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# Does it pay to be loyal? An empirical analysis of underwriting relationships and fees ☆

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**Abstract**

We examine underwriting fees for repeat issuers of new securities to determine the relation between loyalty to an underwriting bank and the fees charged. For a sample of offers over the 1975–2001 period, we find that loyalty is associated with lower fees for common stock offers, consistent with valuable relationship capital being built through loyalty. For debt offers, however, we find the opposite pattern, consistent with relationship capital not being as valuable. For both offer types, firms that graduate to higher-quality banks face lower fees. Firms that are more likely to be switching banks to improve analyst coverage face higher fees for common stock offers, but not for debt offers.


*JEL classification:* G20; G24; L14

*Keywords:* Underwriting; Relationship capital; Firm loyalty; Seasoned offers

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## 1. Introduction

Firms often have a primary investment bank, one with which they have a long-term relationship and regularly use for underwriting new security issues to the public. The persistence of bank–client relationships in a competitive market for intermediation services has been ascribed to "relationship specific capital" by, among others, Rajan (1992) and James (1992). The notion is that, in the course of providing intermediation services or through an ongoing effort, the bank–client relationship emerges as a valuable asset that lowers the cost or improves the quality of the services provided. Such benefits can emerge, for instance, if the bank acquires a better understanding of the client's operations and learns to work more effectively with the client. A relationship asset is always at risk, however, from a competing bank that can provide a superior product or charge a lower price. Some observers claim that intensified competition among investment banks, as well as developments in financial products and institutions, has discouraged relationship investing and substantially weakened bank–client relationships.[1]

In this paper, we examine the nature of bank–client relationships and their impact on the pricing of intermediation services. We investigate the time-series and cross-sectional patterns in these relationships by analyzing a sample of debt and common stock offerings by U.S. firms over the 1975–2001 period. Bank–client relationships are characterized in terms of two loyalty measures. The first is a short-term loyalty metric, which denotes whether the firm's current security offering is underwritten by the bank used for the firm's prior offering. The second is a longer-term loyalty measure capturing the extent to which a firm has relied on the investment bank used for its current offer to issue securities over the preceding five years. Consistent with anecdotal evidence, we find that both loyalty measures decreased over the sample period, suggesting that bank–client relationships have weakened.

How should loyalty be related to underwriting fees? We posit that an important aspect of bank–client loyalty is that, by enhancing relationship capital with its bank, a firm can lower its underwriting costs. When a client firm retains a bank for repeated offerings, the client and bank develop a closer working relationship and a deeper understanding of each other's operations and procedures. The bank also becomes more informed about the firm's quality and prospects. These benefits should lower the bank's cost of underwriting and certifying the client's future security offers. As long as the client captures a portion of these cost savings, loyalty will be associated with lower underwriting fees.

The predicted relation between fees and loyalty is less clear, however, when relationship capital is less important than other factors a firm considers. The fact

[1]For instance, see Eccles and Crane (1988) for a discussion about the shift in the nature of bank relationships, and Bhattacharya and Nanda (2000) for a discussion of the interaction between financial innovations and switching of banks by firms. Also, certain institutional changes such as greater deregulation of the financial marketplace and the introduction of shelf registration, in the process of increasing bank competition, could have contributed to the decline in bank–client relationships. As these changes take place, we would expect a decline in the extent to which investment banks invest in maintaining client relationships, thereby further weakening the relationships.

that firms do switch banks with some frequency suggests that they often choose underwriters for reasons unrelated to relationship capital. Some firms may switch to opportunistically gain lower fees from a competing bank. Others may switch to gain improved analyst coverage or an association with a higher-reputation bank, as shown in Krigman et al. (2001). In such situations, it is not clear how switching, and thus how loyalty, empirically relates to fees. For instance, firms that switch to higher-quality banks could pay for higher quality service or, alternatively, if such firms have become especially desirable as clients, they could win price concessions even while switching to a higher-quality bank.

We therefore examine two competing hypotheses for how loyalty is related to fees. The first is the benefits of loyalty hypothesis, which states that fees decrease in a firm's loyalty to its current bank. The second is the costs of loyalty hypothesis, which states that fees increase in loyalty. We propose that the benefits of loyalty hypothesis is more likely to hold (and the costs of loyalty hypothesis is less likely to hold) when underwriter certification is relatively more important and a bank–client relationship is therefore more valuable. The value of relationship capital should be related to the importance of underwriter certification because relationship capital makes underwriter certification more credible and also less costly to provide (because of lower investigative costs). We therefore reason that, all else equal, underwriter certification should be relatively more important for common stock offers than it is for debt offers. This is because, for debt offers, the capital markets can usually observe calibrated debt ratings provided by third parties such as Standard and Poor's and Moody's. Hence, we argue that the benefits of loyalty hypothesis is more likely to hold (and the costs of loyalty hypothesis is less likely to hold) for common stock offers than it is for debt offers. The strength of this prediction is tempered, however, by the lack of clear predictions regarding loyalty and fees when firms switch to higher- or lower-reputation banks or switch to gain improved analyst coverage or both.

Our findings are as follows. First, the evidence is consistent with our prediction regarding common stock versus debt offers. We find that, on average, underwriting fees are decreasing in both loyalty measures for common stock offerings. We find the opposite for debt offerings, as underwriting fees tend to be increasing in both loyalty measures. Second, for both common stock and debt offers, firms graduating to higher reputation underwriters pay lower fees. This indicates that firms in a position to move up in terms of underwriter quality tend to obtain price concessions even as they switch to higher-quality banks. We also find that, for common stock offers, switching firms that are more likely to be switching for analyst coverage pay higher fees. Unlike for common stock offers, for debt offers we do not find that fees are significantly affected by whether firms are more or less likely to be switching for analyst coverage. Therefore, although stock and debt offers share the similarity that firms graduating to higher-reputation banks pay lower fees, striking differences appear to exist in how loyalty to a bank affects fees in the two markets.

Few papers in the literature focus on bank–client relationships and their impact on the pricing of intermediation services. Rajan (1992) and James (1992), among others, emphasize that the existence of durable relationship specific capital can lock in

clients once the relationship is developed. The trade-off associated with the development of such relationship specific capital between firms and commercial banks is analyzed in Rajan (1992). James (1992) develops and provides evidence for the proposition that a lock-in effect could induce competing investment banks to charge lower underwriting fees for initial public offerings (IPOs) of firms with a greater likelihood of providing future business. Petersen and Rajan (1996) show that commercial banks tend to be more likely to increase their loans to clients with whom they have a longer relationship.

Several papers in the literature analyze underwriter fees and other costs associated with selling securities publicly. Hansen and Altinkilic (2000) characterize economies of scale in providing underwriting services.[2] In other contexts, Bhagat and Frost (1986) examine underwriting fees in negotiated and competitive equity offerings by utilities, while Esho et al. (2004) examine underwriting fees for Eurobond issues. Tufano (1989) analyzes the fees charged by innovating banks for new securities. None of these papers explicitly examines the pricing effect of a firm's loyalty to its bank. Several papers analyze the early effects of shelf registration in lowering underwriting fees and the cost of offerings (see Kidwell et al., 1987; Allen et al., 1990; Denis, 1991). Consistent with this evidence, we find that shelf-registered common stock offers have lower fees. Krigman et al. (2001) explore the factors that lead firms issuing seasoned equity within three years of their IPO to switch away from their IPO underwriter. They report that firms primarily switch to move to higher-reputation underwriters or to obtain improved analyst coverage. Aside from our focus on fees, our context differs in two ways. First, our analysis includes debt offers. Second, because of the way our data are constructed, the firms in our sample are more seasoned and further removed from their IPOs.

The rest of the paper is organized as follows. Section 2 motivates our hypotheses, and Section 3 describes the data. Section 4 examines the determinants of firm loyalty. Section 5 investigates the effect of loyalty on underwriting fees, and Section 6 incorporates underwriter quality and analyst coverage into the analysis. We conclude in Section 7.

## 2. Hypotheses

In this section we define two competing hypotheses for how a client firm's prior loyalty to the current offer's underwriter affects the underwriting fee it is charged. The first hypothesis predicts that loyalty to a bank results in lower underwriting fees. In the course of providing services to a client and through investment in the relationship, a bank and client can develop a close working relationship that should lower the costs of providing additional services. The relative bargaining power of a

[2]They find that proceeds have a U-shaped impact on underwriting fees, a pattern that preliminary analysis showed is not well supported in our sample. This could be because of our focus on firms that issue securities with sufficient frequency to evaluate their loyalty to a bank, as well as our sample covering a different time period.

bank and its client could affect the manner in which these cost savings are shared, but as long as the client captures a portion of the savings it enjoys lower fees. Furthermore, some firms could switch to become associated with a higher-reputation bank or to improve their analyst coverage (Krigman et al., 2001). Firms switching for these two reasons could pay higher fees for the improvements they gain. Hypothesis 1 (H1) is stated as follows:

**H1:** *Benefits of loyalty: clients that exhibit greater loyalty to a bank pay lower underwriting fees.*

The costs of loyalty hypothesis states that fees increase in loyalty. We propose that this hypothesis is more likely to prevail when underwriter certification is less important, because relationship capital is less likely to be valuable in such cases. Firms for which relationship capital is less important could more often seek to opportunistically switch banks in pursuit of lower fees.[3] These firms could also be more likely to switch to a higher-quality bank to be associated with a higher-reputation underwriter or gain improved analyst coverage, or both, because they do not place as high a value on the relationship capital built with a prior bank. If the firms that switch to higher quality banks are highly desirable as clients, they could face lower fees in spite of switching to higher-quality banks. Hypothesis 2 (H2) is stated as follows:

**H2:** *Costs of loyalty: clients that exhibit greater loyalty to a bank pay higher underwriting fees.*

Our goal is not to necessarily affirm one of these hypotheses to the exclusion of the other. Instead, we believe these hypotheses describe two reasonable and contrasting possibilities for how loyalty should be empirically related to fees, and we aim to uncover if (and when) each hypothesis is consistent with the security issuance process by seasoned firms.

