**Agency conflicts in closed-end funds:
The case of rights offerings**

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Abstract

We study 120 rights offerings by closed-end funds over 1988-1998. On average, rights offerings are announced when funds trade at a premium. This premium turns into a discount over the course of the offering. The premium decline is more severe when the increases in investment advisor's compensation are larger and when the fund uses affiliated broker-dealers to solicit subscriptions to the offer. A clinical analysis shows that rights offerings allow investment advisors to sidestep fee rebates and increase pecuniary benefits to affiliated entities. Overall, our results suggest the presence of significant conflicts of interests in rights offerings by closed-end funds.

I. Introduction

It is widely known that closed-end funds often trade at a discount to their Net Asset Value (NAV). Numerous studies argue that at least part of this discount might be attributable to agency costs in fund management. Boudreaux (1973) and Roenfeld and Tuttle (1973) provide early evidence on this subject. More recently, Brauer (1984, 1988) and Brickley and Schallheim (1985) argue that open ending a fund can eliminate the discount, but that managerial entrenchment reduces the likelihood of open ending. Barclay, Holderness, and Pontiff (1993) confirm the importance of managerial entrenchment by showing that friendly blockholders in closed-end funds derive a multitude of pecuniary and non-pecuniary benefits from their ownership stakes, and that these benefits contribute to discounts. They report that the average discount for funds with blockholders is 14% versus 4% for funds without blockholders. Coles, Suay, and Woodbury (2000) demonstrate how compensation contracts affect fund value. They report that discounts are approximately one percentage point smaller when investment advisors' compensation contracts are more sensitive to fund performance.¹

In this paper, we examine agency conflicts in closed-end funds in a setting that allows the investment advisors to increase pecuniary benefits from a specific event. In particular, we explore the benefits derived by investment advisors from 120 rights offerings by 73 different closed-end funds over 1988-1998. The advantage of focusing on a specific endogenous event is that it allows us to explore the relation between the extraction of rents and *changes* in premiums, conditional on the event. This

¹ Not surprisingly, this concern over managerial discretion in closed-end funds has also prompted regulatory interest. Recently, Arthur Levitt, Chairman of the Securities and Exchange Commission, in opening remarks at a roundtable on boards of directors in the money management industry, expressed concerns regarding the independence of directors in closed-end funds (SEC, 1999).

approach differentiates our study from others that show a correlation between agency costs and premium *levels* (e.g., Barclay, Holderness, and Pontiff (1993) and Coles, Suay, and Woodbury (2000)).

We find that rights offerings are announced when funds trade at an average premium of approximately 2%. This premium turns into a discount over the course of the offering. The premium decline is correlated with two types of explicit and easily visible payments to investment advisors, and to firms affiliated with investment advisors. First, premium declines are more severe for offerings in which a larger proportion of the net proceeds are paid as investment advisory fees. Second, premium declines are larger for funds that employ broker-dealers affiliated with the investment advisory firm, to solicit subscriptions to the rights offering. The negative relations persist when we control for other factors that could influence premium changes, and are robust to econometric techniques that account for serial and cross-correlation in the data. Our regressions suggest that the magnitudes of the above effects are comparable to average premium *levels*, and therefore economically meaningful. For example, a fund that employs an affiliated broker-dealer to solicit subscriptions to rights suffers an incremental premium decline ranging from 1.7 to 5.7% of NAV. Similarly, an increase in the investment advisory fee that is one standard deviation higher than average, results in an incremental premium decline of 1.4% of NAV.

We also perform a clinical analysis of rights offerings and find that despite lawsuits and shareholder pressure, investment advisors are able to use rights offerings to sidestep negotiated fee reductions. Further, using simple cases, we show that investment advisors direct brokerage commissions to affiliated entities. Both our large sample and clinical analyses understate the total benefits to investment advisors, because we focus only on pecuniary benefits even though non-pecuniary benefits can be

substantial. Overall, our results suggest that agency problems play an important role in the operation and management of closed-end funds. More importantly, we establish a link between changes in premiums and agency costs.

