			Consumer Finance			Diversified/Conglomerates			Health Care & Pharmaceuticals			Industrials and Materials			Media			Metals and Mining			Oil and Gas			Technology			Telecommunications			Transportation Services			Utilities			Undisclosed & Other		
	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N												
Relative credit spreads	3.6	4.0	228	4.4	5.0	9	4.0	4.0	5	3.3	3.0	15	3.4	4.0	35	4.3	4.0	6	3.7	4.0	6	3.5	4.0	10	3.1	3.0	49	3.8	4.0	10	3.7	4.0	7	4.1	4.0	12	3.7	4.0	13	3.9	4.0	7	3.8	4.0	16	4.1	5.0	13	3.5	4.0	15
Access to deeper capital markets	3.4	4.0	227	3.7	4.0	9	3.6	4.0	5	3.1	3.0	15	3.1	3.0	35	4.0	4.0	6	3.3	4.0	6	3.6	4.0	10	2.8	3.0	49	3.0	3.5	10	3.9	4.0	7	3.6	4.0	12	4.1	4.0	13	4.1	4.0	7	3.8	4.0	16	3.8	4.0	12	3.3	4.0	15
Documentation and disclosure	2.9	3.0	224	2.6	2.0	9	2.8	3.0	5	2.9	3.0	15	2.9	3.0	35	3.3	3.0	6	2.8	3.0	6	3.2	3.5	10	2.7	3.0	47	2.9	2.5	10	3.3	4.0	7	3.0	3.0	12	3.5	4.0	13	3.1	4.0	7	3.1	4.0	16	3.5	3.0	11	2.3	2.0	15
Speed of execution	3.1	3.0	225	3.3	3.0	9	2.4	2.0	5	2.5	3.0	15	3.3	3.0	35	3.7	3.5	6	3.0	3.0	6	2.9	3.0	10	2.8	3.0	48	3.3	3.5	10	3.1	3.0	7	3.0	3.0	12	3.6	4.0	13	3.7	4.0	7	3.1	3.5	16	3.1	3.0	11	2.7	3.0	15
Covenants	3.3	4.0	225	2.4	3.0	9	3.2	4.0	5	3.5	3.0	15	3.3	4.0	35	3.8	4.0	6	3.8	5.0	6	3.5	4.0	10	2.9	3.0	49	3.5	3.5	10	3.4	3.0	7	3.9	4.0	12	3.9	4.0	13	4.1	4.0	7	3.3	3.5	16	3.7	4.0	10	2.7	3.0	15
Need to obtain a rating	2.2	2.0	225	1.9	3.0	9	1.8	1.0	5	1.8	2.0	15	2.1	2.0	35	3.2	3.0	5	2.5	3.0	6	1.8	2.0	10	2.0	2.0	49	1.8	1.5	10	2.6	2.5	8	2.6	2.5	12	2.8	3.0	13	2.7	3.0	7	2.5	3.0	15	2.9	3.0	10	2.3	3.0	16
Customization of borrowing terms	2.7	3.0	215	3.1	3.0	7	2.8	2.0	5	1.7	2.0	15	3.0	3.0	34	4.2	4.0	5	na	na	<5	2.2	2.0	10	2.6	3.0	48	2.6	2.0	10	2.4	2.0	7	3.3	3.0	12	3.2	3.0	13	3.6	3.0	7	2.7	3.0	15	2.8	3.0	9	2.3	3.0	14
Prior experience	2.5	3.0	219	1.6	1.0	9	2.6	3.0	5	2.0	2.0	15	2.6	3.0	34	3.3	3.5	6	2.2	2.0	5	2.3	2.0	10	2.2	2.0	48	3.0	3.0	10	2.3	2.0	7	3.0	3.0	12	2.8	3.0	13	3.6	4.0	7	2.6	2.5	14	2.8	3.0	9	2.4	3.0	15
Signal to competitors and customers	1.8	2.0	217	2.4	3.0	9	2.0	2.0	5	1.3	1.0	15	2.2	2.0	33	3.8	4.0	5	2.2	2.0	5	1.7	1.0	10	1.3	1.0	48	0.8	1.0	10	1.6	2.0	7	2.0	1.0	11	2.8	3.0	13	2.1	2.0	7	1.9	2.0	15	2.2	2.0	9	1.9	2.0	15
Signals to capital markets	2.5	3.0	222	2.6	3.0	9	3.0	4.0	5	2.5	2.0	15	2.6	3.0	34	4.0	4.0	5	3.2	3.0	5	1.8	1.0	10	2.0	2.0	49	1.8	1.5	10	2.3	3.0	7	3.2	3.0	12	3.2	3.0	13	3.3	4.0	7	2.3	2.0	15	3.1	3.0	11	2.6	3.0	15
Transaction costs	3.2	3.0	225	3.6	3.0	9	3.8	3.0	5	2.8	3.0	15	3.3	3.0	35	4.0	4.5	6	4.2	4.5	6	2.5	2.5	10	3.2	3.0	48	2.8	3.0	10	3.6	4.0	7	2.8	2.5	12	3.5	4.0	13	3.3	4.0	7	3.4	3.5	16	3.4	4.0	11	3.2	4.0	15
Other companies in industry	1.5	1.0	220	1.0	1.0	9	1.2	1.0	5	0.9	1.0	15	1.6	1.0	33	3.6	3.0	5	1.2	1.0	6	1.5	1.5	10	1.1	1.0	47	1.1	1.0	10	0.9	1.0	7	2.2	2.0	12	2.5	3.0	13	2.0	2.0	7	1.6	1.5	16	2.5	3.0	10	1.5	1.0	15
Other companies in rating category	1.5	1.0	217	1.0	1.0	9	1.2	1.0	5	1.1	1.0	15	1.7	1.0	33	3.2	3.0	5	na	na	<5	1.7	1.5	10	1.2	1.0	47	0.8	1.0	10	0.9	1.0	7	2.3	2.5	12	2.1	2.0	13	1.7	1.0	7	1.6	2.0	16	2.3	2.0	9	1.5	2.0	15