We believe H1 is more likely to hold when the certification role of the underwriter is more important. Relationship capital is primarily valuable to a client because it lowers a bank's investigative costs (James, 1992), a savings that should be at least partially passed to the client. Presumably, relationship capital can also make the certification a bank provides more credible. This is because the bank's information is more likely to be reliable, because it includes information that has been gathered through a longer relationship and from underwriting prior offers. When characteristics of the security or issuing client suggest that underwriter certification is important, the benefits of relationship capital through loyalty should be enhanced. Loyalty should be less valuable, however, when underwriter certification is perceived to be less important. This leads us to speculate that the benefits of loyalty, and thus

[3]Such lower fees could result from a bank's cost advantage, the client's willingness to accept lower-quality service, or a bank's initial low-balling pricing strategy (see DeAngelo, 1981; Farrell and Shapiro, 1989).

the likelihood that H1 holds, are lower for debt issues. For debt offers, the availability of calibrated debt ratings assigned by third parties (such as Moody's and Standard and Poor's) presumably lessens the importance of the certification an underwriter provides. The diminished importance of underwriter certification could also encourage clients to put more emphasis on underwriter reputation, analyst coverage, and fees when choosing whether or not to switch to a new underwriter.

The underwriting market for debt could also be more competitive. Debt offerings are more common than equity offerings, and the greater frequency of debt offers could attract a wider assortment of competing banks. Also, if it is true that underwriter certification is less important for debt offers, a bank's skill in assessing an issuer's quality could be less important in this market when competing for clients. This could encourage firms to consider a wider variety of banks because they could be less concerned with a bank's ability to provide highly credible quality certification.

## 3. Data sources and descriptive statistics

In this section we describe the sample construction and provide some descriptive statistics to characterize the sample of offers we study.

### *3.1. Sample*

Our data on underwritten security offerings are drawn from the new issues section of the Thomson Financial Securities Data Corporation (SDC) Platinum database. This database contains offers starting in 1970. From this source we obtain offering information such as the type of security, the offering proceeds, and whether the issue is shelf-registered. We also derive information on underwriting arrangements such as the details of the fee arrangements, the identity of the primary underwriter, and whether the offering is syndicated. Information about the issuing firm, such as its public or private status, primary standard industrial classification (SIC) code, and certain balance sheet data, is derived from the SDC database and from Compustat.

We limit the sample to issues by public entities according to SDC. An analysis of loyalty, by definition, requires a focus on firms making multiple offers. Therefore, firms making less than five offers over the sample period are also eliminated. Security descriptions are used to classify offers into common stock, straight debt (which we call debt), convertible debt, and preferred stock. Our main analysis focuses on common stock and debt offers, although for completeness we also briefly discuss results for convertible debt and preferred stock.

A drawback of the SDC data is that they sometimes contain multiple listings within a few days for the same offering. In addition, some firms are reported as making two or more distinct offers of the same type with the same bank within several days. We examine and carefully combine these offers to reflect the overall nature of the firm's offering activity. News articles from Lexis–Nexis and descriptions on offer activity contained in Securities and Exchange (SEC) filings are used for clarification when needed. This step of combining offers results in an

initial sample of 8,682 offers (more detail on how we combine offers is in the Appendix). From these offers we obtain a smaller sample of offers for which valid measures of loyalty can be constructed. Therefore, in addition to requiring an offering firm to have at least five total offers over the entire sample period, it must have at least two offers in the preceding five years. We exclude offers by financial firms that underwrite their own securities, given that fees in such cases are somewhat artificial. The final sample consists of 3,031 total offers by a total of 769 firms.

### 3.2. Measuring short- and long-term loyalty

We measure loyalty on an offer-by-offer basis in two different ways. The first measure is short-term loyalty, denoted ST-loyalty, and is an indicator variable set to one if the client retains (for its current offer) the bank it used in its prior offer. The second measure is long-term loyalty, denoted LT-loyalty, and reflects the extent to which the client has been loyal to the current offer's bank over the preceding five years. By including both of these measures in the analysis, we can determine whether any difference exists in how short- and long-term loyalty affect underwriting fees.

As noted, LT-loyalty examines the extent to which the current offer's underwriter is used for offers by the client during the preceding five years. We make this choice so a reasonable amount of time passes over which a longer-term type of loyalty can be established. For this reason, only offers beginning in 1975 or later can have a valid long-term loyalty measure. We also require that the firm has made at least two offers in the preceding five years, so that our sample does not contain offers for which our long-term loyalty metric is not meaningful. In other words, the metric we use assumes the firm cannot build long-term loyalty on the basis of only one prior offer in the past five years.[4] The metric we use also takes into account the relative size of prior offers, as well as when they occurred. Larger offers are given more weight, as are more recent ones. The assumption is that larger and more recent prior offers build relatively more relationship capital than smaller and more distant offers. The long-term loyalty measure for each offer is constructed as follows:

$$LT-loyalty_{CO}=\frac{\sum_{j=1}^{n}(Ind_j)(Proceeds_j)\left(\frac{3650-[Date(CO)-Date(j)]}{3650}\right)}{\sum_{j=1}^{n}(Proceeds_j)\left(\frac{3650-[Date(CO)-Date(j)]}{3650}\right)}. \tag{1}$$

Here, $CO$ denotes the current offer, and $j$ is an index of the offers the firm has made over the five years prior to the current offer. The producer price index is used to convert the gross proceeds of each offer, $Proceeds_j$, to January 2001 dollars (all other financial variables in the analysis are similarly converted to January 2001 dollars). $Ind_j$ is an indicator variable equal to one if offer $j$ uses the same investment

[4]A firm making only five offers can have at most three offers included in the sample. Its first and second offer do not have the requisite two prior offers in the preceding five years. This explains much of reduction in the overall number of offers (8,682) that are included in the final sample of 3,031.

bank as the current offer, and zero otherwise. Holding proceeds constant, an offer five years ago (or 1,825 days ago) receives a weight of 0.50, and an offer one year ago (or 365 days ago) receives a weight of 0.90. It is logical to account for time and proceeds in the construction of a loyalty measure, but we have found the results for long-term loyalty are robust to a number of alternative constructions.[5]

One complicating factor in measuring loyalty is the effect of merger activity among investment banks. A firm can appear to switch underwriters when in fact it remains loyal to an underwriter that was recently acquired by another. Using data from the mergers and acquisitions section of SDC and from other sources such as Lexis–Nexis, we take account of investment bank mergers in all of our analysis. For example, in the loyalty measures, if the bank used for the current offer was acquired by the bank used in the firm's previous offer, we code the metrics as if the same bank is being used.

### 3.3. Summary statistics

Table 1 presents some descriptive statistics for the sample. The total number of offers (3,031) is categorized into three mutually exclusive categories: common stock, debt (excluding convertible debt), and convertible debt and preferred stock. The shelf and junk subcategories are not mutually exclusive. A high-yield, shelf debt offer would appear in both subcategories. As the table indicates, 1,114 (37%) of the offers are common stock, 1,408 (46%) are debt, and 509 (17%) are convertible debt or preferred stock. Given our focus on a client's loyalty to a bank, the sample does not contain initial public offerings. The common stock offers we examine are by seasoned firms.

Firms in our sample tend to make fewer common stock offers than debt offers, as the mean number of common stock issues per client firm is 1.45 for common stock offers and 1.83 for debt offers. The distributions are skewed, however, as the median number of issues per firm in each category is 1.00. Among the three security classes in the sample, the typical debt offer raises the largest proceeds (the median and mean are \$114.54 million and \$164.55 million in 2001 dollars, respectively), while the typical common stock offering raises the smallest (median and mean proceeds are \$61.27 million and \$104.78 million, respectively).

We use the gross fee and include underwriting fees and selling concessions, as a percent of gross proceeds. Common stock offers have the highest underwriting fees and debt offers have the lowest. The median (mean) fee for common stock offers is 4.48% (4.64%), while that for debt offers is 0.70% (1.16%). Given their hybrid nature, convertible debt and preferred stock offers tend to have lower fees than common stock offers and higher fees than debt offers (and although not reported in the table, this is also true for each of these offer types on their own). As we would

[5]For example, results are robust to adjusting the long-term measure so that proceeds are not included. The results are also robust to replacing the weighting scheme such that the weight is exponential in the number of days between prior offers and the current offer (such that even more weight is assigned to more recent offers).

expect, shelf-registered offers have lower fees in all offer types, and junk offers have higher fees than nonjunk offers.

The mean short-term loyalty for the offers in our sample is 0.59, indicating that the firm's prior bank is retained in 59% of the offers (and a new bank is chosen in 41% of the offers). Firms making common stock offers tend to be slightly more loyal to their prior bank than those making debt offers (0.61 for common stock offers versus 0.56 for debt offers). Short-term loyalty rates do not appear to differ substantially based on whether the offer is a shelf offer or a junk offer.

A greater difference seems to exist between offer types when long-term loyalty is used. The median long-term loyalty metric is 0.67 for common stock offers and 0.58 for debt offers. A larger difference also is based on the shelf status of the offer for firms making common stock offers. The median long-term loyalty is 0.55 for common stock offers that are shelf-registered (versus 0.67 for all common stock offers). Shelf registration does not appear to make a material difference for debt offers. Finally, a difference also appears to emerge in the long-term loyalty rate for debt offers that are rated as junk (the median loyalty is 0.75 for these offers, versus 0.58 for debt offers in general).

We also incorporate bank and client industry share into our analysis. Bank industry share is defined as the percent of proceeds the bank brings to market in the firm's two-digit SIC code industry during the prior three years. This metric provides a measure of the relative experience of the underwriter in selling securities of firms in the industry. Banks with greater industry shares could have stronger bargaining positions when underwriting fees are negotiated. Common stock offers have banks with slightly lower industry shares than in the other offer categories. The median (mean) bank industry share is 0.08 (0.13) for common stock offers, while that for debt offers is 0.10 (0.17) and that for convertible debt and preferred stock offers is 0.09 (0.15).

