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Does the Intended Use of Proceeds and Bank's Characteristics Affect the Bank Underwriters' Certification Role? Evidence from Seasoned Equity Offerings

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by

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Abstract

This paper examines the effects of the intended use of proceeds on bank underwriters' certification roles in Japan following deregulation in 1999. We find that bank underwriters have a positive effect on announcement returns. However, when the issuer discloses that the intended use of proceeds is repayment, the bank underwriter has no effect on the announcement returns. Although banks' holding loans have a positive effect on announcement returns, banks' equity holdings are negatively associated with the announcement return. Furthermore, issuers underwritten by banks whose use of proceeds is loan repayment are more likely to be weak in their ex-post performance than those without repayment. We conclude that banks have different effects on issuers according to the intended use of proceeds and the banks' characteristics.

JEL classification: G21; G24

Keywords: Commercial bank; Intended use of proceeds; Announcement return; Certification; Conflicts of interest.

1. Introduction

On average, firms' stock prices react negatively to their announcements of seasoned equity offerings (SEOs).[3] Several hypotheses have been advanced to explain the abnormal negative average common stock return following an SEO announcement. Prominent among these is the adverse selection model of Myers and Majluf (1984). Myers and Majluf (1984) attribute the average negative return to information asymmetry between corporate insiders and outside investors. If managers are better informed than outside investors, firms are more likely to issue equity when the equity is overvalued. Thus, the announcement of an equity offering conveys negative information about firm value. Under this condition, Booth and Smith (1986) and Cooney, Kato, and Schallheim (2003) argue that the informative underwriter can guarantee that the market price is not overvalued for investors, and their certification of the market price has a more favorable effect on the SEO market reaction.

In general, banks can obtain private information about a firm through loans or clearing functions. This private information may affect the announcement return in two ways: through a certification effect and through a conflict of interest effect.[4,5] A bank with private information can assess the issuers' market valuation and set the security price more suitably than an investment house can (i.e., the certification effect).[6]

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[3] In Japan, Cooney, Kato, and Schallheim (2003) and Kang and Stulz (1996) found that the average abnormal return following SEO announcements was positive before 1991. However, after 1995, the abnormal return of SEO announcement is negative, similar to United States SEO market (Suzuki 2009).

[4] There are also several papers that examine the effect of bank entry into the market. Gande, Puri, and Saunders (1999) and Takaoka and McKenzie (2006) show that competition intensifies within the underwriting market, because issue costs, following the entrance of banks, decrease on the U.S. and Japanese bond markets.

[5] Kanatas and Qi (1998) and Puri (1999) show the effect of certification in the presence of a conflict of interest rather than treating certification and conflict as two mutually exclusive effects.

[6] Suzuki (2010) argues that because the bank underwriter can set the security price suitably, the bank issuers lower the issue discounts more than those employed by investment houses.

Conversely, if a bank has the issuer's bad information about a future prospectus that is not spread to investors, the bank may have an incentive to misrepresent the value of a firm's securities and use the proceeds to repay its own loans (i.e., the conflict of interest effect). If the conflict of interest effect is supported, the SEO announcement return and long-term performance of issuers underwritten and borrowed by the bank's underwriters will be negative. Extensive research using bond market data demonstrates that the certification effect has a stronger influence on credit availability than the conflict of interest effect does.[7,8]

This paper examines the market reaction to SEO announcements and post-issue performance with a particular emphasis on commercial bank-affiliated underwriters. This paper differs from previous empirical research in several respects. First, we examine the relationship between the bank underwriter and the issue costs of the stock market instead of the bond market. Compared to a bond market, the problem of inside information is more serious in SEO markets (Brennan and Kraus 1987; Myer and Majluf 1984; Burch, Nanda, and Warther 2005).[9] Thus, it is suitable to use the equity market to examine the effect, because the announcement effect is more relevant to firms that face serious information problems. Suzuki (2010) examines the relationship between the bank underwriter and the flotation costs (i.e. discount rate and the

[7] For example, Puri (1996), Gande, Puri, Saunders, and Walter (1997), and Takaoka and McKenzie (2006) examine the question of whether investors paid higher prices for bonds underwritten by banks than those underwritten by investment houses. See Kroszner and Rajan (1994), Puri (1994), and Konishi (2002) for studies of bond performance using pre-war data for the United States or Japan.

[8] In contrast, Ito and Konishi (2000) and Kang and Liu (2007) show that Japanese banks create conflicts of interest in bond markets.

[9] Brennan and Kraus (1987) and Myer and Majluf (1984) wrote theoretical papers on capital structure, based on the problem of insider information at the time of new equity issuance. Burch, Nanda, and Warther (2005) argue that the problem of inside information is more serious in SEO markets than bond markets, because bond markets usually observe calibrated debt ratings provided by third parties, such as Standard and Poor's and Moody's.

underwriting fee) of SEOs. In addition, we examine the effect of between bank underwriters on the market impact of SEO announcements and the post-issue long-term performance.

Second, this paper examines the effect of the relationship between the bank underwriter and the intended use of the proceeds on the SEO announcement return and long-term performance. In Japan, when issuers offer new shares, they must disclose the intended use of the proceeds to the investors in their prospectus. If the conflict of interest effect is supported, the SEO announcement's return will be more negative when issued by a bank that uses the proceeds to repay bank loans. Walker and Yost (2008) find that the pre-issue disclosure of the intended use of SEO proceeds reduces informational asymmetry and have an effect of the announcement price reactions. Duarte-Silva (2010) examines the relationship between the underwriter lending and the SEO announcement return. Regarding the relationship between long-term performance and the use of proceeds, Autore, Bray, and Peterson (2009) find that management can recapitalize debt by issuing stock when investors are overly optimistic about a firm's future prospects, potentially resulting in relative devaluation over the long term. In addition, we examined the relationship between the intended use of proceeds to repay the bank underwriter and the market impact on SEO announcement returns and long-term performance.

Third, Japanese banks differ from U.S. banks in several respects. Japanese banks have close and long-term relationships with their borrowers. Such ties enable a bank to produce more information than an investment house.[10] Moreover, unlike the United

[10] In this paper, the term "investment house" refers to securities companies that do not have a bank as their parent company.

States where banks are banned from having equity holdings, Japanese banks are allowed to own equity in their client firms. While previous theoretical research has strenuously examined the difference between allowing and denying bank equity holdings (e.g., Kanatas and Qi 2003; Puri 1999), empirical examinations have not been fully performed in the United States. Puri (1999) argues that the impact of equity holdings is internationally testable in countries in which banks are allowed to hold equity. Thus, we examine the effect of the equity holdings of bank underwriters on SEO announcement returns and post-issue performance.

This research contributes to the existing literature in several ways. We find that the bank underwriter, and especially the bank lending relationship, has a positive effect on SEO announcement returns and post-issue long-term performance. This result is consistent with the certification effect in which investors evaluate if a bank with private information can assess the issuer's intrinsic value and set the security price more suitably than an investment house. This result is also consistent with the bond market (Puri 1996; Gande, Puri, Saunders, and Walter 1997; Konishi 2002; Takaoka and McKenzie 2006; Yasuda 2007) and equity market (Duarte-Silva 2010; Kutsuna, Smith, and Smith 2007; Suzuki 2010) literature. However, when the issuers intend to use proceeds to repay bank loans, the bank underwriter is not significantly associated with the announcement return and the post-issue performance. This result is novel and implies that the intended use of proceeds to repay bank loans offsets a bank's certification effect, which is consistent with the conflict of interest effect.

Bank equity holdings have significantly negative effects on SEO announcement returns and post-issue performance. These results imply that the bank equity holding offsets the bank's certification effect, which is consistent with the conflict of interest

effect. Yasuda (2007) and Suzuki (2010) find that the underwriting fee of issuers in which the underwriters' parent banks concurrently have shareholdings is higher than that of the issuers underwritten by investment houses or banks with no lending in the bond and SEO market.[11] We find additional effects of the concurrent bank equity holdings on SEO announcement returns.