In addition to contributing to the closed-end fund literature, our results are also relevant for the equity issuance literature. Theories of equity issuance rely on information asymmetry about the value of assets-in-place or investment opportunities, leverage effects, price pressure, or managerial opportunism to explain the cross-sectional variation in abnormal announcement returns.² Certain unique institutional features of closed-end funds allow us to abstract from, or explicitly control for, some of these issues. Since the assets held by closed-end funds are generally traded in liquid markets, there is little or no scope for information asymmetry about the value of the assets-in-place, to explain our results. Moreover, since closed-end funds invest the proceeds of the rights issue in relatively efficient capital markets (as opposed to industrial firms' investment in less efficient product markets), there should also be less information asymmetry with regard to investment opportunities. Even though some funds offer access to restricted markets or securities, various proxies for such investment opportunities are not significant in our regressions. Since closed-end funds are not taxed at the corporate level, leverage effects also cannot explain our results. Finally, variables designed to capture price pressure effects are not related to premium declines. Our results do support the managerial opportunism hypothesis, and

² See Myers and Majluf (1984), Cooney and Kalay (1993), Ambarish, John and Williams (1987) for information asymmetry explanations, and Scholes (1972), Shleifer (1986), and Harris and Gurel (1986) for price pressure arguments and Jung, Kim, and Stulz (1996) for agency-based explanations. For evidence, see Asquith and Mullins (1986), Masulis and Korwar (1986), Mikkelsen and Partch (1986), Scholes (1972), Shleifer (1986), Harris and Gurel (1986), Barclay and Litzenberger (1988), and Jung, Kim, and Stulz (1996).

concur with Jung, Kim and Stulz's (1996) conclusion that agency relationships play an important role in the capital acquisition process.

The remainder of the paper proceeds as follows. We discuss the data collection procedure and descriptive statistics in Section II, multivariate results in Section III and clinical evidence in Section IV. We conclude the paper in Section V.

II. Data

A. Data Collection

We obtain a comprehensive list of rights offerings by closed-end funds for the 1988-1998 period from *Lipper Analytical Services*. This list contains issuance information on 131 offerings over this eleven-year period. This information includes offering dates, expiration dates, net proceeds, and a binary variable indicating whether the offering is transferable.

We supplement this information with data from several other sources. First, we obtain prospectuses for each offering from the fund, *Lipper Analytical Services*, or the SEC's Edgar database. From these prospectuses, we collect announcement dates, unrealized capital gains information and pricing features. We also use prospectuses to confirm the accuracy of the data provided by *Lipper*, collect information on investment advisory fee structures, details of brokerage transactions, and whether the fund uses a broker-dealer to solicit subscriptions to rights during the offering period. Second, we search for any mention of our sample funds in the *Wall Street Journal Index (WSJI)* and the *Dow Jones News Retrieval Service (DJNR)* over the eleven-year period to identify announcements that are relevant to the rights issues. Third, we use proxy statements from the year prior to the offering to obtain information on insider and blockholder ownership.

To determine whether blockholders are friendly or hostile, we employ a two-stage process. First, we match our sample with the appendix of Barclay, Holderness, and Pontiff (1993). Their appendix contains a detailed description of each fund and a classification of funds with and without friendly blockholders. Second, following Barclay, Holderness, and Pontiff (1993), we search all entries in the *WSJI* and *DJNR* for any mention of blockholder attempts to open end the fund. Blockholders who attempt to open-end the fund are classified as non-friendly.

We obtain weekly price and NAV data primarily from *Lipper Analytical Services* and from the *Wall Street Journal*. In situations where we cannot obtain NAV and price data from either of these two sources, we obtain data from *Bloomberg*. Our data requirements result in a sample of 120 offerings by 73 different closed-end funds. This sample represents almost the entire population of offerings over the sample period.

B. Sample Selection Issues

Section 23 of the Investment Company Act stipulates that closed-end funds cannot issue shares at a price below the NAV of the fund, except if: (i) the offering is made to existing stockholders (i.e. a rights issue); (ii) a majority of shareholders consent to the offering; (iii) the stock is issued upon conversion of a convertible security; (iv) the offering is due to the exercise of warrants outstanding on the date of enactment of the Investment Company Act of 1940; or (v) the SEC explicitly permits the fund to issue stock. Technically, a fund can conduct a seasoned equity offering (SEO) if it is trading at a premium.³ If managers are in fact permitted to conduct both seasoned and rights offerings, then

³ This is a risky strategy since if the premium were to turn negative, the fund would be in violation of the law.

managers who expect the premium to fall will do rights offerings, and those who expect to maintain a positive premium will issue seasoned equity. This raises the possibility of a sample selection bias that could influence our results.