Means and Medians in Percent

4.6: Factors Affecting Source of Debt by Ratings and Listing

Question: How important are the following factors in your choice between bank debt, privately placed debt, and publicly issued debt?

Results of Question 4.6: Factors Affecting Source of Debt by Ratings and Listing																								
	Ratings									Listing														
	All			Investment Grade			Non-investment Grade			Not Rated			Undisclosed			Listed			Not Listed			Undisclosed		
	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N	\bar{x}	\hat{x}	N
Relative credit spreads	3.6	4.0	228	4.0	4.0	78	4.0	4.0	27	3.6	4.0	5	3.2	4.0	118	3.9	4.0	156	2.9	3.0	71	na	na	<5
Access to deeper capital markets	3.4	4.0	227	3.8	4.0	78	4.1	4.0	27	3.2	4.0	5	2.9	3.0	117	3.7	4.0	155	2.6	3.0	71	na	na	<5
Documentation and disclosure	2.9	3.0	224	3.1	3.0	77	3.2	4.0	27	2.8	3.0	5	2.8	3.0	115	3.1	3.0	153	2.7	3.0	70	na	na	<5
Speed of execution	3.1	3.0	225	3.1	3.0	77	3.5	4.0	27	3.0	3.0	5	3.0	3.0	116	3.2	3.0	153	2.9	3.0	71	na	na	<5
Covenants	3.3	4.0	225	3.4	4.0	76	4.1	4.0	27	3.4	3.0	5	3.1	3.0	117	3.6	4.0	153	2.8	3.0	71	na	na	<5
Need to obtain a rating	2.2	2.0	225	1.7	1.0	75	2.2	2.0	27	2.0	3.0	5	2.6	3.0	118	2.2	2.0	152	2.4	3.0	71	na	na	<5
Customization of borrowing terms	2.7	3.0	215	2.6	3.0	72	3.2	3.0	27	3.0	3.0	5	2.7	3.0	111	2.8	3.0	146	2.5	3.0	68	na	na	<5
Prior experience	2.5	3.0	219	2.6	3.0	74	3.1	3.0	27	2.4	3.0	5	2.3	2.0	113	2.7	3.0	149	2.1	2.0	69	na	na	<5
Signal to competitors and customers	1.8	2.0	217	1.7	1.0	73	2.1	2.0	27	1.8	2.0	5	1.8	2.0	112	1.9	2.0	147	1.8	2.0	69	na	na	<5
Signals to capital markets	2.5	3.0	222	2.8	3.0	76	3.1	3.0	27	2.4	2.0	5	2.2	2.0	114	2.8	3.0	151	2.0	2.0	70	na	na	<5
Transaction costs	3.2	3.0	225	3.2	3.0	77	3.3	4.0	27	3.8	3.0	5	3.2	3.0	116	3.3	3.0	153	3.1	3.0	71	na	na	<5
Other companies in industry	1.5	1.0	220	1.6	1.0	75	2.1	2.0	26	2.0	2.0	5	1.3	1.0	114	1.7	2.0	149	1.2	1.0	70	na	na	<5
Other companies in rating category	1.5	1.0	217	1.7	2.0	74	2.1	2.0	27	1.8	2.0	5	1.3	1.0	111	1.8	2.0	147	1.1	1.0	69	na	na	<5