The verification method of an abnormal return also differs from that used in previous studies. This paper examines abnormal SEO returns using a characteristic-based benchmark model. Event studies typically use data that are characteristically non-representative of the overall market and are often grouped by underlying traits, such as size, momentum, and valuation. For instance, firms that initiate dividends, split their stock, or issue new shares are likely to be large with high prior returns.[12] Ahern (2009) indicates that a characteristic-based benchmark model produces the least biased returns with the fewest rejection errors. To control for any possible selection bias in the estimation, we used a benchmark portfolio sample that employs a propensity score-matching estimation approach.

We assumed that the bank is exogenously determined. Additionally, to investigate the robustness of our results, we used sample selectivity methods. The results discussed above do not differ when controlling for the endogeneity of the bank's underwriting decisions using selectivity methods.

The remainder of this paper consists of six sections. Section 2 discusses the related literature and develops our hypotheses. Section 3 describes the sample selection and

[11] Drucker and Puri (2005) find that issuers with underwriters who concurrently lend to issuers pay lower underwriting fees and loan yield spreads than those with underwriters who do not lend to issuers.

[12] Under these conditions, Ahern (2009) evaluates eight methods, including a characteristic-based benchmark model, a market model, the Fama French Three-Factor and Carhart Four-Factor models, and four test statistics, to determine which method has the least mean bias, the best power, and the best specification of the tests.

data. Sections 4 and 5 present the empirical methodology and results, respectively. Finally, section 6 presents concluding remarks.

2. Related Literature and Hypotheses

Myers and Majluf (1984) argue that if managers typically have a more accurate information set than the market and the market is aware of this information asymmetry, investors interpret the decision to sell equity by issues as an incidence of managerial opportunism. Therefore, the asymmetric information between the issuer and outside investors produces negative stock return following an SEO announcement.

The role of the underwriter is to alleviate the asymmetric information. The underwriter has incentive to underwrite the issuers with a suitable stock price. Booth and Smith (1986), Chemmanur and Fulghieri (1994), and Cooney, Kato, and Schallheim (2003) argue that because the underwriter has an incentive to price appropriately to maintain its reputation for future business, the informative underwriter certifies its issuers to the market.[13]

Unlike investment houses, which do not offer loans to issuers in Japan, banks can obtain private information about issuers through loans or clearing functions. Diamond (1984) argues that through debt contracts, banks can access information that is not publicly available and enjoy a comparative cost advantage in information production. This advantage allows bank underwriters to gather more information about issuers and use their information to signal to investors the quality of issued securities, as formally modeled in Puri (1999). The certification hypothesis implies that if banks obtain superior information via lending activities, issuers underwritten by banks that are

[13] Dunbar (2000) and Fernando, Gatchev, and Spindt (2005) indicate that mispricing in offer prices significantly affects changes in the underwriter market share and leads to changes in the lead underwriter.

concurrently lending should have higher announcement returns and post-issue performance than those that are underwritten by banks without lending and investment houses.

Japanese banks can hold both loans and stocks of firms.[14] There is no definitive evidence from previous research that a bank's equity holdings will enhance or lower its certification ability. Berlin, John, and Saunders (1996) argue that equity holdings by financial intermediaries enhance their certification capacity. Moreover, Li and Masulis (2004) suggest that equity investments in issuers improve the alignment of underwriter and issuer interests, thus causing underwriters to set relatively higher offer prices. If a bank's equity holdings heighten the bank's certification ability and improve the alignment of underwriter and issuer interests, then issues underwritten by banks holding the equity of issuers will have lower announcement returns and post-issue performance than those underwritten by banks that do not hold the equity of issuers.

In contrast, Puri (1999) argues that when the equity held by the bank underwriter is retired by the proceeds of the issue, equity damages the credibility of the bank. The reason is that equity increases the incentives of the bank to underwrite a bad quality firm more than debt does. If the certification ability of a bank that is concurrently underwriting and holding the shares of an issuer is weaker than that of a bank underwriter engaged only in lending, then issues underwritten by banks holding the equity of issuers will have lower announcement returns and post-issue performance than those underwritten by banks that do not hold the equity of issuers.

A bank with superior information about issuing firms can misrepresent the value of a firm's securities and use the proceeds to repay its own debts (Benston 1990). This is

[14] By law in Japan, bank shareholdings among firms are limited to a maximum of 5%.

known as the conflict of interest effect. Because Japanese investment houses do not extend loans to firms, the issuer with an investment house underwriter is not altered by the conflict of interest effect, though the issuer with a bank underwriter may face this effect. This is especially true when issuers have lending relationships with banks disclose that the intended use of proceeds is repayment; this increases outsiders' concerns about the bank's conflict of interest. Thus, the conflict of interest hypothesis implies that when the intended use of proceeds disclosed by issuers is loan repayment, these issues underwritten by banks will have lower announcement returns and post-issue performance than issuers with banks that do not use proceeds for loan repayment.

3. Sample Selection

We analyze an initial sample of 693 SEOs from January 2000 to December 2007. The sample includes all registered stock offerings made by Japanese firms during that period. We exclude utilities, financial companies, and REITs, as well as firms that release important information (e.g., such as earnings, dividends, and switch the exchange) with the announcement of the issue. The final sample consists of 346 offerings.

We obtain the data on equity issues (including the offer price, proceeds, and original underwriter names) from the IN Information Systems and the eol ESPer database. Bank shareholding information is accessed via a subscription to the Japanese Group Company database and the NIKKEI NEEDS Financial Quest database. Data on the age of the SEO firms and the timing of the listed changes are obtained from Quarterly Firms Statistics and the NIKKEI NEEDS Financial Quest database. The remainder of the data is gathered from the NIKKEI NEEDS Financial Quest database.

4. Empirical Model

4.1. Announcement return

Following Ahern (2009), we use a characteristic-based benchmark model to examine abnormal returns around the SEO pricing date. We defined abnormal returns for an individual firm i, $AR_{i,t}$ as:

$$AR_{i,t} = \text{Return}_{i,t} - \text{Return}_{p,t}, \tag{1}$$

where $\text{Return}_{i,t}$ is the daily stock return on day t for firm i, and $\text{Return}_{i,t}$ is the daily stock return on day t for the matching portfolio p. A simple comparison of the daily return of firms that issued equity and those that did not is inappropriate due to a possible selection bias. If firms issuing securities are riskier than those that do not issue securities, then a simple comparison of the returns between these groups confounds ex-ante riskiness and ex-post riskiness (i.e., changes in the riskiness of the borrowers after issuing the security). To circumvent this problem, we need to control for any possible selection bias in the estimation. Thus, we employ a propensity score matching estimation approach. The matching procedure is presented in Appendix A. The *CAR* is the three-day cumulative abnormal return around the SEO announcement date (day -1, 0, +1).

We estimate the following equation using an ordinary least squares regression (OLS):

$$\begin{aligned} \text{CAR}_j = {} & \alpha + \beta_1 \text{Bank}_j + \beta_2 \text{Payment}_j + \beta_3 \text{Investment}_j + \beta_4 \text{Working capital}_j \\ & + \beta_5 \ln(\text{Capitalization}_j) + \beta_6 \text{RelSize}_j + \beta_7 \text{TobinQ}_j \\ & + \beta_8 \text{STDR}_j + \beta_9 \text{MajorUW}_j + \beta_{10} \text{Days}_j \\ & + \sum_k \beta_k \text{EXCHANGE}_{jk} + \sum_l \beta_l \text{YEAR}_{jl} + u_j . \end{aligned} \tag{2}$$

The dependent variable *CAR* represents the cumulative abnormal returns around the announcement date (day -1, 0, +1). The first independent variable is *Bank*, which is the

variable of primary interest. *Bank* is a dummy variable is equal to one if the lead underwriter is a bank-affiliated securities company and zero otherwise. When the certification effect is considered, the *CAR* should be positively correlated with the *Bank*. Conversely, considering the conflict of interest effect, the *CAR* should be negatively correlated with the *Bank*.