Client industry share is similarly defined and measures the percent of proceeds the firm raises in its two-digit SIC code industry during the prior three years. The motivation for this variable is that a firm that accounts for a larger fraction of proceeds brought to market could have more bargaining power when negotiating an underwriting fee. The bank could be interested in establishing (or maintaining) a relationship with a firm more likely to offer greater underwriting opportunities in the future. For this measure the current offer is also included along with the prior offers. The idea is that, in terms of negotiating power, when the bank and firm are negotiating the fee, the size of the firm's current offer is a component of the firm's overall market share of offers in its industry. Similar to bank industry share, we find that client industry share is slightly lower for common stock offers.

### 3.4. Loyalty through time

Claims are made that the ties between firms and their banks have weakened in recent years (see, for example, Eccles and Crane, 1988). A quintessential example is that of General Motors which, after several decades of exclusively dealing with Morgan Stanley, now uses other banks as well. Radical changes took place in the

Table 1
Summary statistics

Statistics are for a sample of 3,031 offers in the Thomson Financial Securities Data Corporation (SDC) database by 769 client firms during 1975–2001. The three categories of common stock, debt, and convertible debt and preferred stock are mutually exclusive. The categories of shelf issues (those classified as shelf registered) and junk issues (those classified as high yield) are not mutually exclusive. Proceeds is the gross proceeds in 2001 dollars using the producer price index. Fee is the gross underwriting spread (including lead-management fees, comanagement fees, and selling concessions) expressed as a percentage of the gross proceeds. Short-term loyalty is an indicator variable set to one if the bank used in the firm's prior offer (regardless of offer type) is retained for the current offer. Long-term loyalty is a measure of the extent to which the firm has used the bank underwriting the current offer to underwrite offers over the past five years. Bank industry share is the percent of proceeds (in 2001 dollars) the bank has underwritten in the firm's two-digit standard industrial classification (SIC) code during the past three years. Client industry share is similarly defined as the percent of 2001 dollar proceeds the client firm has raised in its two-digit SIC code. Bank industry share and client industry share are calculated using all offers contained in the SDC database (i.e., these measures are not only based on the offers in the final sample). Client assets are the latest available prior to the offer. The number of observations for each column is given on the first row (number issues in sample). The number of observations included in the statistics for client assets is lower than the number of issues because of missing data.

| | All issues | | | | Shelf issues | | | | Junk issues | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | Common stock | Debt | Convertible debt and preferred stock | Total | Common stock | Debt | Convertible debt and preferred stock | Total | Debt | Convertible debt and preferred stock |
| Number of issues in sample | 3,031 | 1,114 | 1,408 | 509 | 763 | 74 | 638 | 51 | 512 | 246 | 266 |
| Number of issues per client firm | | | | | | | | | | | |
| Median | 3.00 | 1.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mean | 3.94 | 1.45 | 1.83 | 0.62 | 0.99 | 0.10 | 0.83 | 0.07 | 0.67 | 0.32 | 0.35 |
| Standard deviation | 4.41 | 1.71 | 3.48 | 1.15 | 2.27 | 0.34 | 2.17 | 0.33 | 1.20 | 0.78 | 0.75 |
| Proceeds (millions of dollars) | | | | | | | | | | | |
| Median | 85.70 | 61.27 | 114.54 | 84.82 | 106.86 | 93.08 | 108.48 | 84.67 | 106.76 | 131.20 | 82.24 |
| Mean | 133.77 | 104.78 | 164.55 | 112.05 | 166.80 | 174.75 | 166.41 | 160.18 | 132.33 | 160.55 | 106.23 |
| Standard deviation | 180.45 | 159.27 | 209.85 | 108.26 | 235.45 | 210.40 | 239.86 | 217.08 | 117.39 | 137.73 | 87.24 |
| Fee (percent) | | | | | | | | | | | |
| Median | 2.75 | 4.48 | 0.70 | 2.75 | 0.66 | 3.80 | 0.63 | 2.75 | 3.00 | 2.97 | 3.00 |
| Mean | 2.72 | 4.64 | 1.16 | 2.81 | 1.25 | 3.79 | 0.85 | 2.57 | 3.10 | 2.83 | 3.35 |
| Standard deviation | 2.08 | 1.52 | 1.12 | 1.53 | 1.32 | 1.35 | 0.85 | 1.07 | 1.26 | 0.96 | 1.44 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Short-term loyalty | | | | | | | | | | | |
| Median | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Mean | 0.59 | 0.61 | 0.56 | 0.65 | 0.56 | 0.62 | 0.54 | 0.78 | 0.67 | 0.65 | 0.68 |
| Standard deviation | 0.49 | 0.49 | 0.50 | 0.48 | 0.50 | 0.49 | 0.50 | 0.42 | 0.47 | 0.48 | 0.47 |
| Long-term loyalty | | | | | | | | | | | |
| Median | 0.63 | 0.67 | 0.58 | 0.66 | 0.55 | 0.55 | 0.56 | 0.51 | 0.72 | 0.75 | 0.70 |
| Mean | 0.55 | 0.57 | 0.53 | 0.57 | 0.52 | 0.55 | 0.52 | 0.53 | 0.60 | 0.60 | 0.60 |
| Standard deviation | 0.41 | 0.41 | 0.41 | 0.40 | 0.41 | 0.39 | 0.42 | 0.36 | 0.40 | 0.41 | 0.39 |
| Bank industry share | | | | | | | | | | | |
| Median | 0.09 | 0.08 | 0.10 | 0.09 | 0.08 | 0.07 | 0.08 | 0.10 | 0.10 | 0.12 | 0.09 |
| Mean | 0.16 | 0.13 | 0.17 | 0.15 | 0.15 | 0.14 | 0.16 | 0.14 | 0.17 | 0.19 | 0.16 |
| Standard deviation | 0.19 | 0.17 | 0.20 | 0.19 | 0.19 | 0.18 | 0.20 | 0.17 | 0.21 | 0.21 | 0.20 |
| Client industry share | | | | | | | | | | | |
| Median | 0.08 | 0.07 | 0.10 | 0.08 | 0.09 | 0.08 | 0.09 | 0.08 | 0.14 | 0.20 | 0.11 |
| Mean | 0.18 | 0.15 | 0.21 | 0.19 | 0.20 | 0.16 | 0.21 | 0.20 | 0.24 | 0.28 | 0.20 |
| Standard deviation | 0.24 | 0.22 | 0.25 | 0.24 | 0.25 | 0.21 | 0.26 | 0.23 | 0.25 | 0.25 | 0.24 |
| Client assets (millions of dollars) | | | | | | | | | | | |
| Median | 1,609 | 624 | 3,036 | 1,380 | 3,313 | 1,257 | 3,489 | 2,498 | 691 | 816 | 663 |
| Mean | 6,244 | 2,903 | 9,578 | 4,552 | 12,410 | 3,554 | 12,715 | 21,647 | 1,780 | 2,191 | 1,384 |
| Standard deviation | 30,768 | 23,437 | 34,032 | 35,075 | 50,390 | 6,928 | 46,771 | 103,395 | 5,441 | 7,491 | 1,968 |
| Number of observations | 2,361 | 899 | 1,090 | 372 | 633 | 62 | 529 | 42 | 434 | 213 | 221 |

Table 2
Loyalty through time

This table reports the yearly mean short-term and long-term loyalty measures for 3,031 offers in the Thomson Financial Securities Data Corporation (SDC) database by 769 firms during 1975–2001. Short-term loyalty (ST-loyalty) is an indicator variable set to one if the bank used in the firm's prior offer (regardless of offer type) is retained for the current offer. Long-term loyalty (LT-loyalty) is a measure of the extent to which the firm has used the bank underwriting the current offer to underwrite offers over the past five years. LT-loyalty is defined as

$$LT-loyalty_{CO}=\frac{\sum_{j=1}^{n}(Ind_j)(Proceeds_j)\left(\frac{3650-[Date(CO)-Date(j)]}{3650}\right)}{\sum_{j=1}^{n}(Proceeds_j)\left(\frac{3650-[Date(CO)-Date(j)]}{3650}\right)}$$

where *CO* denotes the current offer, *j* is an index of the offers the firm has made over the five years prior to the current offer, *Proceeds* is gross proceeds in 2001 dollars using the producer price index, and *Ind(j)* is an indicator variable equal to one if offer *j* uses the same investment bank as the current offer (and zero otherwise). The weighting scheme is linear and causes an offer one year ago to receive a weight of 0.90 and an offer five years ago to receive a weight of 0.50. The all offers category includes 216 convertible debt offers and 293 preferred stock offers. Debt offers exclude convertible debt.