To determine the importance of this potential selection bias, we obtain a comprehensive list of SEOs by closed-end funds from two sources: *Lipper Analytical Services* and the *Securities Data Corporation (SDC)* database. These data show that SEOs by closed-end funds are an extremely infrequent occurrence. There are only 13 SEOs by 6 closed-end funds in our sample period. No more than two offerings take place in any one year and *all* of the offerings are by country funds. Ten (77%) of these 13 offerings are conducted by three funds (The Taiwan Fund conducted six, The ROC Taiwan Fund conducted two and the Korea Fund conducted two offerings). The low frequency of SEOs is consistent with the view that Section 23 of the Act is effective in discouraging SEOs, suggesting that the selection bias is unimportant for our sample. Nonetheless, we perform two additional checks to ensure the accuracy of this conclusion. First, for the population of 13 SEOs, we compare premiums before and after the offerings. We find that one week prior to the SEO, the average premium is almost 24% (compared to approximately 2% for rights offers). This is an unusually high premium, which lowers the likelihood that the fund would trade at a discount and be in violation of the law by the time the shares are offered. After the offering, the average premium declines to 13%. The fact that premiums also decline for SEOs is inconsistent with the idea that managers who expect to maintain a positive premium use SEOs. Second, we discuss the selection bias issue with a senior official in the Closed-End Fund Division of *Lipper Analytical Services*, who confirms that Section 23 of the Act is binding for most funds. Given these data, we believe that sample selection bias does not influence our results.

C. Price Adjustment to Reflect the Drop in Value on the Ex-Rights Date

Rights offers involve the transfer of in-the-money warrants to shareholders, which are detached from the stock on the ex-date. As a result, there is a price decline on the ex-date, similar in spirit to one that would occur for common stock on an ex-dividend date. As with most price series (such as those supplied by CRSP), it is important to adjust the time series of prices and NAVs to reflect this ex-date effect. *Lipper Analytical Services* provides us with “rights adjustment factors” to make this correction. These factors are equivalent to the adjustment factors that CRSP uses to adjust prices for rights offerings, and are applied in a similar manner (by multiplying the price series by the adjustment factor from the ex-date). Conceptually, the adjustment factors “gross up” the time series so that changes in prices and NAVs before and after the offering are comparable. For transferable offerings, prices are adjusted by $\left(1 + \frac{P_R}{P_S}\right)$ where P_R is the closing price of the right on the first trade date and P_S

is the market price of the stock prior to the detachment of the right. Similarly, NAVs are adjusted by $\left(1 + \frac{\Delta NAV}{NAV_P}\right)$ where ΔNAV is the (dollar) change in NAV as a result of the rights offering, and takes into account over-subscription privileges and expenses associated with the offer, and NAV_P is the NAV prior to dilution.⁴ For non-transferable offerings, the NAVs and prices are adjusted using the same NAV-based factor because the rights are not publicly traded.

⁴ The CRSP adjustment factors, FACPR and FACSHR, adjust the price and shares outstanding series in a similar manner.

We test the robustness of the above adjustment factors by ensuring that the intrinsic value of the rights is always smaller than the value of the traded rights. We also compare the *Lipper* adjustment procedure to the CRSP adjustment procedure (the two are quite similar) and ensure that warrant values calculated using the Noreen and Wolfson (1981) procedure are similar to *Lipper* adjustment factors. These checks indicate that the Lipper adjustment factors are reasonable. We then use these price and NAV data to calculate the premium as $\frac{P_{it} - NAV_{it}}{NAV_{it}}$, where P_{it} (NAV_{it}) is the price (net asset value) of fund i at time t .

D. Sample Distribution

We show the time-series distribution of the sample in Table 1. Most of the sample is concentrated in the period from 1992 to 1996. Of the 120 offerings, 74 are offerings by funds that conducted at least one prior offering up to three years before the start of the sample period. We refer to these as repeat offerings. We report the distribution of these repeat offerings in the right-hand column of panel A. The majority of repeat offerings take place between 1992 and 1995. We report the frequency of offerings classified by the number of prior offerings by the same fund in panel B. The data show that repeat offerings are frequently the second and third offering by a fund. One fund in our sample, Royce Value Trust, conducted six offerings over the sample period. The clustering in calendar-time and across funds suggests a lack of independence in the data which could influence our results. We return to this issue in Section III.C.

E. Descriptive Statistics

In Table 2, we present descriptive statistics for the sample. Approximately 64% of the funds in our sample are equity funds while the remaining are bond or convertible securities funds. Also, 49% of the sample consists of country funds. The average market value of the funds on the day prior to the announcement of the rights offering is \$318 million. There is, however, considerable variation in fund size; the smallest fund in our sample has a market value of \$25 million (The Bull and Bear Global Income Fund) while the largest fund's market value is \$1.9 billion (Nuveen Municipal Value Fund). Almost all fund categories, including a variety of bond (municipal, high yield, government and convertible) funds, equity funds, and country funds are represented in our sample.