Payment, *Investment*, and *Working capital* are the variables concerning the firm's intended purpose for the proceeds. *Payment* is a dummy variable, which is equal to one if the intended use of proceeds, which issuers disclose in the SEO prospectus, is a loan payment. Otherwise, the variable equals zero. Autore, Bray, and Peterson (2009) indicate that management may recapitalize debt by issuing stock when investors are overly optimistic about a firm's future prospects, which potentially results in relative devaluation in the long term. Thus, we expected *CAR* to be negatively associated with *Payment*. *Investment* is a dummy variable, which is equal to one if the intended use of proceeds is investment for facilities and zero otherwise. Walker and Yost (2008) find that firms that have valuable growth opportunities are specific in their S-filings, and the market views their anticipated investments favorably. Furthermore, Autore, Bray, and Peterson (2009) indicate that firms issuing equity specifically for investment purposes are more likely to use the proceeds for value adding investments and less likely to be opportunistic market timers. Thus, we expected *CAR* to be positively associated with *Investment*. *Working capital* is a dummy variable, and it is equal to one if the intended use of proceeds is working capital and zero otherwise. The use of working capital does not necessarily reflect future investment opportunities. Thus, we did not expect *CAR* to be associated with *Working capital*.

The remaining independent variables are used to control for other factors that may

affect the announcement return. The adverse selection problem results in a negative relationship between announcement returns and ex-ante uncertainty concerning the value of the issue. We define two proxies, ln(*Capitalization*) and *STDR*, for asymmetric information and uncertainty, respectively. The first proxy, ln(*Capitalization*) is the natural logarithm of total market capitalization on the day prior to the offer. *STDR* is the standard deviation of daily stock returns over 120 trading days and ending 20 days prior to the offer. We expect *CAR* to be positively associated with ln(*Capitalization*) and *STDR*. Cooney and Kalay (1993) argue that the investment opportunities to invest in a positive net present value (NPV) project are positively associated with SEO announcement returns. *TobinQ* is the ratio of the market value of a firm to its total assets. We expected *CAR* to be positively associated with *TobinQ*. Prestigious underwriters certify the quality of the issue and alleviate informational asymmetry problems. As a proxy variable for prestigious underwriters, *Major UW* was used in the present study as the dummy variable for a prestigious underwriter. This variable assumes a value of one if the lead underwriter is a major underwriter (e.g., such as Nomura, Nikko, or Daiwa) and zero otherwise. Based on the certification role of prestigious underwriters, *Major UW* was expected to be positively associated with the CAR. *Days* is the number of days between the pricing date (PD) and the issue day (ID). If the number of days between PD and ID is high, price uncertainty will increase (Corwin 2003). We define the relative offer size, *RelSize*, as the number of offered shares divided by the size of the existing market for the firm's shares. *EXCHANGE* and *YEAR* are sets of exchange and year dummy variables, respectively.

4.2. Long-term performance

Following Li and Zhao (2006), we use a propensity score matching method to examine the post-issue abnormal buy and hold returns. We define the post-issue abnormal buy and hold returns for an individual firm i, ABHR_i as:

$$\mathrm{ABHR}_i = \mathrm{BHR}_i - \mathrm{BHR}_p \tag{3}$$

where BHR_i is the buy and hold return for the 24-month return after issue for firm i, and BHR_p is the buy and hold return for the 24-month return after issue for the matching portfolio p. The propensity score matching method finds matches by the propensity score. The matching procedure is presented in Appendix A. In the long-term performance examination, we exclude the issuers that issued equity 2 years before the issue examined. Therefore, the long-term performance sample includes 300 issuers.

5. Empirical Results

5.1. Descriptive statistics

In this paper, a bank-affiliated underwriter is defined as a securities company in which the bank holds at least a 20% equity stake. Table 1 shows the number of bank-affiliated underwriting and investment houses that underwrote SEOs from 2000 to 2007. The underwriting market share of bank-affiliated underwriters is nearly unchanged over this period: from 40.90% in 2000 to 53.85% in 2006. This market share accounts for 47.69% of the overall issues during 2000–2007. These results are consistent with Suzuki (2010).

The high market share of bank underwriter in 2000 is because the bank acquired the stocks of certain major investment houses just before 2000, including Daiwa Securities SMBC and Kokusai Securities. Daiwa Securities, second in the underwriting market, merged with Sumitomo Securities, which handled securities for the Sumitomo

Bank-Group. Daiwa Securities SMBC then joined the Sumitomo Bank-Group. In 2000, Daiwa Securities SMBC underwrote 19 SEO firms and held a 25% market share. Kokusai Securities, the fifth largest in the underwriting market, became a group company of the Bank of Tokyo Mitsubishi when Nomura Securities (an investment house and the largest stockholder) sold off equity to the Bank of Tokyo Mitsubishi.[15] There were five underwriting firms of Kokusai Securities in 2000, accounting for a 6.5% market share. Unlike the underwriting market for Japanese bonds, there were no rapid changes in market share in the SEO underwriting market. This implies that driving an investment bank out of the SEO market is relatively difficult. We indicate the detail of bank underwriters in Appendix B.

Table 2 presents descriptive statistics for the sample. The total number of offers is divided into two mutually exclusive categories: bank and investment house SEO samples. The mean (median) cumulative abnormal return, i.e., *CAR*, is -3.88% (-3.68%). This level is low at ~1.5% compared with Eckobo, Masulis, and Norli (2007) in the United States (-2.22%). The mean market capitalization, i.e., *Capitalization*, is 189,000 million yen, and the average offering raised 14,200 million yen in proceeds. The mean relative offer size, i.e., *RelSize*, is 13%, and the mean (median) *STDR* is 3.20 (2.84). The period from the pricing date to the offer date is, on average, 8.44 days. The share of major underwriters in the Japanese SEO underwriter market is 71%. The percentage of issuers who intend to repay loans in Japan is 35%. The share of issuers who intended to invest their SEO proceeds for facilities is 64%. The share of firms who intended to use proceeds for working capital is 32%. The mean level of offering characteristics in the

[15] In September 2002, Kokusai Securities, Tokyo Mitsubishi Securities, and Tokyo Mitsubishi Personal Securities formed Mitsubishi Securities.

bank underwriter group is not statistically different from that in the investment house group, excluding *Major UW* and *RelSize*.

5.2. Announcement returns

In Table 3, we report the cumulative abnormal return, which divides the entire sample by the issuer's intended use of proceeds. In Panel A, we divide the sample into the payment issuer and the non-payment issuer groups and compare the announcement returns between these groups. The payment group is defined as the firms whose intended use of the SEO proceeds is loan payment, and the non-payment group is defined as the firms that do not intend to use the SEO proceeds in loan payment. The level of announcement returns in the payment group (mean: -4.82%; median: -4.88%) is lower than that in the non-payment group (mean: -3.37%; median: -3.41%), and the difference is both economically and statistically significant. Furthermore, we divide the sample into issuers underwritten by banks and those underwritten by investment houses. We then compare the announcement returns with the payment and non-payment groups, respectively. Although the cumulative abnormal returns of the payment group are not statistically different from that in the non-payment group in the investment house subsample, the announcement returns of the payment group are 2.5% lower than that in the non-payment group in the bank underwriter subsample. In Panel B, we divide the sample into the investment and non-investment groups and compare the cumulative abnormal returns with these groups. The investment group is defined as the firms whose intended use of SEO proceeds disclosed in the prospectus is investing in facilities, and the non-investment issuer's intended use of SEO proceeds is not investing in facilities. The level of announcement returns in the investment group (mean: -3.59%; median:

-3.62%) was not statistically and economically different from that in the non-investment group (mean: -4.39%; median: -3.81%). We divided the issuers into bank and investment house subsamples and then compared the announcement returns with the investment and non-investment groups, respectively. Neither comparison resulted in a statistical or economic difference in *CAR* between the investment and non-investment groups. In Panel C, we divided the sample into the working capital and non-working capital groups and compared the cumulative abnormal returns for each. The working capital group is defined as the firms whose intended use of SEO proceeds in the prospectus is working capital, and the non-working capital issuer's intended use of SEO proceeds is not working capital. The level of announcement returns in the working capital group (mean: -4.52%; median: -5.04%) is not statistically or economically different from that in the non-working capital group (mean: -3.58%; median: -3.40%). Moreover, we divided the sample into issuers affiliated with banks and investment houses and compared the cumulative abnormal returns with the working capital and non-working capital groups, respectively. There is neither a statistical nor economic difference in *CAR* between the working capital and non-working capital groups.