| Year | All offers ($N=3,031$) | | | Common stock ($N=1,114$) | | | Debt ($N=1,408$) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Number | ST-loyalty | LT-loyalty | Number | ST-loyalty | LT-loyalty | Number | ST-loyalty | LT-loyalty |
| 1975 | 79 | 0.722 | 0.582 | 25 | 0.720 | 0.537 | 42 | 0.690 | 0.625 |
| 1976 | 91 | 0.582 | 0.532 | 32 | 0.563 | 0.513 | 43 | 0.512 | 0.467 |
| 1977 | 87 | 0.644 | 0.593 | 22 | 0.727 | 0.634 | 50 | 0.620 | 0.572 |
| 1978 | 78 | 0.615 | 0.593 | 33 | 0.727 | 0.727 | 35 | 0.486 | 0.456 |
| 1979 | 87 | 0.563 | 0.605 | 38 | 0.605 | 0.678 | 38 | 0.474 | 0.519 |
| 1980 | 127 | 0.591 | 0.575 | 50 | 0.640 | 0.619 | 49 | 0.490 | 0.494 |
| 1981 | 107 | 0.589 | 0.580 | 52 | 0.558 | 0.523 | 38 | 0.553 | 0.588 |
| 1982 | 140 | 0.664 | 0.634 | 61 | 0.754 | 0.702 | 46 | 0.609 | 0.560 |
| 1983 | 168 | 0.708 | 0.625 | 76 | 0.711 | 0.642 | 57 | 0.684 | 0.627 |
| 1984 | 140 | 0.750 | 0.637 | 37 | 0.757 | 0.626 | 71 | 0.761 | 0.659 |
| 1985 | 137 | 0.657 | 0.602 | 36 | 0.667 | 0.553 | 71 | 0.634 | 0.637 |
| 1986 | 167 | 0.641 | 0.611 | 59 | 0.576 | 0.566 | 65 | 0.662 | 0.633 |
| 1987 | 135 | 0.637 | 0.586 | 39 | 0.667 | 0.600 | 57 | 0.561 | 0.538 |
| 1988 | 90 | 0.689 | 0.634 | 19 | 0.632 | 0.518 | 60 | 0.700 | 0.673 |
| 1989 | 72 | 0.639 | 0.593 | 19 | 0.579 | 0.595 | 41 | 0.707 | 0.632 |
| 1990 | 63 | 0.603 | 0.584 | 18 | 0.556 | 0.563 | 32 | 0.750 | 0.716 |
| 1991 | 102 | 0.510 | 0.453 | 45 | 0.556 | 0.497 | 36 | 0.528 | 0.485 |
| 1992 | 103 | 0.641 | 0.543 | 37 | 0.649 | 0.551 | 46 | 0.717 | 0.604 |
| 1993 | 133 | 0.609 | 0.568 | 51 | 0.608 | 0.540 | 57 | 0.614 | 0.608 |
| 1994 | 105 | 0.676 | 0.670 | 54 | 0.704 | 0.676 | 43 | 0.628 | 0.644 |
| 1995 | 130 | 0.569 | 0.562 | 56 | 0.643 | 0.569 | 66 | 0.515 | 0.558 |
| 1996 | 125 | 0.552 | 0.541 | 63 | 0.556 | 0.531 | 50 | 0.520 | 0.547 |
| 1997 | 135 | 0.467 | 0.463 | 53 | 0.547 | 0.577 | 62 | 0.339 | 0.341 |
| 1998 | 132 | 0.455 | 0.413 | 47 | 0.447 | 0.389 | 73 | 0.384 | 0.392 |
| 1999 | 105 | 0.410 | 0.334 | 41 | 0.439 | 0.387 | 56 | 0.339 | 0.265 |
| 2000 | 86 | 0.326 | 0.316 | 23 | 0.261 | 0.322 | 58 | 0.345 | 0.325 |
| 2001 | 107 | 0.374 | 0.306 | 28 | 0.500 | 0.462 | 66 | 0.333 | 0.238 |
| $<1988$ | 1,543 | 0.649 | 0.600 | 560 | 0.664 | 0.613 | 662 | 0.609 | 0.578 |
| $\geqslant 1988$ | 1,488 | 0.533 | 0.496 | 554 | 0.560 | 0.521 | 746 | 0.508 | 0.483 |
| *T*-statistic for Difference | | (6.53) | (7.13) | | (3.60) | (3.74) | | (3.81) | (4.39) |

nature of the competition triggered in part by financial deregulation and innovations in financial products and services. Some contend little trace exists of a noncompetitive climate in which banks avoid competing for clients of other banks.

To examine the extent to which bank–client relationships could have changed over the course of our sample period, Table 2 shows mean short- and long-term loyalty through time. Both loyalty measures fluctuate somewhat randomly from year to year, likely the result of the varying composition of firms undertaking offerings in different years, but both are lower in the second half of the sample (and particularly so after the mid-1990s). This is true for both common stock offers and debt offers. The overall pattern is consistent with a trend toward weaker client–bank relationships, and for all offers the mean ST-loyalty and LT-loyalty are significantly lower in the second half of the sample according to a standard $T$-test (the $T$-values are 6.53 and 7.13, respectively). The differences are also significant for common stock or debt offers alone, and although not reported in the table, the differences are significant for convertible debt and preferred stock offers. While some decline is evident over the sample period, a more substantial decline could have occurred earlier, because claims of a decline in client–bank relationships sometimes appear to refer to periods before the starting date of our sample.

## 4. The determinants of loyalty

Before examining how loyalty affects fees, we explore the factors that explain loyalty. Understanding these factors could help identify important control variables when we turn to investigating the relationship between loyalty and fees. Preliminary analysis suggests that the factors we examine affect loyalty differently for common stock and debt offers, so in Table 3 we report regressions on these two groups separately. We examine three categories of variables: offer characteristics, bargaining power variables, and performance and size variables. Offer characteristics include log(proceeds), the log of the gross proceeds in 2001 dollars using the producer price index; shelf, an indicator set to one if the offer is shelf registered (and zero otherwise); syndicated, an indicator set to one if the offer is syndicated (and zero otherwise); and junk, an indicator set to one if the offer is rated as a high yield offer (and zero otherwise). Junk is not coded for common stock offers.

Bargaining power variables include log(number total offers), client offer experience, bank industry share, and client industry share. The number of total offers is measured for each client firm over the entire sample period (i.e., the count includes prior, current, and future offers). We view this metric as measuring whether the client has been, or is expected to be, a frequent issuer. More frequent issuers are presumably more valuable as clients if repeat business can be captured. Client offer experience measures how experienced the client firm is in making an offer at the time of the current offer and is the log-transformed number of the offer the firm is making [i.e., log(1) for its first, log(2) for its second, etc.]. More experienced issuers could be in a stronger bargaining position with investment banks. The remaining two

Table 3
Regressions explaining short- and long-term loyalty

This table reports regressions predicting ST-loyalty and LT-loyalty for common stock and debt offers. ST-loyalty is an indicator variable set to one if the bank used in the firm's prior offer (regardless of offer type) is retained for the current offer. LT-loyalty is a measure of the extent to which the firm has used the bank underwriting the current offer to underwrite offers over the past five years. Proceeds is the gross proceeds in 2001 dollars using the producer price index. Shelf, syndicated, and junk are indicator variables for whether the offer is shelf registered, syndicated, and rated as a junk issue (for debt offerings), respectively. Number total offers is the total number of offers (of any type) the firm makes over the entire sample period (regardless of the bank used). Client offer experience is the log-transformed number of the offer the firm is making throughout the entire sample period, regardless of bank used or offer type, and is coded as log(1) for the first offer, log(2) for the second, etc. Bank industry share is the percent of proceeds (measured in 2001 dollars) the bank has underwritten in the current firm's two-digit SIC code during the past three years. Client industry share is similarly defined as the percent of proceeds (measured in 2001 dollars) the firm has raised (for all types of offers) in its two-digit standard industrial classification (SIC) code. Bank industry share and client industry share are calculated using all offers contained in the Securities Data Corporation database (i.e., these measures are not only based on the offers in the final sample). Return on assets, market-to-book, and assets are measured at the latest date possible prior to the offer month. The dependent variable and regression type are shown above each model. All models include indicator variables for each year (based on the offer year). Pseudo *T*-ratios (for the logistic regressions) and heteroskedastic *T*-ratios (for the OLS regressions) are in parentheses.

| | Common stock offers | | | | Debt offers | | | |
|---|---|---|---|---|---|---|---|---|
| | ST-loyalty Logistic | | LT-loyalty Ordinary least squares | | ST-loyalty Logistic | | LT-loyalty Ordinary least squares | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Offer characteristics | | | | | | | | |
| Log(proceeds) | 0.023 | −0.158 | 0.025 | −0.015 | −0.071 | −0.050 | −0.005 | 0.019 |
| | (0.31) | (−1.44) | (1.97) | (−0.83) | (−1.30) | (−0.66) | (−0.59) | (1.78) |
| Shelf | 0.583 | 0.721 | 0.055 | 0.050 | 0.328 | 0.258 | 0.121 | 0.098 |
| | (1.84) | (1.87) | (1.23) | (0.97) | (1.94) | (1.26) | (4.32) | (3.05) |
| Syndicated | −0.476 | −0.471 | −0.059 | −0.022 | −0.005 | 0.017 | −0.025 | −0.005 |
| | (−2.90) | (−2.43) | (−2.11) | (−0.73) | (−0.03) | (0.07) | (−0.87) | (−0.14) |
| Junk | — | — | — | — | 0.392 | −0.254 | 0.070 | −0.065 |
| | — | — | — | — | (2.08) | (−1.05) | (2.24) | (−1.69) |
| Bargaining power | | | | | | | | |
| Log (number total offers) | −0.291 | −0.348 | −0.038 | −0.084 | 0.131 | 0.058 | 0.001 | −0.020 |
| | (−1.35) | (−1.28) | (−1.05) | (−1.95) | (0.93) | (0.33) | (0.01) | (−0.65) |
| Client offer experience | −0.258 | −0.348 | −0.057 | −0.060 | −0.434 | −0.275 | −0.050 | −0.017 |
| | (−1.28) | (−1.40) | (−1.66) | (−1.51) | (−3.08) | (−1.60) | (−2.01) | (−0.57) |
| Bank industry share | 5.871 | 6.284 | 0.846 | 0.886 | 4.483 | 4.290 | 0.891 | 0.844 |
| | (8.89) | (7.97) | (9.90) | (9.71) | (10.42) | (8.25) | (17.43) | (13.06) |
| Client industry share | −1.415 | −1.509 | −0.259 | −0.290 | −1.659 | −1.515 | −0.325 | −0.252 |
| | (−3.36) | (−2.94) | (−3.99) | (−4.06) | (−5.06) | (−3.89) | (−7.96) | (−5.14) |
| Performance and size | | | | | | | | |
| Return on assets | — | 1.560 | — | 0.416 | — | −2.435 | — | −0.552 |
| | — | (2.42) | — | (4.58) | — | (−1.69) | — | (−2.23) |
| Market-to-book | — | 0.216 | — | 0.037 | — | 0.300 | — | 0.041 |
| | — | (2.76) | — | (3.58) | — | (1.59) | — | (1.36) |
| Log(assets) | — | 0.090 | — | 0.025 | — | −0.301 | — | −0.058 |
| | — | (1.10) | — | (1.99) | — | (−4.20) | — | (−5.40) |
| Number of observations | 1,114 | 830 | 1,114 | 830 | 1,408 | 1,016 | 1,408 | 919 |
| Adjusted $R^2$ | — | — | 0.695 | 0.704 | — | — | 0.717 | 0.724 |
| Chi-square *P*-value | <0.001 | <0.001 | — | — | <0.001 | <0.001 | — | — |

bargaining power variables are bank industry share and client industry share as defined in our discussion of Table 1.