Table 2 also shows that on average, rights offerings raise \$53 million. Rights are always issued at a discount to the prevailing price, and are almost always fully subscribed. Since the average market value of the fund is \$318 million, these offerings clearly have a significant impact on the size of the fund. Only 35% of the offerings are transferable, which means that for 65% of the rights cannot be sold to another investor. Approximately 60% of all offerings utilize broker-dealers to solicit subscriptions to the rights offer from individual shareholders. Broker-dealers are provided with a list of shareholders by the fund for this purpose.⁵

A majority of the funds trade at a premium prior to the offering. The premium on the day of the announcement is 2% (mean and median). A friendly blockholder is present in 10% of the sample and 61% of the sample funds have antitakeover provisions.

III. Premium Changes and Compensation from Rights Offerings

⁵ The shareholder list is a partial list because investors who refuse broker-dealer mailings are excluded from the list.

A. Premium Changes: Measurement Issues and Univariate Analysis

We follow the existing literature on agency costs and closed-end funds (Barclay, Holderness, and Pontiff (1993), and Coles, Suay, and Woodbury (2000)) and on closed-end fund event studies (Bonser-Neal, Brauer, Neal, and Wheatley (1990), and Brickley and Schallheim (1985)) by focusing on premium changes rather than abnormal returns. In addition to convention and comparability, we follow this approach because Gruber (1996) argues that premiums are a direct measure of managerial ability. Consistent with this notion, Chay and Trczinka (1999) present evidence that premiums reflect the market's assessment of future performance.

Analysis of premium changes presents us with an empirical difficulty. Recall that we obtain announcement dates from offering prospectuses. We confirm these dates from searches in the *Dow Jones News Retrieval System* but find that the initial announcement press release (reported on newswires) provides very little information about the offering characteristics. Seven out of the first ten announcements that we examine do not provide any information on the use of proceeds, distribution arrangements, details of the offering price etc. Instead, these data are revealed during the weeks following the announcement. Moreover, in 80% of the offerings, the subscription price is a function of average NAVs and prices just prior to the subscription date. Thus, for these offerings, the potential dilution for non-participating shareholders cannot be assessed until the subscription price has been determined. As a result of the slow release of information, and the inability to cumulate or compound premiums, we are forced to employ event windows that are somewhat wider than those traditionally used.

Our remedy to the above problem is to construct measures of premium changes by averaging premiums before and after the announcements. Specifically, for each offering, we compute a premium

2% premium with the premium on weeks

+1 and +2 (which need not be negative because of the slow release of information), our measure understates the premium decline. However, given the advantages of averaging described above, this is a cost we bear because it biases us *against* finding a decline in premiums.

In panel A of Table 3, we present means and medians for both types of premium changes. P-values are in parentheses below the mean (median) and indicate whether the premium changes are significantly different from zero using a t-test (Wilcoxon Rank-Sum test). When the post-event period is up to five weeks after the announcement, the median premium decline is one percentage point and is statistically significant (p-value = 0.00). When the post-event period is from week +1 to the subscription week, the median premium decline increases to 1.7 percentage points (p-value = 0.05). Similarly, mean premium changes are also negative and statistically significant.

Recall that the median premium level prior to the offering is approximately 2%. The magnitude of the premium declines shown in Table 3 suggests that this premium is (approximately) reduced to zero. However, both of our premium change measures are differences of time-series *averages* in pre- and post-event periods. If we compute cross-sectional averages in event time (i.e. the mean premium across all funds in weeks +1, +2 etc.), the premium decline is larger in magnitude. In fact, the average premium one week before subscription week drops to -0.002%. Overall, the results show a substantial decline in premiums over the course of the rights offerings.

We also examine two simple univariate partitions to our sample in panel A based on the increase in the advisory fee and on the use of affiliated broker-dealers to solicit subscriptions to the rights. First, we calculate the dollar value of the marginal increase in the investment advisory fee from each offering. Of the 120 offerings, 61 are for funds that employ a staggered advisory fee structure such that the percentage fee on additional assets declines as the dollar value of assets under management reach pre-specified threshold levels (breakpoints in the compensation schedule). In other words, the compensation schedule is a descending step function that specifies the “width” and “height” of each step. For these offerings, we use the net proceeds from the offering and details of the fee structure

provided in the offering prospectuses to calculate the implied one-year increase in advisory fees. In 57 cases, the compensation schedule is a flat linear function of asset size. For these cases, the marginal increase in advisory fee is simply the product of the percentage fee and the net proceeds from the offering. In two cases (Adams Express and Baker, Fentress and Co.), the funds are managed internally and no compensation data are available.