Means and Medians in Percent

3.10: Hybrid Securities by Region, Ratings and Listing

Question: Has your firm issued equities or equity-related securities with the following features?

Results of Question 3.10: Hybrid Securities by Region, Ratings and Listing											
	Preferred or preference shares (nonconvertible)	Convertible preferred or preference shares	Capped appreciation preferred shares	Supervoting shares	Trust preferred securities	Convertible debt	Units consisting of debt with warrants	Mandatory convertible securities	Separately issued warrants	Share of listed subsidiary	N
All	26%	14%	2%	3%	2%	64%	20%	5%	8%	14%	66
Region											
Asia excluding Japan	46%	23%	0%	0%	0%	62%	8%	0%	8%	8%	13
Australia & New Zealand	na	na	na	na	na	na	na	na	na	na	<5
Eastern Europe, Middle East & Africa	na	na	na	na	na	na	na	na	na	na	<5
Germany	9%	9%	0%	0%	0%	73%	9%	9%	0%	45%	11
Japan	0%	0%	0%	0%	0%	83%	75%	8%	0%	8%	12
Latin America	na	na	na	na	na	na	na	na	na	na	<5
North America	36%	36%	9%	9%	9%	36%	0%	9%	9%	0%	11
Western Europe excluding Germany	21%	7%	0%	0%	0%	79%	14%	0%	14%	14%	14
Undisclosed	na	na	na	na	na	na	na	na	na	na	<5
Ratings											
Investment Grade	29%	11%	0%	4%	4%	61%	14%	7%	7%	18%	28
Non-investment Grade	20%	13%	7%	7%	0%	67%	47%	0%	7%	7%	15
Not Rated	na	na	na	na	na	na	na	na	na	na	<5
Undisclosed	25%	20%	0%	0%	0%	60%	10%	5%	10%	15%	20
Listing											
Listed	21%	9%	0%	0%	2%	72%	21%	5%	7%	12%	58
Not Listed	71%	57%	14%	29%	0%	0%	14%	0%	0%	29%	7
Undisclosed	na	na	na	na	na	na	na	na	na	na	<5

3.10: Hybrid Securities by Industry

Question: Has your firm issued equities or equity-related securities with the following features?

Results of Question 3.10: Hybrid Securities by Industry											
	Preferred or preference shares (nonconvertible)	Convertible preferred or preference shares	Capped appreciation preferred shares	Supervoting shares	Trust preferred securities	Convertible debt	Units consisting of debt with warrants	Mandatory convertible securities	Separately issued warrants	Share of listed subsidiary	N
All	26%	14%	2%	3%	2%	64%	20%	5%	8%	14%	66
Industry											
Automobiles	na	na	na	na	na	na	na	na	na	na	<5
Business Services	na	na	na	na	na	na	na	na	na	na	<5
Chemicals	na	na	na	na	na	na	na	na	na	na	<5
Consumer	38%	0%	0%	0%	0%	63%	25%	0%	13%	13%	8
Consumer Finance	na	na	na	na	na	na	na	na	na	na	<5
Diversified & Conglomerates	na	na	na	na	na	na	na	na	na	na	<5
Health Care & Pharmaceuticals	na	na	na	na	na	na	na	na	na	na	<5
Industrials and Materials	29%	7%	0%	0%	7%	64%	36%	0%	0%	14%	14
Media	na	na	na	na	na	na	na	na	na	na	<5
Metals & Mining	na	na	na	na	na	na	na	na	na	na	<5
Oil & Gas	na	na	na	na	na	na	na	na	na	na	<5
Technology	29%	29%	0%	0%	0%	71%	0%	0%	29%	0%	7
Telecommunications	na	na	na	na	na	na	na	na	na	na	<5
Transportation Services	0%	17%	0%	0%	0%	83%	0%	0%	0%	17%	6
Utilities	na	na	na	na	na	na	na	na	na	na	<5
Undisclosed & Other	na	na	na	na	na	na	na	na	na	na	<5