The performance and size variables are return on assets (operating income before depreciation divided by the book value of assets), market-to-book (the market value of equity plus the book values of debt and preferred stock, all divided by the book value of assets), and log(assets), which is measured in 2001 dollars using the producer price index. Finally, all regression models include indicator variables for each offer year (27 in total), which precludes the need for an intercept term. For brevity, we do not report the coefficients and $T$-values for the year indicators.

Models 1 and 2 are logistic regressions that explain ST-loyalty, the indicator variable set to one if the prior bank is retained for the current offer (and zero otherwise). The models are similar except that Model 2 also includes the performance and size variables, which are missing for 284 observations (hence the number of observations drops from 1,114 to 830). Models 3 and 4 are similar in terms of the explanatory variables and samples, but these report ordinary least squares regressions to explain LT-loyalty, the long-term loyalty measure. All four of these models are limited to common stock offers.

Models 1 and 2 show that firms making shelf offers are more likely to retain the prior bank, although the psuedo $T$-ratios for shelf in the two models suggest only weak significance ($T = 1.84$ and 1.87, respectively). In Models 3 and 4, which explain LT-loyalty, these variables are insignificant. Models 1–3 show that syndicated is negatively related to short- and long-term loyalty. This suggests that client firms are more likely to switch banks when a syndicate is needed, or alternatively, that banks are more likely to form a syndicate when underwriting the offer of a new client. As shown in Model 4, however, this variable does not help to explain long-term loyalty once we control for performance and size.

Of the bargaining power variables, only the two industry share variables are consistently significant. First, client firms are more loyal to banks with higher industry shares, as bank industry share is positive and highly significant in all four models. By contrast, clients with larger shares of offer proceeds in their industry are less loyal, as client industry share is negative and significant in each model. Models 2 and 4 also show that return on assets and market-to-book are significant determinants of a client firm's loyalty to a bank. Firms with stronger operating performance and higher market-to-book ratios are more likely to be loyal when making equity offers.

Models 5 through 8 report the same models estimated using only debt offers, except that the models also include junk, the indicator variable for a high yield offer. Except for Model 6, the regressions indicate that shelf offers lead to greater loyalty. Unlike for common stock offers, no evidence exists that syndicated offers are associated with less loyalty than nonsyndicated offers. We do find that the junk status is positive and significant in Models 5 and 7, as the $T$-values for junk are 2.08 and 2.24, respectively. Hence, firms offering junk issues are more loyal in these models. Once the performance and size variables are included in Models 6 and 8, however, the issue's junk status is no longer positive and significant. Although the positive significance of junk could disappear in part because of the junk status

proxying for the firm's performance and size variables, further investigation reveals that the loss in the sample size in Models 6 and 8 is also a factor.

As is the case for the common stock offers, the bargaining power variables bank industry share and client industry share are positively and negatively related, respectively, to both short- and long-term loyalty. Depending on the model, evidence shows that greater client offer experience leads to less loyalty. Finally, firms with higher return on assets are less loyal, as are firms with larger assets.

In untabulated results we also estimate Models 5–8 for the 509 convertible debt and preferred stock offers. The significant results are as follows: shelf is positive and significant in Models 5 and 6, junk is positive and significant in Models 5 and 7, client offer experience is negative and significant in all four models, and bank industry share is positive and significant in all four models. If we estimate the models for only convertible debt offers ($N = 216$) or using only preferred stock offers ($N = 293$), even fewer variables are significant. The fewer significant variables using these two samples (either separately or together) could stem from reduced statistical power resulting from smaller sample sizes.

## 5. The effect of loyalty on fees

We now investigate the effect of short- and long-term loyalty on underwriting fees. In Table 4 we report ordinary least squares regressions in which the dependent variable is the log of the fee (the gross underwriting fee as a percent of proceeds). The results in Table 3 show that several of the firm and offer characteristics are significant determinants of loyalty, so we include them as control variables here. We report regressions separately for common stock and debt offers for two reasons. First, Table 3 suggests that the determinants of loyalty are to some degree different for these two types of offers, which in turn suggests different market dynamics are at play. Second, we conjecture that H1 (the benefits of loyalty hypothesis) is more likely to hold for common stock offers, while H2 (the costs of loyalty hypothesis) is more likely for debt offers. Models 1–4 include only common stock offers, and models 5–8 include only debt offers.

Model 1 shows that for common stock offers, ST-loyalty is negative and significant ($T = -2.52$), implying that a client is charged lower fees if it retains the prior bank. This is consistent with the benefits of loyalty hypothesis (H1) holding for the common stock offer market. In terms of economic significance, the estimated regression indicates that, all else equal, firms that retain their prior bank pay around 4% less in fees than those that switch banks. Most of the control variables are also significant. Offers with larger proceeds are associated with lower fees, consistent with economies of scale. We also find that shelf offers result in lower fees and that syndicated offers are associated with higher fees. Three of the bargaining power variables are also significant. Firms making more offers over the sample period appear to be able to negotiate lower fees, as do those with greater offering experience. Bank industry share is insignificant, but client offer share is positive and significant ($T = 2.77$). This result is perhaps surprising. It could indicate that it is

Table 4
Regressions explaining log(fee)

This table reports various ordinary least squares regressions predicting log(fee), in which the fee is the gross underwriting spread (including lead-management fees, comanagement underwriting fees, and selling concessions) expressed as a percentage of the gross proceeds. ST-loyalty is an indicator variable set to one if the bank used in the firm's prior offer (regardless of offer type) is retained for the current offer. LT-loyalty is a measure of the extent to which the firm has used the bank underwriting the current offer to underwrite offers over the past five years. Proceeds is the gross proceeds in 2001 dollars using the producer price index. Shelf, syndicated, and junk are indicator variables for whether the offer is shelf registered, syndicated, and rated as a junk issue (for debt offerings), respectively. Number total offers is the total number of offers (of any type) the firm makes over the entire sample period (regardless of the bank used). Client offer experience is the log-transformed number of the offer the firm is making throughout the entire sample period, regardless of bank used or offer type, and is coded as log(1) for the first offer, log(2) for the second, etc. Bank industry share is the percent of proceeds (measured in 2001 dollars) the bank has underwritten for firms in the current firm's two-digit standard industrial classification (SIC) code during the past three years. Client industry share is similarly defined as the percent of proceeds (measured in 2001 dollars) the firm has raised (for all types of offers) in its two-digit SIC code. Bank industry share and client industry share are calculated using all offers contained in the Securities Data Corporation database (i.e., these measures are not only based on the offers in the final sample). Return on assets, market-to-book, and assets are measured at the latest date possible prior to the offer month. All models include indicator variables for each year (based on the offer year). Heteroskedastic *T*-ratios are in parentheses.

| | Common stock offers | | | | Debt offers | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| ST-loyalty | −0.043 | −0.024 | — | — | 0.157 | 0.111 | — | — |
| | (−2.52) | (−1.32) | — | — | (4.25) | (2.51) | — | — |
| LT-loyalty | — | — | −0.058 | −0.027 | — | — | 0.269 | 0.162 |
| | — | — | (−2.89) | (−1.19) | — | — | (5.75) | (3.02) |
| Offer characteristics | | | | | | | | |
| Log(proceeds) | −0.151 | −0.104 | −0.150 | −0.104 | −0.159 | −0.091 | −0.160 | −0.096 |
| | (−15.01) | (−8.79) | (−14.89) | (−8.77) | (−9.64) | (−4.08) | (−9.66) | (−4.25) |
| Shelf | −0.157 | −0.099 | −0.159 | −0.101 | 0.081 | 0.110 | 0.059 | 0.100 |
| | (−4.10) | (−2.50) | (−4.15) | (−2.54) | (1.43) | (1.62) | (1.05) | (1.47) |
| Syndicated | 0.149 | 0.137 | 0.149 | 0.139 | 0.110 | 0.123 | 0.116 | 0.124 |
| | (7.21) | (6.50) | (7.29) | (6.65) | (2.08) | (1.86) | (2.17) | (1.87) |
| Junk | — | — | — | — | 1.366 | 1.262 | 1.361 | 1.267 |
| | — | — | — | — | (26.73) | (18.34) | (26.68) | (18.48) |
| Bargaining power | | | | | | | | |
| Log (number total offers) | −0.040 | −0.014 | −0.040 | −0.015 | −0.200 | −0.169 | −0.196 | −0.164 |
| | (−1.81) | (−0.55) | (−1.79) | (−0.57) | (−5.01) | (−3.63) | (−4.95) | (−3.54) |
| Client offer experience | −0.081 | −0.010 | −0.083 | −0.010 | −0.039 | −0.011 | −0.040 | −0.014 |
| | (−3.82) | (−0.44) | (−3.89) | (−0.43) | (−0.97) | (−0.22) | (−0.99) | (−0.29) |
| Bank industry share | −0.064 | −0.012 | −0.057 | −0.012 | −0.266 | −0.227 | −0.371 | −0.274 |
| | (−1.03) | (−0.19) | (−0.90) | (−0.18) | (−2.94) | (−2.10) | (−4.01) | (−2.53) |
| Client industry share | 0.119 | 0.157 | 0.118 | 0.157 | 0.087 | 0.245 | 0.121 | 0.252 |
| | (2.77) | (3.30) | (2.78) | (3.30) | (1.00) | (2.42) | (1.39) | (2.50) |
| Performance and size | | | | | | | | |
| Return on assets | — | −0.271 | — | −0.268 | — | −0.156 | — | −0.121 |
| | — | (−5.12) | — | (−5.02) | — | (−0.49) | — | (−0.38) |
| Market-to-book | — | −0.022 | — | −0.022 | — | −0.005 | — | −0.006 |
| | — | (−3.54) | — | (−3.50) | — | (−0.12) | — | (−0.12) |
| Log(assets) | — | −0.082 | — | −0.082 | — | −0.121 | — | −0.118 |
| | — | (−9.62) | — | (−9.55) | — | (−4.93) | — | (−4.88) |
| Number of observations | 1,114 | 830 | 1,114 | 830 | 1,408 | 1,016 | 1,408 | 1,016 |
| Adjusted $R^2$ | 0.971 | 0.976 | 0.971 | 0.976 | 0.589 | 0.620 | 0.593 | 0.621 |

more difficult and costly to place issues by firms that have already placed a substantial dollar portion of issues in their industry over the past few years.

