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 document 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 high fees for common stock offers, but not for debt offers.

Firms often have a primary investment bank, one with whom they have a long-term relationship and regularly use for underwriting new security issues to the public. The persistence of such 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.[1] Such 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 have claimed 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.[2,3]

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 US 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 simply 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 which captures 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 document that both loyalty measures have decreased over the sample period, suggesting that bank-client relationships have weakened.

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[1] 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.

[2] See, for instance, the discussion in Eccles and Crane (1988) about the shift in the nature of bank relationships.

[3] See 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, may have contributed to the decline in bank-client relationships. As these changes take place, we would expect there to be a decline in the extent to which investment banks invest in maintaining client relationships, thereby further weakening the relationships.

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. The notion is that when a client firm retains a bank for repeated offerings, the client and bank will develop a closer working relationship and a deeper understanding of each other's operations and procedures. The bank will also become 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 thus 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 may consider. The very fact 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 documented in Krigman, Shaw, and Womack (2001). In such situations, it is not clear how switching, and thus how loyalty, will empirically relate to fees. For instance, firms that switch to higher quality banks may pay for higher quality service or, alternatively, if such firms have become especially desirable as clients, they may win price concessions even while switching to a higher quality bank.

We therefore examine two competing hypotheses for how loyalty may be related to fees. The first is the benefits of loyalty hypothesis, which states that fees will be decreasing in a firm's loyalty to its current bank. The second alternative is the costs of loyalty hypothesis, which states that fees will be increasing 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 (due to 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 Poors and Moodys. 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 and/or switch to gain improved analyst coverage.

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. It appears, therefore, that although stock and debt offers share the similarity that firms graduating to higher reputation banks pay lower fees, there are also striking differences in how loyalty to a bank affects fees in the two markets.

There are relatively few papers in the literature that 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 such a "lock in" effect may 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) document 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.[4] In other contexts, Bhagat and Frost (1986) examine underwriting fees in negotiated and competitive equity offerings by utilities, while Esho, Kollo, and Sharpe (2004) examine underwriting fees for Eurobond issues. Tufano (1989) analyzes the fees charged by innovating banks for new securities. None of these papers explicitly examine the pricing effect of a firm's loyalty to its bank. Several papers have analyzed the early effects of shelf registration in lowering underwriting fees and the cost of offerings (see Kidwell, Marr and Thompson (1987), Allen, Lamy and Thompson (1990), and Denis (1991)). Consistent with this evidence, we find that shelf-registered common stock offers have lower fees. Krigman, Shaw, and Womack (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 in order 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 also includes debt offers. Second, due to the way our data is 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 1 motivates our hypotheses, and section 2 describes the data. Section 3 examines the determinants of firm loyalty. Section 4 investigates the effect of loyalty on underwriting fees, and section 5 incorporates underwriter quality and analyst coverage into the analysis. We conclude in section 6.

1. Hypotheses

In this section we define two competing hypotheses for how a client firm's prior loyalty to the current offer's underwriter will affect the underwriting fee it is charged. The first hypothesis predicts that loyalty to a bank will result in lower underwriting fees. First, in the course of providing services to a client and through investment in the relationship, a bank and client can

[4] 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 may be due to 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.

develop a close working relationship that should lower the costs of providing additional services. The relative bargaining power of a bank and its client may affect the manner in which these cost savings are shared, but as long as the client captures a portion of the savings it will enjoy lower fees. Second, some firms may switch to become associated with a higher reputation bank or to improve their analyst coverage (Krigman, et. al., 2001). It is possible that firms switching for these two reasons may 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 second alternative is the costs of loyalty hypothesis, which states that fees will be increasing 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 may more often seek to opportunistically switch banks in pursuit of lower fees.[5] These firms may also be more likely to switch to a higher quality bank to be associated with a higher reputation underwriter and/or gain improved analyst coverage, 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, it is possible for them to 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. Rather, 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.