We scale the dollar value of the marginal fee increase by net proceeds, and divide our sample into offerings for which the (scaled) fee increases are above or below the median. Higher fee increases may suggest that agency issues are more important at the fund and that the fund's rights issues will be more beneficial for the advisor. Using premium changes with the 5-week post-event window, we find that the median (mean) premium decline is 1.2 (1.3) percentage points for funds with higher fee increases, compared to 0.4 (0.3) percentage points for those with lower fee increases. While these differences appear large, and are consistent with what one would expect in the presence of high agency costs for funds with high advisory fee increases, statistical tests fail to reject the null hypotheses that the means (medians) are equal. When we measure premium changes in which the post-event interval is from week +1 to the subscription week, however, the differences in premium declines are larger and statistically significant (the p-value of differences in medians is 0.05 and the p-value of differences in means is 0.01).

Second, we compare premium changes for offerings that use a broker-dealer affiliated with the investment advisor to solicit subscriptions to the rights, with those that do not. If a broker-dealer has the same name as the investment advisor, or is a subsidiary of the investment advisor, we deem the broker-dealer to be "affiliated". Using the five week post-event interval, the mean (median) premium decline is 2.9 (3.3) percentage points for offerings that use an affiliated broker-dealer; for the

remainder of the sample, the premium decline is 0.1 percentage point and is not statistically different from zero. The differences in premium changes across the two subsamples are significantly different (p-value = 0.00 for both means and medians). Similar results are obtained when the post-event window is extended to the subscription week (p-values of tests of differences in both means and medians are 0.00).

It is possible that the two univariate partitions described above vary systematically by type of fund. To investigate this potential clustering, we examine the distribution of these partitions across equity versus bond funds, country versus domestic funds and transferable versus non-transferable offerings. We find no systematic differences in distributions across these categories, for (i) the use of affiliated broker-dealers, and (ii) the increase in advisory fee above or below the median. These distributions are not reported because a χ^2 test does not reject the equality of distributions across these categories.

In panel B, we present a more powerful univariate test of the relationship between premium changes and the scaled marginal increase in advisory fees, and affiliated broker dealers. The panel shows Pearson correlation coefficients between these variables and both measures of premium changes and associated p-values. The correlation between the scaled marginal increase in advisory fees and premium changes is -0.15 . The correlation between a dummy variable equal to one if the broker-dealer is affiliated with the investment advisor (and zero otherwise), and the premium changes is even more negative (-0.26). Both are statistically significant. Thus, these simple univariate tests suggest that premium declines are more pronounced when compensation to investment advisors is high and when affiliated entities benefit from the offering.

It is conceivable, however, that other offering characteristics generate premium declines. To assess if the univariate premium changes are robust to other fund or offering characteristics, we estimate

cross-sectional regressions with the change in the premium as a dependent variable in the following section.

B. Multivariate Analysis

To examine the premium changes cross-sectionally, we first need to identify the relevant independent variables. Our choice of independent variables is motivated by our desire to detect the influence of conflicts of interest on rights offerings and accompanying premium changes. As a result, our primary independent variables measure advisory fee increases and the presence of affiliated solicitation dealers. We also include certain fund and offering characteristics to control for other effects that might influence premium changes.

We use two variables to measure the effect of advisory fee increases. The *scaled marginal increase in advisory fee* is defined as in the univariate analysis (Table 3) and reflects the proportion of the proceeds that are paid out as advisory fees. If higher fees are related to higher agency costs and if higher agency costs are associated with larger premium declines, then we expect a negative coefficient on this variable. However, it is also important to control for the change in the marginal compensation rate in the regression. Coles, Suay, and Woodbury (2000) show that lower sensitivity of compensation to NAV lowers the premium. Since contracts are often concave step-functions, and rights offerings always increase asset value, it is possible that premium declines are due to the change in the marginal compensation rate. The appropriate way to measure this is to examine the change in the slope of the fee schedule due to the rights offering. For 57 offerings, the compensation schedule is a flat function of asset size and therefore the change in the marginal compensation rate is zero. Of the remaining 61 offerings, 46 are at the bottom of their compensation schedule and 9 do not cross a threshold in the

compensation schedule. As a result, the change in the marginal compensation rate is zero for 112 out of 118 offerings. Due to the absence of variation in the change in the marginal compensation rate, we construct an alternative, albeit less precise, measure. Specifically, we calculate the *change in compensation expense ratio*, defined as the advisory fee after the offering scaled by market value, minus the advisory fee before the offering scaled by market value, as an independent variable.