Model 2 adds the performance and size variables. All of these variables are negative and significant, indicating that firms with stronger operating performance, higher market-to-book values, and larger sizes are charged lower fees. All else equal, common stock issues of such firms could be easier to place because of greater market demand. For example, many institutional investors could prefer to invest in stocks of larger firms because they have greater liquidity; that is, selling large blocks of shares could be easier in terms of market depth problems. ST-loyalty is no longer significant in this model. This could be the result of reduced statistical power, because if we reestimate Model 1 using only the 830 observations from Model 2, the $T$-value on ST-loyalty is $-1.86$. The sample size reduction alone does not explain the insignificance of ST-loyalty in Model 2, however, and this suggests the need to investigate the effect of performance and size for firms that retain their bank instead of switching.

To investigate whether the relation between loyalty and fees is affected by the firm's performance or size, in results not reported in the table, we reestimate Model 2 but replace ST-loyalty with two interaction variables between ST-loyalty and indicator variables based on whether a performance or size variable is above or below its sample median. First, in one estimation we remove ST-loyalty but add both ST-loyalty $\times$ hi-ROA and ST-loyalty $\times$ low-ROA, where hi-ROA is an indicator variable set to one if return on assets is above its sample median (and zero otherwise) and low-ROA $= 1 -$ hi-ROA. We find that ST-loyalty $\times$ hi-ROA is negative and significant ($T = -2.87$) and that ST-loyalty $\times$ low-ROA is insignificant ($T = 0.33$). Hence, having higher ROA is helpful in inducing a client's prior underwriter, if retained for the current offer, to charge lower fees. Firms with higher ROA could be more desirable clients (on average), and potential competition from competing banks could help such clients to negotiate lower fees with their current bank. We find similar results when we consider an alternative estimate that instead includes ST-loyalty $\times$ hi-MB and ST-loyalty $\times$ low-MB as interaction terms based on high and low values of market-to-book (instead of return on assets). The $T$-statistic for ST-loyalty $\times$ hi-MB is –2.09 and that for ST-loyalty $\times$ low-MB is –0.26. Hence, firms with higher market-to-book values are able to negotiate lower fees when retaining their banks. We do not find significant results using ST-loyalty $\times$ hi-assets and ST-loyalty $\times$ low-assets.

Models 3 and 4 are similar to the first two models in Table 4, but we use the long-term loyalty measure (LT-loyalty) instead of ST-loyalty. The results are fairly similar, with LT-loyalty being negative and slightly more significant ($T = -2.89$) than ST-loyalty is in Model 1, and LT-loyalty being insignificant in Model 4. The signs and significance levels of the various control variables are also consistent with what we observe in the first two models. In untabulated results we try replacing LT-loyalty with the interaction terms based on whether a performance or size variable is above the sample median (e.g., LT-loyalty $\times$ hi-ROA and LT-loyalty $\times$ low-ROA). Results are similar to the analogous regressions using ST-loyalty in that we find both LT-loyalty $\times$ hi-ROA and LT-loyalty $\times$ hi-MB are negative and significant. As

before, this suggests that improved performance induces the firm's existing underwriter to reduce fees.

In Models 5–8 we repeat the analysis for debt offers. The results with regards to loyalty are strikingly different. Both loyalty measures are positive and significant regardless of whether the performance and size variables are included. ST-loyalty has *T*-values of 4.25 and 2.51 in Models 5 and 6, respectively, and LT-loyalty has *T*-values of 5.75 and 3.02 in Models 7 and 8, respectively. These results support the notion that for debt offers H2 is more likely to describe the dynamic in effect. In terms of economic significance, the estimated regression in Model 5 indicates that, all else equal, firms that retain their prior bank pay around 16% more in fees than firms that switch banks.

As is the case for common stock offers, log(proceeds) is negative and highly significant, suggesting there are economies of scale in the fees that are charged. Syndicated offers are associated with higher fees, as is the case for common stock offers. Unlike for common stock offers, however, there is no evidence that shelf offers have lower fees. The models also show that junk offers have higher fees, as the coefficients for junk are positive and highly significant.

For debt offers, log(number total offers) is consistently and negatively significant in the four models. This suggests that firms that have made (and presumably are expected to make) more offers are charged lower fees for their debt issues. Unlike for common stock offers, client offer experience is consistently insignificant in the four models, and bank industry share is negative and significant. Client industry share is positive and significant in the models that include the performance and size variables, a result that matches that for common stock offers. Unlike for common stock offers, we do not find that return on assets or market-to-book are significant. This is perhaps not surprising because the junk issue indicator variable is arguably more informative in terms of the risk profile of the type of debt being offered. If we remove Junk from Models 6 and 8, return on assets is negative and significant (*T*-values in the two models are $-2.47$ and $-2.44$, respectively). As with common stock offers, we do find that log(assets) is negative and significant.

In untabulated results, for the debt sample we investigate whether the costs of loyalty hypothesis has less support for firms with lower return on assets, lower market-to-book values, and smaller assets. To do so, we repeat the exercise for common stock offers in which we replace the loyalty variable with two interaction variables based on performance or size. For example, we first reestimate Model 6 with ST-loyalty $\times$ hi-ROA and ST-loyalty $\times$ low-ROA in place of ST-loyalty. In the reestimation of Model 6 the *T*-values on ST-loyalty $\times$ hi-ROA and ST-loyalty $\times$ low-ROA are 1.47 and 2.58, respectively, and the coefficients are 0.075 and 0.145, respectively. Hence, firms with higher ST-loyalty and lower return on assets face significantly larger fees from their existing underwriters. Similar results are obtained when we instead try ST-loyalty $\times$ hi-MB and ST-loyalty $\times$ lo-MB. Both interaction terms using assets are insignificant.

We repeat Models 5–8 for the 509 convertible debt and preferred stock offers (these are not reported in the table). ST-loyalty is insignificant, while LT-loyalty is negative but only weakly significant (the *T*-values for LT-loyalty in Models 7 and 8

are −1.65 and −1.67, respectively). If we estimate the regressions using only the convertible debt offers, none of the loyalty variables approaches being significant. This is also the case if we estimate the models using only the preferred stock offers. The sample sizes are smaller, however, reducing the statistical power. In addition, to varying degrees depending on the security's design, both convertible debt and preferred stock are hybrid securities. Although these securities are perhaps more often thought of as debt securities from an institutional standpoint, they do have equity-like components that often make valuation less straightforward. Given the contrasting nature of the loyalty results for common stock and straight debt offers, it is not surprising that the loyalty measures are mostly insignificant for convertible debt and preferred stock offers.

Another issue we investigate is whether the results are materially different between the short- and long-term loyalty measures. As Table 4 shows, the results do not appear to differ substantially, although the LT-loyalty variable is slightly more significant. The two measures are highly correlated (the correlation coefficient is 0.82 for the common stock sample and 0.75 for the debt sample), and hence it is not surprising that the models reported in Table 4 show that both are related to fees in similar ways.

## 6. The effects of underwriter quality and analyst coverage

The results thus far support the benefits of loyalty hypothesis (H1) for common stock offers and the costs of loyalty hypothesis (H2) for debt offers. However, loyalty does not have significant explanatory power for common stock offers once we control for performance and size. For debt offers, switching banks results in lower fees on average, but for common stock offers on average there is at best no significant effect on fees and at worst there is an adverse effect. This begs the question of why some firms offering common stock switch banks. If switching is often costly for these firms in terms of the fees they pay, is there an offsetting benefit?

The work of Krigman et al., (2001) could offer clues. It examines firms issuing seasoned equity within three years of their IPO and finds that 30% of firms switch to new underwriters and that they prefer to graduate to higher-reputation underwriters. It is unclear how graduation effects impact underwriter fees. Client firms that graduate up to higher-reputation banks could pay higher fees to have their securities underwritten by higher-reputation underwriters. Alternatively, these firms could have become more desirable clients, allowing them to graduate to higher-reputation banks while still lowering their fees.