[5] Such lower fees may 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; and Farrell and Shapiro, 1989).

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, since it includes information that has been gathered through a longer relationship and from underwriting prior offers. When characteristics of the security and/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 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 Moodys and Standard and Poors) presumably lessens the importance of the certification an underwriter provides. The diminished importance of underwriter certification may 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 may also be more competitive. Debt offerings are more common than equity offerings, and the greater frequency of debt offers may attract a wider assortment of competing banks. Also, if it is indeed true that underwriter certification is less important for debt offers, a bank's skill in assessing an issuer's quality may be less important in this market when competing for clients. This may encourage firms to consider a wider variety of banks because they may be less concerned with a bank's ability to provide highly credible quality certification.

2. Data sources and descriptive statistics

2.1 Sample

Our data on underwritten security offerings is drawn from the new issues section of the Thomson Financial SDC Platinum database (SDC). 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/private status, primary 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 simply 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 it sometimes contains multiple listings within a few days for what is in fact the same offering. Additionally, 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 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 contained 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, we require it to have at least two offers in the preceding five years. We also exclude offers by financial firms that underwrite their own securities, since fees in such cases are somewhat artificial. The final sample consists of 3,031 total offers by a total of 769 firms.

2.2. 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 simply 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 there is any difference 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 there is a reasonable amount of time over which a longer-term type of loyalty can potentially be established—and 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.[6] 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 here 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:

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

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

[6] Note that a firm making only five offers can have at *most* three offers included in the sample. Its first and second offer will not have the requisite two prior offers in the preceding five years. This explains much of reduction in the overall number of offers (8682) that are included in the final sample of 3031. The rest of the reduction is due to offers by a firm that has not made at least two prior offers in the past five years.

one if offer *j* uses the same investment bank as the current offer, and zero otherwise. Holding proceeds constant, note that an offer five years ago (or 1825 days ago) will receive a weight of 0.50, and an offer one year ago (or 365 days ago) will receive 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.[7]

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 above, 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.

2.3. Summary statistics

Table 1 presents some descriptive statistics for the sample. The total number of offers (3031) is categorized into three mutually exclusive categories: (1) common stock, (2) debt (excluding convertible debt), and (3) convertible debt and preferred stock. We note, however, that the shelf and junk subcategories are not mutually exclusive. A high-yield, shelf debt offer would appear in both subcategories. As the table indicates, 1114 (37%) of the offers are common stock, 1408 (46%) are debt, and 509 (17%) are convertible debt or preferred stock. We also note that 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

[7] 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).

raises the largest proceeds (the median and mean are $114.54m and $164.55m in 2001 dollars, respectively) while the typical common stock offering raises the smallest (median and mean proceeds are $61.27m and $104.78m, respectively).

The fee we use is our study is the gross fee and includes underwriting fees and selling concessions, as a percent of gross proceeds. Not surprisingly, 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 offer type on its own). As we would expect, shelf-registered offers have lower fees in all offer types, and junk offers have higher fees than non-junk 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 in our sample (and a new bank is chosen for 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 or not the offer is a shelf offer or a junk offer.

There seems to be a greater difference 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. There is also a larger difference 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, there also appears to be a difference 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, and provides a measure of the relative experience of the underwriter in selling securities of firms in the industry. Banks with greater industry shares may 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 may have more bargaining power when negotiating an underwriting fee. The bank may 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.

2.4. Loyalty through time

It has been claimed 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. These changes are attributed to radical changes in the nature of the competition triggered in part by financial deregulation and innovations in financial products and services. Some contend there is little trace of a non-competitive climate in which banks avoid competing for clients of other banks.

To examine the extent to which bank-client relationships may have changed over the course of our sample period, Table 2 documents mean short- and long-term loyalty through time. Both loyalty measures fluctuate somewhat randomly from year to year, likely due to 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 towards 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 also significant for convertible debt and preferred stock offers. It should be noted that while there is some decline over the sample period, a more substantial decline may 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.