3.11: Factors Affecting Hybrid Issuance

Question: If so, which factors were more important in your decision to issue multiple classes of equity securities or equity-linked securities?

Results of Question 3.11: Factors Affecting Hybrid Issuance										
	Not Important					Very Important		\bar{x}	\tilde{x}	<i>N</i>
	0	1	2	3	4	5				
Risk-return preferences of new investors	23%	11%	21%	16%	23%	7%	2.3	2.0	57	
Governance preferences of new investors	45%	20%	13%	9%	11%	2%	1.3	1.0	55	
Constraints from existing investors	35%	24%	13%	11%	13%	5%	1.6	1.0	55	
Tax considerations	30%	25%	14%	16%	13%	2%	1.6	1.0	56	
Accounting considerations	31%	21%	10%	21%	12%	5%	1.8	1.0	58	
Regulatory considerations	38%	23%	13%	14%	7%	5%	1.5	1.0	56	
Listing requirements	41%	23%	11%	11%	9%	5%	1.4	1.0	56	
Limited capacity for regular equity	31%	24%	15%	13%	9%	7%	1.7	1.0	54	
Attractive pricing as an issuer	20%	3%	5%	18%	32%	22%	3.0	4.0	60	
Seeking to broaden base of investors	26%	2%	11%	18%	33%	11%	2.6	3.0	57	
Rating Agencies equity credit	31%	9%	14%	21%	14%	12%	2.1	2.0	58	

3.11: Factors Affecting Hybrid Issuance by Region

Question: If so, which factors were more important in your decision to issue multiple classes of equity securities or equity-linked securities?

Results of Question 3.11: Factors Affecting Hybrid Issuance by Region																														
	All			Asia excluding Japan			Australia & New Zealand			Eastern Europe, Middle East & Africa			Germany			Japan			Latin America			North America			Western Europe excluding Germany			Undisclosed		
	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N			
Risk-return preferences of new investors	2.3	2.0	57	3.2	3.5	10	na	na	<5	na	na	<5	1.0	0.0	12	2.6	2.5	10	na	na	<5	2.1	2.0	10	2.3	2.0	11	na	na	<5
Governance preferences of new investors	1.3	1.0	55	3.1	3.0	9	na	na	<5	na	na	<5	0.9	0.0	12	1.1	1.0	9	na	na	<5	0.4	0.0	10	1.1	1.0	11	na	na	<5
Constraints from existing investors	1.6	1.0	55	2.8	3.0	9	na	na	<5	na	na	<5	1.0	0.0	12	1.4	1.0	9	na	na	<5	1.5	0.5	10	1.0	1.0	11	na	na	<5
Tax considerations	1.6	1.0	56	2.7	3.0	10	na	na	<5	na	na	<5	1.3	1.0	12	1.1	1.0	9	na	na	<5	1.2	1.0	10	1.2	1.0	11	na	na	<5
Accounting considerations	1.8	1.0	58	2.7	3.0	10	na	na	<5	na	na	<5	1.5	0.5	12	1.5	1.0	10	na	na	<5	1.2	0.5	10	1.8	1.0	12	na	na	<5
Regulatory considerations	1.5	1.0	56	3.1	3.0	9	na	na	<5	na	na	<5	0.8	0.0	12	1.2	1.0	9	na	na	<5	1.0	0.0	10	1.5	1.0	12	na	na	<5
Listing requirements	1.4	1.0	56	3.2	3.5	10	na	na	<5	na	na	<5	1.0	0.0	12	1.2	1.0	9	na	na	<5	1.0	0.0	10	0.6	0.0	11	na	na	<5
Limited capacity for regular equity	1.7	1.0	54	2.6	3.0	9	na	na	<5	na	na	<5	1.8	1.5	12	1.0	1.0	9	na	na	<5	2.1	2.0	9	1.2	1.0	11	na	na	<5
Attractive pricing as an issuer	3.0	4.0	60	3.7	4.0	10	na	na	<5	na	na	<5	2.2	3.0	13	3.5	4.0	11	na	na	<5	2.3	3.0	10	3.4	4.0	12	na	na	<5
Seeking to broaden base of investors	2.6	3.0	57	3.4	4.0	9	na	na	<5	na	na	<5	2.2	3.0	13	2.9	3.0	10	na	na	<5	2.2	2.5	10	2.8	3.0	11	na	na	<5
Rating Agencies equity credit	2.1	2.0	58	3.0	3.0	10	na	na	<5	na	na	<5	2.2	2.0	13	2.4	2.0	9	na	na	<5	1.7	0.0	11	1.8	1.0	11	na	na	<5