Krigman, Shaw, and Womack also find that an important reason firms switch from their IPO underwriter is to gain more influential analyst coverage. Similar to the graduation effects regarding underwriter reputation, it is unclear whether a client firm switching to gain better analyst coverage pays higher or lower fees. Banks offering superior analyst coverage perhaps do not need to offer price concessions to attract new clients seeking better coverage. These banks could even be able to justify higher underwriting fees as indirect compensation for more prestigious analyst

Table 5
The effects of switching, changes in underwriter reputation, and analyst coverage on log(fee) for common stock offers

This table reports various ordinary least squares regressions predicting log(fee) for common stock offers. Switch-up is the magnitude of the increase in underwriter reputation for client firms that switch to higher-reputation banks and is zero for all other cases (including cases in which the firm does not switch banks). A bank's reputation is the modified Carter and Manaster ranking found on Jay Ritter's web page, measured on an integer scale from 1 to 9. Prior bank reputation is the reputation rank of the bank used to underwrite the client's prior offer. ST-loyalty is an indicator variable set to one if the bank used in the firm's prior offer (regardless of offer type) is retained for the current offer. Switch × prior coverage is set to one for client firms that switch banks when the new bank issued an analyst report on the client from 18 to six months before the current offer according to I/B/E/S and is zero in all other cases. Switch × number analysts equals an indicator variable set to one if the client firm switches banks (and zero otherwise) times the number of analysts who issued reports on the client firm from 18 to six months before the current offer according to I/B/E/S. All models include indicator variables for each year (based on the offer year). Heteroskedastic *T*-ratios are in parentheses.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Switch-up | −0.051 | −0.059 | −0.063 | −0.071 | −0.088 | −0.084 |
| | (−4.12) | (−4.09) | (−3.73) | (−3.48) | (−5.34) | (−5.02) |
| Prior bank reputation | −0.070 | −0.053 | −0.070 | −0.052 | −0.068 | −0.051 |
| | (−8.99) | (−6.00) | (−8.25) | (−5.29) | (−8.00) | (−5.28) |
| ST-loyalty | −0.049 | −0.037 | −0.082 | −0.066 | −0.135 | −0.088 |
| | (−2.37) | (−1.71) | (−2.63) | (−1.97) | (−3.46) | (−2.04) |
| Switch × prior coverage | — | — | −0.152 | −0.139 | — | — |
| | — | — | (−3.95) | (−3.40) | — | — |
| Switch × number analysts | — | — | — | — | −0.013 | −0.009 |
| | — | — | — | — | (−3.41) | (−2.19) |
| Offer characteristics | | | | | | |
| Log(proceeds) | −0.120 | −0.092 | −0.113 | −0.080 | −0.116 | −0.091 |
| | (−11.78) | (−7.61) | (−10.49) | (−6.14) | (−10.45) | (−7.03) |
| Shelf | −0.184 | −0.126 | −0.170 | −0.134 | −0.149 | −0.105 |
| | (−4.10) | (−2.50) | (−3.67) | (−2.48) | (−3.27) | (−2.01) |
| Syndicated | 0.156 | 0.149 | 0.161 | 0.149 | 0.153 | 0.148 |
| | (7.69) | (7.13) | (7.54) | (6.76) | (7.49) | (6.93) |
| Bargaining power | | | | | | |
| Log(number total offers) | −0.018 | −0.001 | −0.027 | 0.000 | −0.032 | −0.007 |
| | (−0.79) | (−0.04) | (−1.10) | (0.02) | (−1.32) | (−0.25) |
| Client offer experience | −0.082 | −0.017 | −0.088 | −0.020 | −0.091 | −0.026 |
| | (−3.88) | (−0.72) | (−4.01) | (−0.81) | (−4.08) | (−1.04) |
| Bank offer share | −0.062 | −0.024 | −0.072 | −0.061 | −0.046 | −0.014 |
| | (−0.98) | (−0.35) | (−1.10) | (−0.93) | (−0.67) | (−0.20) |
| Client offer share | 0.086 | 0.139 | 0.107 | 0.182 | 0.097 | 0.148 |
| | (2.01) | (2.83) | (2.40) | (3.76) | (1.95) | (2.71) |
| Performance and size | | | | | | |
| Return on assets | — | −0.225 | — | −0.301 | — | −0.249 |
| | — | (−4.50) | — | (−4.86) | — | (−4.44) |
| Market-to-book | — | −0.017 | — | −0.015 | — | −0.012 |
| | — | (−2.73) | — | (−1.89) | — | (−1.54) |
| Log(assets) | — | −0.071 | — | −0.072 | — | −0.068 |
| | — | (−8.25) | — | (−7.70) | — | (−6.46) |
| Number of observations | 1,041 | 775 | 848 | 627 | 819 | 616 |
| Adjusted $R^2$ | 0.973 | 0.977 | 0.974 | 0.979 | 0.975 | 0.979 |

coverage. However, firms able to graduate to better analyst coverage could be in a strong position and face lower fees. The firms could be able to simultaneously improve their analyst coverage and reduce the fees they pay.

In Table 5 we present several regressions that explore the effects of underwriter reputation and analyst coverage on underwriting fees for common stock offers. We begin with underwriter reputation, using the reputation ranks available on Jay Ritter's web page (these are modified Carter and Manaster rankings, measured on an integer scale from 1 to 9).[6] We code two variables. The first is switch-up, which equals the improvement in reputation rank for firms that switch to a higher-reputation bank, and zero otherwise. The second is prior bank reputation, a control variable set to the reputation rank of the bank that underwrote the firm's prior offer (regardless of whether the current offer uses the same bank). We also include ST-loyalty to determine the marginal effect of retaining the prior bank once these new variables are included.

Model 1 shows that, when clients switch to higher reputation banks for their common stock offers, their fees are reduced, because switch-up is negative and significant ($T = -4.12$). The coefficient of $-0.051$ implies that, all else equal, a two-rank increase in underwriter reputation as a result of switching leads to a decrease of 0.102 in log(fee), or around a 10% reduction in the amount of the fee. In untabulated results we try replacing switch-up with an indicator variable set to one if the client firm switches to a higher reputation underwriter (regardless of the magnitude of the change). This variable is also negative and significant, although less so than switch-up. The reported Model 1 also shows that as we might expect, fees are negatively related to the reputation of the firm's prior bank. Firms already with higher-reputation banks are presumably in a stronger position to negotiate their fees. Model 2 shows that these results continue to hold after adding the performance and size variables.

Krigman, Shaw, and Womack also find that firms sometimes switch banks to gain more or improved analyst coverage. To see whether switching for these reasons appears to have a marginal impact on fees beyond switching in general, we try adding two variables to the analysis. The first variable, switch $\times$ prior coverage, is an indicator variable set to one if a firm switches banks and the new bank was already issuing analyst reports on the firm from 18 to six months before the offer. The variable is coded as zero if the firm does not switch banks, or if the firm switches but the new bank was not already issuing analyst reports from 18 to six months before the offer. If a new bank was already issuing analyst reports on a firm that switched (switch $\times$ prior coverage $= 1$), we know that the firm's switch is not motivated by a desire to gain coverage by the new bank. We code this variable using data from the I/B/E/S Detailed Analysts Estimates Database (IBES), the same source of research coverage data used in Krigman, Shaw, and Womack and many

[6]Jay Ritter reports that these rankings have an added 0.1 (e.g., 8.1 instead of 8.0) to flag whenever the ranking assigned does not match the Carter and Manaster methodology because of occasional subjective modifications. We always take the integer of the rankings provided. See http://bear.cba.ufl.edu/ritter/rank.htm for further detail on these rankings.

other studies. We use 18 to six months before the offer to mitigate the possibility that the new bank begins to issue reports immediately before it underwrites the firm's offering. We also throw out observations in which a firm switches banks but the new bank does not appear on IBES as issuing a report for any firm at all during the 18 to six months before the sample firm's offer. This is necessary because IBES does not cover 100% of all banks issuing analyst reports.

In Model 3, there are 848 observations, 193 of which are firms that switch banks, and 78 of these 193 switches are motivated by noncoverage reasons (i.e., 78 have switch × prior coverage coded as one). The results show that switching results in lower fees when the switch is not motivated by coverage reasons, as the *T*-value for switch × prior coverage is −3.95. This result also holds if switch-up and prior bank reputation are excluded (not reported in the table). Hence, irrespective of graduation effects regarding underwriter reputation, firms offering common stock that switch banks obtain lower fees if it appears that the switch is unrelated to analyst coverage. The flip side of the coin is that, when switching could be motivated by analyst coverage, firms pay higher fees (on average). However, we cannot know for sure whether a firm switching to a new bank that did not provide coverage in the past has gaining analyst coverage as its switching motivation. Short of directly asking those involved in the decision-making process for the offers in our sample (which date back to 1975), we can never fully know the true motivation for a switch.

In Models 5 and 6 we instead include switch × number analysts. This variable is a switching indicator variable (set to one for firms that switch and zero for those that do not) interacted with the number of unique analysts issuing a report on IBES on the firm during the 18 to six months prior to the offer. Firms that have more analyst coverage are less likely to have analyst coverage as a motivation for switching. Inspection of the data also makes it clear that firms with larger numbers of analysts covering them are likely to be covered by at least one analyst, and usually numerous analysts, employed by the more prestigious investment banks. As the models show, switch × number analysts is negative and significant (the *T*-values in Models 5 and 6 are −3.41 and −2.19, respectively). Switch-up, prior bank reputation, and ST-loyalty all remain negative and significant in these two models.

The results reported in Models 5 and 6 exclude switching firms for which we do not find at least one analyst covering them, because this could be the result of IBES not covering all analysts or a matching problem. We believe it is unlikely that most of these firms have no analyst coverage. Nevertheless, if we reestimate the models including these observations and coding the switch × number analysts variable as if there are zero analysts covering these firms, the results are similar (the *T*-value for switch × number analysts in Model 5 changes to −4.12 and in Model 6 it changes to –3.43). We also try replacing Switch × number analysts with an indicator variable set to one if a firm switches and the number of analysts is seven or more (the sample median for switching firms in Model 5). This indicator variable is negative and significant (the *T*-values for this alternative variable in Models 5 and 6 are –4.03 and –3.64, respectively). So, once again we find that for common stock offers, firms that seemingly switch for noncoverage reasons pay lower underwriting fees on average.

This result also suggests that firms more likely to be switching for coverage-related reasons pay relatively higher fees when they do so.

Model 1 in Table 4 implies that, for common stock offers, retaining the prior bank results in lower fees on average (because we find that ST-loyalty is negatively related to fees). The models in Table 5 show this continues to be the case even after we control for graduation effects (switching to a higher-reputation bank) or the likelihood that a firm is or is not switching to gain analyst coverage. ST-loyalty continues to be negative and significant, and the coefficients imply that retaining the prior bank reduces fees by anywhere from around 3.7% to 13.5%.