Table 4 shows the effect of bank underwriting and the intended loan payment on the announcement cumulative abnormal returns. In Model 2, the estimated *Bank* coefficient is positively associated with the cumulative abnormal returns, consistent with the certification effect. However, in Models 3 and 5, the coefficient of the interaction of *Bank* and *Payment*, *Bank*Payment*, is negatively and significantly associated with cumulative abnormal returns. This result is consistent with the bank's conflict of interest effect, which implies that the announcement abnormal returns of banks with the intent to repay are lower than that of banks without loan repayment intentions and no different

from that of issuers affiliated with investment firms. The average Japanese firm usually has a bank that is its largest lender and sometimes supplies one or two board members. In such a case, the bank is referred to as the "main bank" of the firm. To investigate the impact of the main bank's underwriter on announcement returns, we include the *Main Bank* in the base model. The *Main Bank* is a dummy variable that assumes a value of one if the bank underwriter's parent bank is the greatest lender to the issuer and zero otherwise. In Models 4 and 5, the estimated coefficients of the *Main Bank* are not significantly associated with the discount rate, which is consistent with Suzuki (2010) and Takaoka and McKenzie (2006). We assume that the bank is exogenously determined. To investigate the robustness of the results, we use sample selectivity methods, as in Suzuki (2010) and Takaoka and McKenzie (2006). However, the results discusses above do not differ when we control for the endogeneity of the bank's underwriting decisions using selectivity methods. The sample selectivity methods are presented in Appendix C.

The results in Table 4 do not allow us to examine whether bank lending and shareholding affect SEO announcement returns. To examine the impact of lending and shareholding relationships between bank underwriters and issuers, issuers are classified into various groups, as shown in Table 5. They are divided into two groups based on the parent underwriter of the loans to the issuing firm: issuing firms with a loan relationship and issuing firms with no loan relationship. The number of issuers with a loan relationship is 112 (67.88%), and the number of firms with no loan relationship is 53 (32.12%). The loan share is the total loan from the parent bank of the underwriter just before the issue, divided by the issuer's total assets. The average loan share of issuers with a loan relationship is 6.58%. Based on the parent's equity share in the issuing firm,

issuers are divided into two groups: issuing firms with an equity relationship and those with no equity relationship. The number of issuing firms with an equity relationship is 52 (31.51%), and the number with no equity relationship is 113 (68.49%). The *Equity share* is the equity held by the parent bank of the underwriter just before issuing securities, divided by the number of shares outstanding. The average equity share of issuers with an equity relationship is 2.17%.

A base model is explained in Section 4, which included two variables, *Loan share* and *Equity share*, to investigate the impact of loan and equity relationships on announcement returns. Models 1-4 in Table 6 show the effect of concurrent loan and equity holdings by a bank underwriter on the announcement returns. The *Loan share* coefficient is positively associated with the cumulative abnormal returns. This result is consistent with Duarte-Silva (2010), who indicates (with respect to the certification prediction) that the level of the SEO announcement return is positively associated with the underwriter who lends concurrently. In contrast, the *Equity share* coefficient is negatively associated with the announcement return. This result is consistent with the certification effect, which predicts that the level of the SEO announcement return is positively associated with the bank underwriter who holds equity concurrently. If the conflict of interest effect is supported, an announcement return may be lower from an issuers who discloses the intention for loan repayment and is underwritten by bank underwriters who concurrently lend. *LoanD* is a dummy variable that is equal to one if the bank underwriter is concurrently lending and a value of zero otherwise. In Model 6, the coefficient of the interaction variable of *LoanD* and *Payment*, *LoanD*Payment*, is negatively associated with the announcement abnormal returns. These results imply that the intended use of proceeds to repay bank loans offsets a bank's certification effect,

which is consistent with the conflict of interest effect.

5.3. Long-term performance

To examine issuers' long-term performance, we exclude firms that offered new stocks within 2 years before and after the SEO offering. Therefore, the long-term performance sample consists of 222 offerings. If the certification effect is supported, issuers underwritten by banks that are concurrently lending should have higher post-issue performance than those underwritten by banks without lending and investment houses. Conversely, if banks misuse their superior information to repay their own claims more actively than investment houses, the issuers with banks that use proceeds to repay bank loans may have lower post-issue performance than those underwritten by banks without lending or by investment houses. In this section, post-issue performance is compared with the bank relationship and the issuers' intended uses of proceeds.

To examine the impact of bank relationships and the issuers' payment intentions, issuers are classified into various groups as shown in Table 7. In Panel A, they are divided into two groups based on the underwriter: issuing firms with bank underwriters and investment houses. The mean (median) *ABHR* for bank underwriters is -8.09% (-10.51%), which is greater than the mean (median) *ABHR* for investment houses, -16.71% (-20.80%). Panel B of Table 7 shows the *ABHR* of issuers who intended to repay bank loans and those who did not. The average (median) *ABHR* for issuers who intended to repay loans is -16.38% (-18.82%), which is lower than the average (median) *ABHR* for issuers who did not intend to repay loans, -10.65% (-12.22%). This result is consistent with Autore, Bray, and Peterson (2009), who state that management may recapitalize debt by issuing stocks when investors are overly optimistic about a firm's

future prospects, potentially resulting in long-term relative devaluation.

Panels C and D of Table 7 indicate the *ABHR* of issuers with bank loans and their equity relationships. The average (median) *ABHR* of the firms that have a loan relationship with a bank is 5.72% (-1.20%). The average and median *ABHR* of issuers with bank underwriters' loan relationships is significantly higher than those without a loan relationship**.** This result is consistent with the certification effect by the bank loan relationship. The average (median) *ABHR*s of the equity relationship and non-equity relationship are -6.56% (-16.65%) and -8.92% (-8.20%), respectively. Although the *ABHR* of banks without an equity relationship (*Non equity*) is marginally greater than that of investment houses (*z*-statistics = 1.62), the *ABHR* of banks with an equity relationship (*Equity*) is not different from that of investment houses. These results imply that the level of *ABHR* is marginally affected by the difference in bank equity relationships, which is consistent with the conflict of interest effect by the bank equity relationship.

Panel E of Table 7 indicates the *ABHR* of issuers with the interaction of the payment intention and bank loan relationship. The average (mean) *ABHR* of banks with *LoanD*Payment* is not significantly different from that of investment houses (*t*-statistics = -1.07, and *z*-statistics = -1.23). In contrast, the average (median) *ABHR* of banks with *LoanD*Nonpayment* is significantly higher than that of investment houses (*t*-statistics = 2.96, and *z*-statistics = 2.87). These results imply that firms' intentions to use proceeds to repay bank loans offset a bank's certification effect, which is consistent with the conflict of interest effect.

6. Concluding Remarks

We examine the effects of bank underwriters on the market reaction to SEO announcements and post-issue long-term performance in Japan following deregulation in 1999. We find that according to the issuers' payment intentions and bank relationships, bank underwriters have different effects on SEO announcement returns and post-issue performance.

First, we demonstrate that the bank underwriter, and especially the bank lending relationship, have a positive effect on SEO announcement returns and post-issue long-term performance. This result is consistent with the certification effect, which states that investors who evaluate a bank with private information can assess the issuer's intrinsic value and set the security price more suitably than an investment house can. Second, when the issuers intended to use proceeds to repay bank loans, the bank underwriter is not significantly associated with the announcement returns and post-issue performance. This result is novel, and it implies that the intended use of proceeds to repay bank loans offsets a bank's certification effect, which is consistent with the conflict of interest effect. Finally, bank equity holdings have significantly negative effects on SEO announcement returns and post-issue performance. These results imply that the bank equity holding offsets a bank's certification effect, which is consistent with the conflict of interest effect. We conclude that banks have different effects on the issuers according to the banks' characteristics and intended uses of the proceeds.

These results support both the certification and conflict of interest effects with regard to SEO announcement returns according to the bank's relationships and the issuers' repayment intentions. However, because the conflict of interest effect on the SEO announcement returns does not exceed the certification effect, the announcement returns of issuers affiliated with banks is not lower than that of issuers affiliated with

investment houses. Thus, the evidence supports the deregulation of the internal flow of information obtained through lending relationships.