3. The determinants of loyalty

Before examining how loyalty affects fees, we explore the factors that explain loyalty. Understanding these factors may help us identify important control variables when we turn to investigating the relationship between loyalty and fees. Preliminary analysis suggested that the factors we examine affect loyalty differently for common stock and debt offers, so 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, the 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 simply 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 may be in a stronger bargaining position with investment banks. The remaining two bargaining power variables are *Bank industry share* and *Client industry share* as defined above 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 1114 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) through (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 that indicates a high yield offer. Except for model (6), the regressions indicate that shelf offers lead to greater loyalty. Unlike for common stock offers, there is no evidence that syndicated offers are associated with less loyalty than non-syndicated 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 it is possible that the positive significance of *Junk* disappears in part due to the junk status proxying for the firm's performance and size variables, we have checked and found the loss in the sample size in models (6) and (8) is also a factor.

As was 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, there is also evidence 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) through (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 only using preferred stock offers (n = 293), even fewer variables are significant. The fewer significant variables using these two samples (either separately or together) may be due to reduced statistical power resulting from smaller sample sizes.

4. 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 where 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, as discussed, 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) through (4) include only common stock offers, and models (5) through (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 who 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 may indicate that it is 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 may be easier to place due to greater market demand. For example, many institutional investors may prefer to invest in stocks of larger firms because they have greater liquidity—selling large blocks of shares may be easier in terms of market depth problems. Interestingly, we observe that *ST-loyalty* is no longer significant in this model. This may be due in part to 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 x Hi-ROA* and *ST-loyalty x 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 x Hi-ROA* is negative and significant (t = -2.87) and that *ST-loyalty x 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. It is possible that firms with higher ROA are more desirable clients (on average), and that potential competition from competing banks helps 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 x Hi-MB* and *ST-loyalty x Low-MB* as interaction terms based on high and low values of *Market-to-book* (instead of *Return on assets)* we find similar results. The t-statistic for *ST-loyalty x Hi-MB* is –2.09 and that for *ST-loyalty x*

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 x Hi-assets* and *ST-loyalty x 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 x Hi-ROA* and *LT-loyalty x Low-ROA*). Results are similar to the analogous regressions using *ST-loyalty* in that we find both *LT-loyalty x Hi-ROA* and *LT-loyalty x 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) through (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 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. Indeed, 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 investigate, we repeat the exercise described above for common stock offers in which we replace the loyalty variable in question with two interaction variables based on performance or size. For example, we first reestimate model (6) with *ST-loyalty x Hi-ROA* and *ST-loyalty x Low-ROA* in place of *ST-loyalty*. In the reestimation of model (6) the t-values on *ST-loyalty x Hi-ROA* and *ST-loyalty x Low-ROA* are 1.47 and 2.58, respectively, and the coefficients are 0.075 and 0.145, respectively. Hence, firms that have lower return on assets face significantly larger fees from their existing underwriters. Presumably, these firms are less desirable as clients to the underwriter and to its potential competitors. Similar results are obtained when we instead try *ST-loyalty x Hi-MB* and *ST-loyalty x Lo-MB*. Both interaction terms using assets are insignificant.

We repeat models (5) through (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 (3) and (4) are –1.65 and –1.67, respectively). If we estimate the regressions using only the convertible debt offers, none of the loyalty variables approach being significant. This is also the case if we estimate the models

using only the preferred stock offers. Of course, the sample sizes are smaller, 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.

5. 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, Shaw, and Womack (2001) may offer clues. They examine firms issuing seasoned equity within three years of their IPO, and find that 30% firms switch to new underwriters and that they prefer to graduate to higher-reputation underwriters. It is unclear how graduation effects will impact underwriter fees. Client firms that graduate up to higher reputation banks may pay higher fees to have their securities underwritten by higher reputation

underwriters. Alternatively, these firms may have become very desirable clients, allowing them to graduate to higher reputation banks while still lowering their fees.