Means and Medians in Percent

3.11: Factors Affecting Hybrid Issuance by Industry

Question: If so, which factors were more important in your decision to issue multiple classes of equity securities or equity-linked securities?

Results of Question 3.11: Factors Affecting Hybrid Issuance by Industry																																																															
	All			Automobiles			Business Services			Chemicals			Consumer			Consumer Finance			Diversified/Conglomerates			Health Care & Pharmaceuticals			Industrials and Materials			Media			Metals and Mining			Oil and Gas			Technology			Telecommunications			Transportation Services			Utilities			Undisclosed & Other														
	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N	\bar{x}	\bar{x}	N																								
Risk-return preferences of new investors	2.3	2.0	57	na	na	<5	na	na	<5	na	na	<5	1.7	0.5	6	na	na	<5	na	na	<5	na	na	<5	2.5	2.0	12	na	na	<5	na	na	<5	na	na	<5	2.1	3.0	7	na	na	<5	na	na	<5	na	na	<5	na	na	<5												
Governance preferences of new investors	1.3	1.0	55	na	na	<5	na	na	<5	na	na	<5	1.3	0.5	6	na	na	<5	na	na	<5	na	na	<5	na	na	<5	1.1	1.0	12	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5									
Constraints from existing investors	1.6	1.0	55	na	na	<5	na	na	<5	na	na	<5	2.0	1.5	6	na	na	<5	na	na	<5	na	na	<5	na	na	<5	2.1	2.0	12	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5						
Tax considerations	1.6	1.0	56	na	na	<5	na	na	<5	na	na	<5	1.7	1.5	6	na	na	<5	na	na	<5	na	na	<5	na	na	<5	1.6	1.5	12	na	na	<5	na	na	<5	na	na	<5	na	na	<5	1.9	1.0	7	na	na	<5	na	na	<5	na	na	<5	na	na	<5						
Accounting considerations	1.8	1.0	58	na	na	<5	na	na	<5	na	na	<5	1.7	1.0	7	na	na	<5	na	na	<5	na	na	<5	na	na	<5	2.0	2.5	12	na	na	<5	na	na	<5	na	na	<5	na	na	<5	1.7	1.0	7	na	na	<5	2.0	2.0	5	na	na	<5	na	na	<5	na	na	<5			
Regulatory considerations	1.5	1.0	56	na	na	<5	na	na	<5	na	na	<5	0.7	0.0	6	na	na	<5	na	na	<5	na	na	<5	na	na	<5	1.5	1.5	12	na	na	<5	na	na	<5	na	na	<5	na	na	<5	1.9	1.0	7	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5			
Listing requirements	1.4	1.0	56	na	na	<5	na	na	<5	na	na	<5	1.0	0.5	6	na	na	<5	na	na	<5	na	na	<5	na	na	<5	1.2	1.0	12	na	na	<5	na	na	<5	na	na	<5	na	na	<5	1.7	1.0	7	na	na	<5	3.0	4.0	5	na	na	<5	na	na	<5	na	na	<5			
Limited capacity for regular equity	1.7	1.0	54	na	na	<5	na	na	<5	na	na	<5	1.3	1.0	6	na	na	<5	na	na	<5	na	na	<5	na	na	<5	1.5	2.0	12	na	na	<5	na	na	<5	na	na	<5	na	na	<5	1.9	2.0	7	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5			
Attractive pricing as an issuer	3.0	4.0	60	na	na	<5	na	na	<5	na	na	<5	2.4	3.0	7	na	na	<5	na	na	<5	na	na	<5	na	na	<5	3.5	4.0	13	na	na	<5	na	na	<5	na	na	<5	na	na	<5	3.0	3.0	7	na	na	<5	4.0	4.0	5	na	na	<5									
Seeking to broaden base of investors	2.6	3.0	57	na	na	<5	na	na	<5	na	na	<5	1.9	0.0	7	na	na	<5	na	na	<5	na	na	<5	na	na	<5	2.4	3.0	12	na	na	<5	na	na	<5	na	na	<5	na	na	<5	2.7	3.0	7	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5	na	na	<5
Rating Agencies equity credit	2.1	2.0	58	na	na	<5	na	na	<5	na	na	<5	1.5	0.5	6	na	na	<5	na	na	<5	na	na	<5	na	na	<5	2.4	2.0	13	na	na	<5	na	na	<5	na	na	<5	na	na	<5	2.6	3.0	7	na	na	<5	2.6	3.0	5	na	na	<5									