Appendix A: Matching Procedure

The matching procedure was performed as follows. First, we implemented a probit estimation that models the probability of an equity offering in year *t*, conditional on the covariates observed in year *t*-1. Firms that issue equity ($SEO_t = 1$) are labeled as treatment observations. Next, we attached a propensity score to each observation. The propensity score $e(\cdot)$ is defined as

$$e(X_{t-1}) \equiv \Pr(SEO_t = 1 \mid X_{t-1}), \qquad \text{(A1)}$$

where X_{t-1} is a vector of covariates in the probit estimation.

Next, we implemented another set of probit estimations, including cross-terms, which are multiplied by the variables that measure the extent of the external control of a firm. For each treatment observation, we identified matched observations from the sample of firms not issuing securities. The matched observations are those that demonstrate the "closest" propensity scores to a particular treatment observation; they are labeled as control observations. These matched observations were selected from the same calendar year as the treatment observation. It should also be noted that we used a non-treated observation more than once as a control, i.e., a non-treatment observation may have been used as a control for more than one treatment observation at the same time. Several matching algorithms can be used to find the "closest" control observations. As a

baseline for this analysis, we employed the ten nearest matches in which the arbitrarily determined ten observations with propensity scores closest to each treatment observation were selected.[16]

One of the benefits of employing a propensity-score-matching estimation is that we could match treatment and control observations using the scalar propensity score. The propensity score, which is the conditional probability of a treatment given the value of the observed characteristics, is a useful variable when dealing with highly dimensional vectors of covariates. Rosenbaum and Rubin (1983) show that treatment observations and control observations with the same propensity score value have the same distribution as the full vector of covariates. Thus, it is sufficient to match firms in terms of the propensity score to obtain the same probability distribution of covariates for treatment and control observations. We began with the baseline probit estimation. In the probit estimation, we obtained the conditional probabilities of a firm issuing equity in year *t* given the values of the observed firm's characteristics in year *t-1*. The dependent binary variable represents a security offering in year *t* (SEO_t). The following explanatory variables were used. Regarding firm performance, the return on total assets (ROA_{t-1}) and the capitalization (CAP_{t-1}), which is defined as the natural logarithm of the total market capitalization, were employed. We also used the debt ratio ($DEBT_{t-1}$) as a variable for a higher risk of bankruptcy and the market to book ratio (MTB_{t-1}) as a variable for the firm's value gap.

[16] We found that the results obtained using different matching algorithms (i.e., nearest five matches) are similar to those obtained using the ten nearest matches.

Appendix B: Wave of securities company mergers between 2000 and 2007

Table A1 shows the list of bank underwriters, their parent commercial banks, and shares. In our sample period, most bank underwriters merged due to the regulation change and the merger of their parent commercial banks. Before 1993, the Securities and Exchange Law, which was modeled after the Glass-Steagall Act in the U.S., separated the banking and securities business. The Financial Institution Reform Act of 1993 allowed banks and securities companies to enter each other's business areas. For example, the Industrial Bank of Japan formed the subsidiary securities company, Industrial Bank of Japan Securities, in July 1993. This act affected the structure of securities companies in two ways. First, in the deregulation process, securities companies were allowed to form equity brokerage businesses. In contrast, subsidiaries of commercial banks were not allowed to engage in equity brokerage businesses, including equity underwriting. However, the Financial System Law of October 1999 enabled securities companies to engage in equity brokerage businesses.

Second, after The Financial Institution Reform Act of 1993 took effect, the structure of the securities industry was concentrated. Thus, banks established subsidies for securities companies. For example, the Industrial Bank of Japan established the Industrial Bank of Japan Securities in September 1997. Furthermore, the Financial System Reform Law of 1998 allowed the creation of financial holding companies. Large banks established or merged other banks or financial service companies. As a result of the concentration of financial companies, four securities companies remained: Shinko Securities, Mizuho Securities, Mitsubishi UFJ Securities, and SMBC Friends Securities, at the end of December 2007.

In April 2000, two subsidiaries of the Industrial Bank of Japan, Shin-Nihon

Securities and Wako Securities, formed Shinko Securities (a). This was an equal merger, and the surviving entity was the former Shin-Nihon Securities. Mizuho Investor Securities (b), formerly Kankaku Securities (which is an affiliated company of Daiichi-Kangyo Bank), became a member of the Mizuho Financial Group in April 2002; it acquired Daito Securities in April 2002. In September 2000, the Mizuho group was created through the establishment of Mizuho Holdings as a holding company of Dai-Ichi Kangyo Bank, Fuji Bank, and the Industrial Bank of Japan, and in October 2000, their respective securities companies (Fuji Securities, Dai-Ichi Kangyo Bank Securities, and Industrial Bank of Japan Securities) merged with Mizuho Securities (c). The surviving entity was the Industrial Bank of Japan Securities.

In July 2001, Sanwa Securities and Tokai International Securities merged into UFJ Capital Markets Securities via the merger of their parent banks. Furthermore, UFJ Capital Markets Securities merged with Tsubasa Securities, which was comprised of the former Taiyo Securities, Towa Securities and Dai-Ichi Securities in June 2002 and named UFJ Tsubasa Securities (d). UFJ Tsubasa Securities is a subsidiary of UFJ Bank and a member of the former UFJ Group. In September 2002, Kokusai Securities, Tokyo Mitsubishi Securities (e), and Tokyo Mitsubishi Personal Securities merged to form Mitsubishi Securities (f), which simultaneously became a subsidiary of The Bank of Tokyo-Mitsubishi and a member of the former Tokyo-Mitsubishi Group. Kokusai Securities (g) was an affiliate of Nomura Securities but became the subsidiary of Tokyo Mitsubishi Bank. Tokyo Mitsubishi Securities was a former subsidiary of the Mitsubishi Trust Bank and was named Mitsubishi-Shin Securities. It became the subsidiary of the Tokyo Mitsubishi Bank in September 1999 and changed its name to Tokyo Mitsubishi Securities. In October 2005, the two largest financial group banks, Mitsubishi Tokyo

Financial Group and UFJ Financial Group, merged to form the Mitsubishi UFJ Financial Group. As a result of this merger, their securities subsidiaries (UFJ Tsubasa Securities and Mitsubishi Securities) merged into Mitsubishi UFJ Securities (h). In April 2003, Meiko National Securities, which was a member of the Sumitomo Group, and Sakura Friend Securities, which was a subsidiary of the Sakura Bank and a member of the former Mitsui Group, formed SMBC Friend Securities (i). In April 1999, the wholesale division of Daiwa Securities and the operations of Sumitomo Capital Securities Operations formed under the name of Daiwa Securities SB Capital Market. At first, Daiwa Securities held 60% of the shares and Sumitomo Bank held 40%. In April 2001, Daiwa Securities SB Capital Market absorbed part of the wholesale securities operations of Sakura Bank and changed its name to Daiwa Securities SMBC Securities (j).

Appendix C. Selection Bias

To examine the difference in the cumulative abnormal returns between firms with a bank or an investment house underwriting, we used OLS regression and estimated the coefficient of a dummy variable for the type of underwriter (Table 4). Specifically, we estimated the following model:

$$y_i = X_i\beta + \alpha C_i + \varepsilon, \qquad \text{(A2)}$$

where y_i is the cumulative abnormal return of the i^{th} issue, X_i represents the set of publicly-observable characteristics of the i^{th} issuer that affect the cumulative abnormal return, C_i is a dummy variable that is equal to one if the i^{th} issue is underwritten by a bank and zero otherwise, and ε is the disturbance term that can contain information on the i^{th} issuer's unobservable characteristics. It is well-known that the estimated coefficient of the dummy variable in the OLS regression is inconsistent if the dummy

variable is endogenously determined. Because a bank's decision to underwrite an issue depends on both the issuer's observable and unobservable characteristics, the dummy variable C_i is potentially correlated with the disturbance term ε. To illustrate the nature of this problem, suppose that the bank's decision to underwrite an issue depends on:

$$d_i = I_i\gamma + u, \tag{A3}$$

where I_i represents a set of the issuer's publicly-observable characteristics, and u is the disturbance term that includes a set of the issuer's publicly-unobservable characteristics. A bank underwrites the issue only when $d_i \geq 0$. Otherwise, a house underwrites the issue. The selection bias of the OLS arises because u can be correlated with ε, in which case the underwriter can partially reveal hidden characteristics and thereby affect stock pricing. To assess the effect of the issuer's unobservable characteristics on cost, we followed Puri (1996) and replaced the dummy variable in Equation (1) with:

$$BANKINFO = C_i * \frac{\phi(I_i\gamma)}{\Phi(I_i\gamma)} - (1-C_i) * \frac{\phi(I_i\gamma)}{1-\Phi(I_i\gamma)}, \tag{A4}$$

where $\phi(\cdot)$ and $\Phi(\cdot)$ are the density and cumulative probability functions of the standard normal distribution, respectively. Thus, Equation (A2) becomes:

$$y_i = X_i\beta + wBANKINFO_i + v. \tag{A5}$$

The test for the difference in the issue cost between bank-underwritten firms and investment house-underwritten firms consists of the sign and significance of w. A positive (negative) and significant value of w suggests a higher (lower) issue cost when a bank underwrites the issue. We estimated Equation (A5) using Heckman's two-step approach (Heckman, 1979). In the first step, we calculated γ in Equation (A3) via probit regression and substituted this estimate of γ into Equation (A4) in order to obtain an approximation for $BANKINFO_i$. We calculated w in Equation (A5) by performing an

OLS regression and testing the null hypothesis that $w = 0$.

The explanatory variables used in a probit model explaining *Bank* were variables contained in the base models for the discount rate and underwriter spread, Ln(*Capitalization*), *STDR*, *Major UW*, *RelSize*, Ln(*Proceeds*), and two additional variables: the main bank's loan share and the number of issues the issuer has made. Table A2 presents the results of the cumulative abnormal returns on the OLS regression in the second step of the test. In this step, the signs and significance of all independent variables are similar to those in Table 4. In particular, the *BANKINFO* coefficient is positive and significant at the 5% level. This result also supports the certification hypotheses.

[2010.10.19 1005]

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Table 1.
The number of seasoned equity offerings from 2000 to 2007

year	*Total sample*	*Bank*		*Investment house*	
		Num	*%*	*Num*	*%*
	(a)	*(b)*	*(b)/(a)*	*(c)*	*(c)/(a)*
2000	44	18	40.91	26	59.09
2001	24	10	41.67	14	58.33
2002	27	12	44.44	15	55.56
2003	31	13	41.94	18	58.06
2004	87	49	56.32	38	43.68
2005	58	28	48.28	30	51.72
2006	49	21	42.86	28	57.14
2007	26	14	53.85	12	46.15
Total	346	165	47.69	181	52.31

This table reports the number of bank underwriter and investment houses underwriting for each year. The sample consists of 346 seasoned equity issues from January 2000 to December 2006. A bank underwriter is defined as a securities company in which the bank holds at least 20% equity.

Table 2.
Summary statistics for seasoned equity offerings

		Total Sample	*Bank*	*Investment house*	*t*-statistics, *z*-statistics
SEO characteristics					
CAR[-1 ~ +1]	Mean	-3.88	-3.30	-4.40	1.61
	Median	-3.68	-3.41	-3.78	1.33
	Std.dev	6.36	6.78	5.92	
Capitalization	Mean	189000	82700	286000	-1.37
(mm yen)	Median	24700	18800	28300	-2.84 ***
	Std.dev	1390000	202000	1900000	
Proceeds	Mean	14200	8520	19400	-1.37
(mm yen)	Median	2710	2370	2880	-1.89 *
	Std.dev	73400	20500	99500	
RelSize	Mean	0.13	0.14	0.12	3.60 ***
	Median	0.12	0.13	0.11	3.42 ***
	Std.dev	0.05	0.05	0.05	
STDR	Mean	3.20	3.25	3.15	0.57
	Median	2.84	2.91	2.75	0.30
	Std.dev	1.58	1.67	1.49	
Days	Mean	8.44	8.23	8.63	-1.23
	Median	7.00	7.00	7.00	1.42
	Std.dev	3.01	2.58	3.35	
TobinQ	Mean	3.01	2.83	3.17	-0.74
	Median	1.60	1.57	1.68	-1.33 *
	Std.dev	4.25	4.35	4.16	
Major UW	Mean	0.71	0.53	0.88	-7.78 ***
Intended use of proceeds					
Payment (%)	Mean	35.26	35.15	35.36	-0.04
Investment (%)	Mean	63.58	60.61	66.30	-1.10
Working capital (%)	Mean	31.79	34.55	29.28	1.05
Observations		346	165	181	

This table reports the summary statistics for each variables by subsamples. *CAR* is the cumulative abnormal return for which the characteristic-based benchmark model is used for the matching portfolio. *Capitalization* is the market value of the firm at the last day of the previous month. *Proceeds* is the amount of money firms earn by SEO. *RelSize* is the numver of offerd shared divided by the size of the existing market for the firm's shares. *STDR* is defined as the standard deviation of daily stock returns over 120 trading days and ending 20 days prior to the offer. *Days* is defined as the numver if days between PD and ID. *TobinQ* is defined as the ratio of the market value to its total assets. *Major UW* is equal to one if the lead underwriter is a major underwriters, Nomura, Nikko, and Daiwa, and zero otherwise. *Paymend* takes a value one if the intended use of proceeds is a loan payment, and a value of zero otherwise. *Investment* takes a value equal to one if the intended use of proceeds is the investment for facilities and a value of zero otherwise. *Working capital* is the dummy variable and takes a value equal to one if the intended use of proceeds is the working capital and a value of zero otherwise. Test statistics are *t*-test and Man-Whitney *z*-test results for difference in mean and median. *** and * indicate statistical significance at the 0.01 and 0.1 levels, respectively.

Table 3.
Announcement returns by the intended use of the proceeds and the type of underwriter

Panel A. Intended use of the proceeds: repayment

CAR[-1~+1]			*Repayment (a)*	*Non-repayment (b)*	*t*-statistics, *z*-statistics
Total sample	Mean		-4.82	-3.37	2.04 **
	Median		-4.88	-3.41	1.98 **
	Std.dev		6.32	6.34	
	Obs.		122	224	
Bank	Mean	(A)	-4.96	-2.41	-2.34 **
	Median	(B)	-5.21	-2.44	-2.32 **
	Std.dev		6.62	6.73	
	Obs.		58	107	
Investment house	Mean	(C)	-4.69	-4.25	-0.49
	Median	(D)	-3.74	-3.78	0.36
	Std.dev		6.09	5.85	
	Obs.		64	117	
	t-statistics	(A) - (C)	-0.23	2.19**	
	z-statistics	(B) - (D)	-0.40	2.05**	

Panel B. Intended use of the proceeds: investment facilities

CAR[-1~+1]			*Investment (a)*	*Non-investment (b)*	*t*-statistics, *z*-statistics
Total sample	Mean		-3.59	-4.39	1.13
	Median		-3.62	-3.81	1.28
	Std.dev		5.83	7.20	
	Obs.		220	126	
Bank	Mean	(A)	-3.00	-3.77	0.71
	Median	(B)	-3.39	-3.84	0.91
	Std.dev		6.27	7.53	
	Obs.		100	65	
Investment house	Mean	(C)	-4.08	-5.05	1.05
	Median	(D)	-3.78	-3.78	0.99
	Std.dev		5.40	6.84	
	Obs.				
	t-statistics	(A) - (C)	1.37	1.00	
	z-statistics	(B) - (D)	1.15	0.88	

Panel C. Intended use of the proceeds: working capital

CAR[-1~+1]			*Working capital (a)*	*Non-working capital (b)*	*t*-statistics, *z*-statistics
Total sample	Mean		-4.52	-3.58	-1.28
	Median		-5.04	-3.40	-1.62
	Std.dev		7.42	5.80	
	Obs.		110	236	
Bank	Mean	(A)	-3.86	-3.01	-0.77
	Median	(B)	-3.94	-3.39	-0.81
	Std.dev		7.44	6.43	
	Obs.		57	108	
Investment house	Mean	(C)	-5.23	-4.06	-1.20
	Median	(D)	-5.78	-3.40	-1.69 *
	Std.dev		7.41	5.18	
	Obs.		53	128	
	t-statistics	(A) - (C)	0.96	1.40	
	z-statistics	(B) - (D)	1.07	1.03	

This table reports the cumulative abnormal returns in the three trading days around the announcement date (i.e., days -1, 0, and 1). Panel A divides the entire sample into the payment group and the non-payment group and compares the *CAR* with the payment group and the non-payment group. Panel B divides the entire sample into the investment group and the non-investment group and compares the *CAR* with the investment group and the non-investment group. Panel C divides the entire sample into the working capital group and the non-working capital group and compares the *CAR* with the working capital group and the non-working capital group. Test statistics are *t*-test and Man-Whitney *z*-test results for difference in mean and median. ** and * indicate statistical significance at the 0.05 and 0.1 levels, respectively.