Krigman, et. al. also find that an important reason that firms switch from their IPO underwriter is to gain more influential analyst coverage. Similar to the graduation effects discussed above regarding underwriter reputation, it is unclear whether a client firm switching to gain better analyst coverage will pay higher or lower fees. It is possible that banks offering superior analyst coverage do not need to offer price concessions to attract new clients seeking better coverage. These banks may even be able to justify *higher* underwriting fees as indirect compensation for more prestigious analyst coverage. On the other hand, firms able to graduate to better analyst coverage may be in a strong position and face lower fees. The firms may be able to simultaneously improve their analyst coverage while at the same time reducing 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-Manaster rankings, measured on an integer scale from 1 to 9).[8] 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. 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

[8] 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-Manaster methodology due to 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.

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 firm's prior bank reputation. 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.

As discussed, Krigman, et. al. also find that firms sometimes switch banks in order 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 we code is *Switch x prior coverage*. This variable is an indicator variable set to one if a firm switches banks and we also find that the new bank was already issuing analyst reports on the firm from 18 to 6 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 6 months before the offer. The notion here is that if a new bank was already issuing analyst reports on the firm that switched (*Switch x 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, et. al. and many other studies. We use 18 to 6 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 6 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 non-coverage reasons (i.e., 78 have *Switch x 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 x 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 *may* be motivated by analyst coverage, firms pay higher fees (on average). Note, however, that 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.[9]

In models (5) and (6) we instead include *Switch x 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 6 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, and usually numerous, analysts employed by the more prestigious investment banks. As the models show, *Switch x number analysts* is negative and significant (the t-values in models (5) and (6) are -3.41 and -2.19, respectively). We note that *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, since this may be due to IBES not covering all analysts or a matching problem. We believe it is unlikely that most of these firms actually have no analyst coverage. If we reestimate the models, however, including these observations and coding the *Switch x number analysts* variable as if there are actually zero analysts covering these firms, the results are similar (the t-value for *Switch x number analysts* in model (5) changes to –4.12 and that in model (6) changes to -3.43). We also try replacing *Switch x 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

[9] 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.

switch for non-coverage 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.

Recall that 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. In fact, the coefficients suggest that these firms obtain around the same reduction in fees as those that retain their prior bank. Interestingly, note that 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 may 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) through (6) of Table 6 show that this result is primarily driven by firms who switch to underwriters with higher reputation ranks. 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 x 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. There is some evidence (but not consistent across all models) that *ST-loyalty* is negatively related to fees, as is the case for equity offers but not debt offers. We also find that *Switch x prior coverage* is negatively related to fees, as is the case for equity offers but not debt offers. We do not find, however, that *Switch x 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) through (4), *Switch x prior coverage* is negative and significant in model (4) and *Switch x 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 x 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.

6. 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 will be related to loyalty. The first predicts that firms that are loyal to a bank will be 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 firms who are more loyal will 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 will 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 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 and/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 result 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 in order 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
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 (equity-related or non-convertible debt). 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 where the syndicated status, shelf status, or junk debt status differs among the offers being combined.

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Table 1
Summary statistics

This table reports summary statistics for 3,031 offers in the 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 (issues that are 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, co-management 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 for firms in the firm's two-digit 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 due to missing data.

	All issues				Shelf issues				Junk issues		
	Total	Common Stock	Debt	Conv. Debt & Pfd. Stock	Total	Common Stock	Debt	Conv. Debt & Pfd. Stock	Total	Debt	Conv. Debt & Pfd. Stk.
No. issues in sample	3031	1114	1408	509	763	74	638	51	512	246	266
No. 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 ($m)											
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 (%)											
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

Table 1 (continued)

	All issues				Shelf issues				Junk issues		
	Total	Common Stock	Debt	Conv. Debt & Pfd. Stock	Total	Common Stock	Debt	Conv. Debt & Pfd. Stock	Total	Debt	Conv. Debt & Pfd. Stk.
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 ($m)											
Median	1609	624	3036	1380	3313	1257	3489	2498	691	816	663
Mean	6244	2903	9578	4552	12410	3554	12715	21647	1780	2191	1384
Standard deviation	30768	23437	34032	35075	50390	6928	46771	103395	5441	7491	1968
No. observations	2361	899	1090	372	633	62	529	42	434	213	221

Table 2
Mean loyalty through time

This table reports the yearly mean short-term and long-term loyalty measures for 3,031 offers in the 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 follows:

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

In the formula, *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, 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.