Means and Medians in Percent

3.11: Factors Affecting Hybrid Issuance by Ratings and Listing

Question: If so, which factors were more important in your decision to issue multiple classes of equity securities or equity-linked securities?

Results of Question 3.11: Factors Affecting Hybrid Issuance by Ratings and Listing																								
	Ratings									Listing														
	All			Investment Grade			Non-investment Grade			Not Rated			Undisclosed			Listed			Not Listed			Undisclosed		
	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N	\bar{x}	\tilde{x}	N
Risk-return preferences of new investors	2.3	2.0	57	2.1	2.0	24	2.1	2.0	13	na	na	<5	2.6	3.0	17	2.3	2.0	50	2.0	2.0	6	na	na	<5
Governance preferences of new investors	1.3	1.0	55	1.0	0.0	23	1.5	1.0	13	na	na	<5	1.3	0.5	16	1.2	1.0	48	1.7	1.0	6	na	na	<5
Constraints from existing investors	1.6	1.0	55	1.0	1.0	23	2.5	2.0	13	na	na	<5	1.7	1.0	16	1.5	1.0	48	1.7	1.0	6	na	na	<5
Tax considerations	1.6	1.0	56	1.4	1.0	23	1.4	1.0	13	na	na	<5	1.8	1.0	17	1.4	1.0	48	2.4	2.0	7	na	na	<5
Accounting considerations	1.8	1.0	58	1.7	1.0	23	1.9	1.5	14	na	na	<5	1.5	1.0	18	1.7	1.0	50	1.9	2.0	7	na	na	<5
Regulatory considerations	1.5	1.0	56	1.3	1.0	24	1.5	2.0	13	na	na	<5	1.4	1.0	16	1.4	1.0	48	1.4	1.0	7	na	na	<5
Listing requirements	1.4	1.0	56	1.2	1.0	23	1.2	1.0	13	na	na	<5	1.4	1.0	17	1.5	1.0	49	0.8	0.0	6	na	na	<5
Limited capacity for regular equity	1.7	1.0	54	1.9	1.5	22	1.8	2.0	13	na	na	<5	1.1	1.0	16	1.7	1.0	47	2.0	1.5	6	na	na	<5
Attractive pricing as an issuer	3.0	4.0	60	3.0	4.0	25	2.9	4.0	15	na	na	<5	3.1	4.0	17	3.3	4.0	53	1.5	1.0	6	na	na	<5
Seeking to broaden base of investors	2.6	3.0	57	2.7	3.5	24	2.4	3.0	14	na	na	<5	2.5	3.0	16	2.8	3.0	50	1.2	0.5	6	na	na	<5
Rating Agencies equity credit	2.1	2.0	58	2.2	2.0	25	2.4	3.0	13	na	na	<5	1.6	1.0	17	2.2	2.0	51	2.0	2.0	6	na	na	<5

Means and Medians in Percent

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