Table 4.
The effect of bank underwriter and the intended use of proceeds on the announcement return

(Obs = 346)	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Bank		1.43 **	2.30 ***	1.74 **	2.60 ***
		(2.02)	(2.68)	(2.19)	(2.72)
Main Bank				-0.94	-0.90
				(-0.91)	(-0.87)
Bank*Payment			-2.64 *		-2.61 *
			(-1.80)		(-1.78)
Payment	-1.18	-1.17	0.08	-1.14	0.09
	(-1.63)	(-1.62)	(0.08)	(-1.58)	(0.10)
Investment	0.15	0.24	0.18	0.16	0.10
	(0.19)	(0.32)	(0.24)	(0.20)	(0.13)
Working capital	-0.16	-0.12	-0.28	-0.10	-0.25
	(-0.18)	(-0.14)	(-0.32)	(-0.11)	(-0.29)
ln(Capitalization)	-0.02	-0.01	-0.01	0.04	0.04
	(-0.05)	(-0.03)	(-0.03)	(0.15)	(0.15)
RelSize	-9.62	-11.63	-12.02	-10.98	-11.39
	(-1.25)	(-1.51)	(-1.54)	(-1.42)	(-1.46)
TobinQ	-0.07	-0.06	-0.07	-0.06	-0.07
	(-0.37)	(-0.32)	(-0.42)	(-0.30)	(-0.39)
STDR	-0.98 ***	-0.98 ***	-0.97 ***	-1.01 ***	-0.99 ***
	(-3.45)	(-3.46)	(-3.44)	(-3.55)	(-3.53)
Major UW	-0.80	-0.23	-0.40	-0.31	-0.48
	(-1.00)	(-0.27)	(-0.47)	(-0.36)	(-0.55)
Days	0.09	0.13	0.15	0.12	0.15
	(0.22)	(0.33)	(0.40)	(0.32)	(0.39)
Exchange dummy	yes	yes	yes	yes	yes
Year dummy	yes	yes	yes	yes	yes
Intercept	-0.08	-1.38	-2.20	-2.41	-3.31
	(-0.01)	(-0.19)	(-0.30)	(-0.33)	(-0.44)
Adj-R^2	0.08	0.09	0.10	0.09	0.10

This table reports the effect of bank underwriter and the intended use of proceeds on the announcement cumulative abnormal return. The dependent variable, *CAR*, represents the cumulative abnormal returns around the announcement date (day -1, 0, +1). *Bank* is the dummy variable which take the value of one if the underwriter is bank. *Main Bank* is the dummy variable that takes the value of one if the bank underwriter's parent bank is the greatest lender to the issuer and zero otherwise. *Paymend* takes the value of one if the intended use of proceeds which issuers disclose in the SEO prospectus is a loan payment, and zero otherwise. *Bank***Payment* is the interaction term of *Bank* and *Payment*. Ln(*Capitalization*) is the natural logarithem of market value at the last day of previous month. *RelSize* is the numver of offerd shared divided by the size of the existing market for the firm's shares. *TobinQ* is defined as the ratio of the market value to its total assets. *STDR* is deefined as the standard deviation of daily stock returns over 120 trading days and ending 20 days prior to the offer. *Major UW* takes a value one if the lead underwriter is a major underwriters, Nomura, Nikko, and Daiwa, and zero otherwise. *Days* is defined as the numver if days between PD and ID. We also include Stock Exchange dummy and year dummy. Heteroskedasticity-adjusted t-statistics are presented in parentheses below the regression coefficients. ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.1 levels, respectively.

Table 5.
Relationship between issuers and bank underwriters, loan repayment, and announcement returns

		Bank loan ratio (%)		*Bank equity ratio (%)*		*Repayment (%)*	*CAR[-1~+1] (%)*	
		Mean	*Median*	*Mean*	*Median*		*Mean*	*Median*
Loan relationship								
yes	112	6.58	4.48	0.84	0.00	41.07	-3.48	-3.51
no	53			0.36	0.00	22.64	-2.93	-3.04
Equity relationship								
yes	52	4.68	3.50	2.17	2.09	40.38	-3.66	-3.22
no	113	4.37	0.59			32.74	-3.14	-3.61

Note:
This table presents the relationship between issuers and bank underwriters, loan repayment, and announcement returns. The sample is restricted to issuers with bank underwriters. Upper (lower) rows divide the sample into groups depending on whether a loan (equity) relationship existed between the firm and parent bank of the underwriter.

Table 6.
The effect of concurrent loan and equity holdings by bank underwriters on announcement returns

(Obs = 346)	*Model 1*	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Bank	1.03	1.91 **	1.50 **	2.35 **	2.40 *
	(1.44)	(2.56)	(2.01)	(2.56)	(1.87)
Loan Share	0.10 *		0.11 **	0.11 **	
	(1.82)		(2.21)	(2.24)	
Equity Share		-0.81 **	-0.88 **	-0.86 **	
		(-2.29)	(-2.46)	(-2.43)	
Bank*Payment				-2.61 *	
				(-1.82)	
LoanD					-0.17
					(-0.12)
LoanD*Payment					-2.96 *
					(-1.93)
NonLoanD*Payment					-1.11
					(-0.49)
Payment	-1.23 *	-1.10	-1.16 *	0.07	0.06
	(-1.72)	(-1.55)	(-1.65)	(0.07)	(0.07)
Investment	0.41	0.18	0.37	0.32	0.26
	(0.54)	(0.24)	(0.48)	(0.41)	(0.33)
Working capital	-0.20	-0.10	-0.20	-0.36	-0.22
	(-0.23)	(-0.12)	(-0.23)	(-0.41)	(-0.24)
ln(Capitalization)	-0.09	0.08	0.00	-0.01	0.03
	(-0.31)	(0.26)	(-0.01)	(-0.02)	(0.10)
RelSize	-10.65	-10.23	-9.02	-9.42	-12.45
	(-1.39)	(-1.34)	(-1.19)	(-1.23)	(-1.60)
TobinQ	-0.04	-0.07	-0.05	-0.07	-0.08
	(-0.24)	(0.37)	(-0.29)	(-0.37)	(-0.42)
STDR	-0.94 ***	-1.04 ***	-0.99 ***	-0.97 ***	-0.99 ***
	(-3.30)	(-3.67)	(-3.52)	(-3.49)	(-3.52)
Major UW	-0.10	-0.49	-0.36	-0.51	-0.43
	(-0.11)	(-0.57)	(-0.42)	(-0.60)	(-0.49)
Days	0.12	0.13	0.13	0.15	0.15
	(0.31)	(0.35)	(0.32)	(0.39)	(0.38)
Exchange dummy	yes	yes	yes	yes	yes
Year dummy	yes	yes	yes	yes	yes
Intercept	-1.27	-2.96	-1.27	-2.00	-2.92
	(-0.16)	(-0.40)	(-0.18)	(-0.29)	(-0.40)
Adj-R^2	0.09	0.10	0.11	0.11	0.09