Overall, we argue that the results in Table 5 are consistent with relationship capital being relatively valuable in equity offers. On average, firms that switch up appear to have a good motivation to do so. They become associated with higher-reputation banks for an offer in which we argue certification should be relatively more important, and they pay lower fees as well. The coefficients suggest that these firms obtain around the same reduction in fees as those that retain their prior bank. We do not observe that firms graduating to higher-reputation banks appear to pay for the increased reputation through higher fees. Instead, in spite of any benefits that come with being associated with higher-reputation banks, it appears that firms do not graduate up unless they also obtain lower fees (on average). On the margin, such lower fees could encourage these firms to switch to a new bank, thereby breaking the relationship with their prior bank.

We repeat the same analysis for debt offers in Table 6. Recall that Table 4 shows that, for debt offers, on average firms that switch banks pay lower fees (because fees are increasing in ST-loyalty). Models 1–6 of Table 6 show that this result is primarily driven by firms that switch to underwriters with higher reputations. The coefficients on switch-up in the various models are negative and highly significant (the $T$-values range from –2.80 to –4.62), while ST-loyalty is mostly insignificant. We also find that the variables involving analyst coverage are insignificant. Even if some firms do switch for analyst coverage, there does not appear to be a significant marginal impact on the fees they pay (on average). Thus, the fee structure environment in the underwriting market for debt offers is primarily affected by the existence of firms that are able to obtain lower fees while simultaneously switching to higher-reputation banks.

In untabulated results we repeat these models for the convertible debt and preferred stock offers (together) and find the following statistically significant results for the switching, bank reputation, and analyst coverage variables. Switch-up is negative and significant in Models 1, 3, and 4, and prior bank reputation is negative and significant in all six models. ST-loyalty is negative and significant in Models 1, 3, and 4. Switch $\times$ prior coverage is negative and significant in Models 3 and 4, with $T$-values of $-2.56$ and $-2.59$, respectively. The overall results are consistent with the securities offered being a hybrid of common stock and debt. Some of the models suggest that ST-loyalty is negatively related to fees, as is the case for equity offers but not debt offers. We also find that switch $\times$ prior coverage is negatively related to fees, as is the case for equity offers but not debt offers. We do not find, however, that

Table 6
The effects of switching, changes in underwriter reputation, and analyst coverage on log(fee) for debt offers

This table reports various ordinary least squares regressions predicting log(fee) for debt offers. Switch-up is the magnitude of the increase in underwriter reputation for client firms that switch to higher reputation banks, and is zero for all other cases (including cases in which the firm does not switch banks). A bank's reputation is the modified Carter and Manaster ranking found on Jay Ritter's web page, measured on an integer scale from 1 to 9. Prior bank reputation is the reputation rank of the bank used to underwrite the client's prior offer. ST-loyalty is an indicator variable set to one if the bank used in the firm's prior offer (regardless of offer type) is retained for the current offer. Switch × prior coverage is set to one for client firms that switch banks when the new bank issued an analyst report on the client from 18 to six months before the current offer according to I/B/E/S and is zero in all other cases. Switch × number analysts equals an indicator variable set to one if the client firm switches banks (and zero otherwise) times the number of analysts who issued reports on the client firm from 18 to six months before the current offer according to I/B/E/S. All models include indicator variables for each year (based on the offer year). Heteroskedastic *T*-ratios are in parentheses.

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| Switch-up | −0.177 | −0.181 | −0.242 | −0.255 | −0.207 | −0.230 |
| | (−4.62) | (−4.10) | (−4.33) | (−4.09) | (−2.80) | (−3.08) |
| Prior bank reputation | −0.204 | −0.153 | −0.191 | −0.155 | −0.191 | −0.146 |
| | (−7.33) | (−5.27) | (−6.61) | (−4.97) | (−6.48) | (−4.65) |
| ST-loyalty | 0.070 | 0.017 | 0.025 | −0.028 | 0.020 | 0.038 |
| | (1.70) | (0.33) | (0.43) | (−0.38) | (0.21) | (0.37) |
| Switch × prior coverage | — | — | −0.055 | −0.040 | — | — |
| | — | — | (−0.61) | (−0.41) | — | — |
| Switch × number analysts | — | — | — | — | −0.004 | 0.001 |
| | — | — | — | — | (−0.75) | (0.11) |
| Offer characteristics | | | | | | |
| Log(proceeds) | −0.108 | −0.083 | −0.112 | −0.081 | −0.114 | −0.077 |
| | (−6.22) | (−3.56) | (−5.56) | (−3.09) | (−5.39) | (−2.86) |
| Shelf | 0.052 | 0.074 | 0.057 | 0.047 | 0.116 | 0.105 |
| | (0.93) | (1.08) | (0.93) | (0.62) | (1.86) | (1.38) |
| Syndicated | 0.138 | 0.127 | 0.101 | 0.097 | 0.118 | 0.114 |
| | (2.75) | (2.03) | (1.85) | (1.40) | (2.03) | (1.60) |
| Junk | 1.300 | 1.275 | 1.284 | 1.240 | 1.312 | 1.270 |
| | (24.72) | (18.21) | (22.83) | (16.43) | (22.09) | (15.91) |
| Bargaining power | | | | | | |
| Log (number total offers) | −0.193 | −0.151 | −0.174 | −0.151 | −0.184 | −0.147 |
| | (−5.12) | (−3.52) | (−4.51) | (−3.25) | (−4.79) | (−3.14) |
| Client offer experience | −0.015 | −0.005 | −0.039 | −0.011 | −0.016 | −0.005 |
| | (−0.37) | (−0.10) | (−0.89) | (−0.21) | (−0.37) | (−0.09) |
| Bank offer share | −0.098 | −0.050 | −0.106 | 0.000 | −0.116 | −0.045 |
| | (−1.04) | (−0.42) | (−0.97) | (0.00) | (−1.02) | (−0.32) |
| Client offer share | 0.094 | 0.155 | 0.157 | 0.192 | 0.152 | 0.226 |
| | (1.04) | (1.47) | (1.53) | (1.58) | (1.45) | (1.81) |
| Performance and size | | | | | | |
| Return on assets | — | 0.471 | — | 0.543 | — | 0.476 |
| | — | (1.50) | — | (1.53) | — | (1.30) |
| Market-to-book | — | 0.031 | — | 0.036 | — | −0.001 |
| | — | (0.62) | — | (0.69) | — | (−0.02) |
| Log(assets) | — | −0.085 | — | −0.093 | — | −0.109 |
| | — | (−3.57) | — | (−3.61) | — | (−4.00) |
| Number of observations | 1,283 | 919 | 1,035 | 763 | 978 | 741 |
| Adjusted $R^2$ | 0.620 | 0.648 | 0.607 | 0.641 | 0.605 | 0.639 |

switch × number analysts is significantly related to fees. In this respect the results are more similar to those for debt offers.

If we reestimate the models for convertible debt only, switch-up is negative and significant in all six models, as is prior bank reputation. ST-loyalty is negative and significant in Models 1–4, switch × prior coverage is negative and significant in Model 4, and switch × number analysts is never significant. Again, these results are consistent with the hybrid nature of convertible debt. The results for preferred stock are less significant, but we do find that ST-loyalty is negative and significant in Models 3 and 6 and that switch × prior coverage is negative and significant in Model 4. These specific results are similar to those in the equity models in Table 5. We do not, however, find that switch-up is significant in any of the six models.

## 7. Conclusion

In this paper we analyze cross-sectional and time-series patterns in the relationship between firms that are repeat issuers of new securities and their underwriters over the 1975–2001 period. Consistent with anecdotal evidence, there appears to have been a decline in the loyalty of firms to their underwriters. We motivate two competing hypotheses for how underwriting fees are related to loyalty. The first predicts that firms that are loyal to a bank are charged lower fees. This would naturally follow if, through building valuable relationship capital between the client and bank, the investigative costs of the bank are lowered. The competing hypothesis predicts that more loyal firms pay higher fees relative to switchers. We claim this is more likely to occur when relationship capital is less valuable because other factors that induce firms to switch banks become more important. We find that, on average, loyalty to a bank decreases fees for common stock offers and increases fees for debt offers. This result is not surprising if relationship capital is more valuable in common stock offers. We conjecture this is the case because underwriter certification, and hence the associated investigative costs, should be more important in common stock offers relative to debt offers for which third-party debt ratings are available.

We further refine the analysis by incorporating the possibility that firms sometimes switch for reasons related to underwriting reputation or analyst coverage. A similarity between common stock and debt offers is that firms offering either type of security pay lower fees when they switch to higher-reputation underwriters. This suggests that firms able to graduate to higher-reputation underwriters are in a relatively strong position, because they are able to simultaneously negotiate lower fees while associating themselves with more prestigious underwriters. There is a difference, however, in how switching to gain more or improved analyst coverage affects fees. For common stock offers, firms less likely to be switching for more or improved analyst coverage pay lower average fees. For debt offers, we do not find that average fees are different for firms less likely to be switching for reasons related to analyst coverage.

## Appendix A. Aggregation of offers

For two or more offers by a firm to be aggregated the offers must use the same investment bank, be no more than seven calendar days apart, and be of the same type (common stock, debt, convertible debt, or preferred stock). Of the 769 firms in the final sample, 73 have offers that are aggregated, and results are robust to excluding these firms. For aggregated offers, the variables used in the analysis are constructed as follows.

ST-loyalty and LT-loyalty, the measures of firm loyalty, are constructed as usual by treating the aggregated offer as a single offer, but proceeds (for LT-loyalty) is the sum of the proceeds of each offer being combined.

The convertible debt status is chosen according to the offer with the largest proceeds. There are no cases in which the syndicated status, shelf status, or junk debt status differs among the offers being combined.

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