	All offers (n=3031)			Common stock (n = 1114)			Debt (n=1408)		
Year	No.	ST-loyalty	LT-loyalty	No.	ST-loyalty	LT-loyalty	No.	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	1543	0.649	0.600	560	0.664	0.613	662	0.609	0.578
≥ 1988	1488	0.533	0.496	554	0.560	0.521	746	0.508	0.483
t-stat for difference:		(6.53)	(7.13)		(3.60)	(3.74)		(3.81)	(4.39)

Table 3
Regressions explaining short- and long-term loyalty

This table reports various OLS 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 sample period (regardless of 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 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 SDC 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). Pseudo t-ratios (for the logistic regressions) and heteroscedastic t-ratios (for the OLS regressions) are in parentheses.

	Common stock offers				Debt offers			
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variable	ST-loyalty		LT-loyalty		ST-loyalty		LT-loyalty	
Estimation method	Logistic		Ord. least squares		Logistic		Ord. least squares	
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 & 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)
Observations	1114	830	1114	830	1408	1016	1408	919
Adj. R-squared	-	-	0.695	0.704	-	-	0.717	0.724
Chi-square p-value	< 0.001	< 0.001	-	-	< 0.001	< 0.001	-	-

Table 4
Regressions explaining log(fee)

This table reports various OLS regressions predicting *Log(fee),* where the fee is the gross underwriting spread (including lead-management fees, co-management 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 sample period (regardless of 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 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 SDC 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). Heteroscedastic t-ratios are in parentheses.

	Common stock offers				Debt offers			
Model	(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 & 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)
Observations	1114	830	1114	830	1408	1016	1408	1016
Adj. R-squared	0.971	0.976	0.971	0.976	0.589	0.620	0.593	0.621

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

This table reports various OLS 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 0 for all other cases (including cases in which the firm does not switch banks). A bank's reputation is the modified Carter-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 x prior coverage* is set to one for client firms that switch banks where the new bank issued an analyst report on the client from 18 to 6 months before the current offer according to *I/B/E/S,* and is zero in all other cases. *Switch x 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 6 months before the current offer according to *I/B/E/S.* All models include indicator variables for each year (based on the offer year). Heteroscedastic t-ratios are in parentheses.

Model	(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 x prior coverage	-	-	-0.152	-0.139	-	-
	-	-	(-3.95)	(-3.40)	-	-
Switch x 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 & 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)
Observations	1041	775	848	627	819	616
Adj. R-squared	0.973	0.977	0.974	0.979	0.975	0.979

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

This table reports various OLS 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 0 for all other cases (including cases in which the firm does not switch banks). A bank's reputation is the modified Carter-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 x prior coverage* is set to one for client firms that switch banks where the new bank issued an analyst report on the client from 18 to 6 months before the current offer according to *I/B/E/S,* and is zero in all other cases. *Switch x 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 6 months before the current offer according to *I/B/E/S.* All models include indicator variables for each year (based on the offer year). Heteroscedastic t-ratios are in parentheses.

Model	(1)	(2)	(3)	(4)	(5)	(6)
Switch x ΔBank rep (+)	-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 x prior coverage	-	-	-0.055	-0.040	-	-
	-	-	(-0.61)	(-0.41)	-	-
Switch x 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 & 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)
Observations	1283	919	1035	763	978	741
Adj. R-squared	0.620	0.648	0.607	0.641	0.605	0.639