This table reports the effect of bank underwriter and the intended use of proceeds on the announcement cumulative abnormal return. The dependent variable, *CAR*, represents the cumulative abnormal returns around the announcement date (day -1, 0, +1). *Bank* is the dummy variable which take the value of one if the underwriter is bank. Loan Share is the share of outstanding loans made by bank. *Equity Share* is the equity share held by the bank underwriter. *Paymend* takes the value of one if the intended use of proceeds which issuers disclose in the SEO prospectus is a loan payment, and zero otherwise. *Bank*Payment* is the interaction term of *Bank* and *Payment*. *LoanD* a dummy variable that take the value of one if the bank underwriter is concurrently lending and zero otherwise. *LoanD**Payment is the interaction term of *LoanD* and *Payment*. *NonLoanD*Payment* is the interaction term of *NonLoanD*, which take the value of one if the underwriter is not concurrently lending and zero otherwise, and *Payment*. Ln(*Capitalization*) is the natural logarithem of market value at the last day of previous month. *RelSize* is the numver of offerd shared divided by the size of the existing market for the firm's shares. *TobinQ* is defined as the ratio of the market value to its total assets. *STDR* is deefined as the standard deviation of daily stock returns over 120 trading days and ending 20 days prior to the offer. *Major UW* takes a value one if the lead underwriter is a major underwriters, Nomura, Nikko, and Daiwa, and zero otherwise. *Days* is defined as the numver if days between PD and ID. We also include Stock Exchange dummy and year dummy. Heteroskedasticity-adjusted t-statistics are presented in parentheses below the regression coefficients. ***, **, and * indicate statistical significance at the 0.01, 0.05, and 0.1 levels, respectively.

Table 7.
Long-term returns by underwriter type and issuers' loan repayment intents

Panel A. Comparison by type of underwriter

$ABHR_{24}$	*Total sample*	*Bank* (a)	*Investment house* (b)	*t-statistics, z-statistics* (a)-(b)
Mean	-12.71	-8.09	-16.71	1.03
Median	-15.27	-10.51	-20.80	1.63
Obs.	222	103	119	

Panel B. Comparison by issuer's loan repayment intents

$ABHR_{24}$	*Payment* (a)	*Nonpayment* (b)	*t-statistics, z-statistics* (a)-(b)
Mean	-16.38	-10.65	-0.66
Median	-18.82	-12.22	-1.16
Obs.	80	142	

Panel C. Comparison by bank loan relationship

$ABHR_{24}$	*Investment house* (a)	*Bank*		*t*-statistics, *z*-statistics (a)-(b)	*t*-statistics, *z*-statistics (a)-(c)	*t*-statistics, *z*-statistics (b)-(c)
		Loan (b)	*Non loan* (c)			
Mean	-16.71	5.72	-41.71	-2.68 ***	-2.01 **	3.23 ***
Median	-20.80	-1.20	-31.40	-2.73 ***	-1.16	2.97 ***
Obs.	119	73	30			

Panel D. Comparison by bank equity relaitonship

$ABHR_{24}$	*Investment house* (a)	*Bank*		*t*-statistics, *z*-statistics (a)-(b)	*t*-statistics, *z*-statistics (a)-(c)	*t*-statistics, *z*-statistics (b)-(c)
		Equity (b)	*Non equity* (c)			
Mean	-16.71	-6.56	-8.92	-0.96	-0.81	0.16
Median	-20.80	-16.65	-8.20	-0.87	-1.62	-0.35
Obs.	119	36	67			

Panel E. Comparison by bank loan relationship and issuers' loan repayment intents

$ABHR_{24}$	*Investment house* (a)	*Bank*		*t*-statistics, *z*-statistics (a)-(b)	*t*-statistics, *z*-statistics (a)-(c)	*t*-statistics, *z*-statistics (b)-(c)
		*LoanD *Payment* (b)	*LoanD *Nonpayment* (c)			
Mean	-16.71	-4.54	12.48	-1.07	-2.96 ***	-1.18
Median	-20.80	-10.43	9.80	-1.23	-2.87 ***	-1.42
Obs.	119	29	44			

ABHR is the 24 month abnormal buy and hold return, which propensity score matching method are used to identify the matching portfolio. Panel A reports the *ABHR* by the type of underwriter; which with banks or with investment houses. Panel B reports the *ABHR* by issuer's loan payment intend. Panel C reports the *ABHR* by the type of the underwriter, and the loan relationship if the parents of underwriter is bank. Panel D reports the *ABHR* by the type of the underwriter, and the equity relationship if the parents of underwriter is bank. Panel E reports the *ABHR* by the type of the underwriter, and the interaction term of *LoanD* and *Payment* (*Nonpayment*), which take the value of one if the firm has (does not has) loan relationship with bank underwriter, and zero otherwise. *LoanD* a dummy variable that take the value of one if the bank underwriter is concurrently lending and zero otherwise. Test statistics are *t*-test and Man-Whitney *z*-test results for difference in mean and median. *** and ** indicate statistical significance at the 0.01 and 0.05 levels, respectively.

Table A1.
Bank Underwriter and Market Share

Bank underwriter		Parent commercial bank	Number of Firms	Share (%)
Daiwa SMBC Securities	i	Mitsui Sumitomo Bank	87	25.14
Kokusai Securities	f	Tokyo Mitsubishi Bank	7	2.02
Mitsubishi Securities	e	Tokyo Mitsubishi Bank	8	2.31
Mitsubishi UFJ Securities	x	Mitsubishi Tokyo UFJ Bank	7	2.02
Mizuho Securities	c	Mizuho Corporate Bank	13	3.76
Mizuho investors Securities	b	Mizuho Bank	5	1.45
Shinko Securities	a	Mizuho Bank	22	6.36
SMBC Friend Securities	h	Sumitomo Bank	1	0.29
Tokyo Mitsubishi Securities	g	Tokyo Mitsubishi Bank	1	0.29
UFJ Tsubasa Securities	d	UFJ Bank	14	4.05

Note:
Security company mergers
April 2000, Shinnihon Securities and Wako Securities formed Shinko Securities
Octorber 2000, Daiichi Kangyo Securities, Fuji Securities, and IBJ Securities formed Mizuho Securities
July 2001, Sanwa Securities and Tokai International Securities formed UFJ Capital Markets Securities
June 2002, Tsubasa Securities and UFJ Capital Markets Securities formed UFJ Tsubasa Securities
September 2002, Kokusai Securities, Tokyo Mitsubishi Securities, and Tokyo Mitsubishi Personal Securities formed Mitsubishi Securities
April 2003, Meiko National Securities and Sakura Frend Securities formed SMBC Friend Securities
Octorber 2005, Mitsubishi Securities and UFJ Tsubasa Securities formed Mitsubishi UFJ Securities

Table A2.
The effect of the bank underwriter on the announcement returns: selectivity bias adjustments

(Obs = 346)	*Two-step*		
	Coeff.	*t-statistics*	
BANKINFO	0.85	1.98	**
Payment	-1.15	-1.60	
Investment	0.24	0.32	
Working capital	-0.12	-0.14	
ln(Capitalization)	-0.03	-0.10	
RelSize	-9.94	-1.29	
TobinQ	-0.06	-0.34	
STDR	-0.98	-3.46	***
Major UW	-0.78	-0.97	
Days	0.10	0.26	
Exchange dummy	yes		
Year dummy	yes		
Intercept	3.22	0.98	
Adj-R^2	0.09		

Note:
This table reports the effect of bank underwriter and the intended use of proceeds on the announcement cumulative abnormal return. The dependent variable, CAR, represents the cumulative abnormal returns around the announcement date (day -1, 0, +1). BANKINFO is the selectivity bias adjustments bank variable. Paymend takes the value of one if the intended use of proceeds which issuers disclose in the SEO prospectus is a loan payment, and zero otherwise. Bank*Payment is the interaction term of Bank and Payment. Ln(Capitalization) is the natural logarithm of market value at the last day of previous month. RelSize is the numver of offerd shared divided by the size of the existing market for the firm's shares. TobinQ is defined as the ratio of the market value to its total assets. STDR is deefined as the standard deviation of daily stock returns over 120 trading days and ending 20 days prior to the offer. Major UW takes a value one if the lead underwriter is a major underwriters, Nomura, Nikko, and Daiwa, and zero otherwise. Days is defined as the numver if days between PD and ID. We also include Stock Exchange dummy and year dummy. Heteroskedasticity-adjusted t-statistics are presented in parentheses below the regression coefficients. *** and ** indicate statistical significance at the 0.01 and 0.05 levels, respectively.