We use three variables to assess the importance of affiliated broker-dealers used to solicit subscriptions to the rights. The *affiliated broker-dealer indicator variable* is equal to one if the fund uses a broker-dealer that is affiliated with the advisor. If the use of an affiliated dealer is another way for the investment advisor to increase payments to the advisor's parent, then we expect a negative coefficient for this variable. It is also possible that premium declines take place simply because using broker-dealers (whether affiliated or not) results in incremental expenses. To determine if the incremental transaction cost of using (any) broker-dealer drives our results, we also include the *broker-dealer fee divided by net proceeds* as an independent variable. Finally, we include an *interaction effect* between the affiliated broker-dealer indicator variable and the broker-dealer fee scaled by net proceeds. This variable is designed to capture the effect of the higher fees charged by affiliated dealers.

Finally, we include three other independent variables as controls. The *friendly blockholder indicator* is equal to one if the fund has a friendly blockholder and is included because Barclay, Holderness, and Pontiff (1993) document that funds with friendly blockholders trade at larger discounts. The *antitakeover provision dummy* is equal to one if the fund has an antitakeover provision in place. This variable is included because the presence of antitakeover provisions may indicate managerial entrenchment. The *number of prior offerings* by the fund is included because

many funds conduct multiple rights offerings over the sample period, and it is possible that some (later) offerings are anticipated.⁸

The results of the cross-sectional regressions appear in Table 4. We present eight models, four sets for each dependent variable. In models (i) through (iv) the dependent variable is the premium change in which the post-event window is week +1 through +5; in models (v) through (viii), the dependent variable is the premium change in which the post-event window is week +1 through the subscription week.

Models (i) and (v) present our basic regressions with the explanatory variables described above. However, since the interaction effect between the affiliated broker-dealer dummy and the scaled dealer fee exhibits a high degree of collinearity with the affiliated broker-dealer dummy ($\rho=0.89$), we cannot estimate coefficients for the two variables in the same regression. As a result, we also estimate models (ii) and (vi) in which we include the interaction effect but remove the affiliated broker-dealer dummy. Clustering in calendar time and fund-specific effects could influence the standard errors of the models described above. Since some funds conduct only one offering over the sample period, typical panel-data remedies that account for lack of independence (such as variance component or other GLS-based models) cannot be applied. We employ two alternatives to account for dependence. First, we estimate a “partial-fixed-effects” model by including indicator variables for each fund that conducts multiple rights offerings. The results of these models are reported in models (iii) and (vii). Second, we re-estimate the regressions using a portfolio approach; for funds conducting multiple offerings, we use

⁸ The literature on closed-end fund premiums suggests a number of other important control variables, such as unrealized capital gains, fund type, etc. We do not report regressions with these (and other) control variables in Table 4 in the interest of brevity, but defer a discussion of the influence of these variables to Sections III.C and III.D.

the average premium change across all offerings as the dependent variable and similarly averaged independent variables. The results of this estimation are reported in models (iv) and (viii).

Of the control variables, the friendly blockholder dummy is insignificant in all models. The antitakeover provision indicator is positive across all specifications but statistical significance is specification dependent. In models (i) and (ii) it is significant at the 0.06 level and in model (vi) it is significant at the 0.07 level. It is not statistically significant, however, in regressions that account for dependencies in the data (models (iii), (iv), (vii) and (viii)). The number of prior offerings is not statistically significant in five out of six regressions (it is not included in the portfolio regressions, models (iv) and (viii)).

Next we turn to our primary variables of interest, relating to advisory fees and the use of an affiliated broker-dealer. We find that scaled marginal increase in advisory fee is negatively related to premium changes in all model specifications. In six out of eight specifications the p-values on the coefficients are equal to or less than 0.05, and in the remaining two models, the coefficients are significant at the 0.06 and 0.07 level. In the “portfolio” models with the most conservative standard errors (models (iv) and (viii)), the p-values are 0.02 and 0.04 respectively. The magnitude of the coefficients varies from -2.407 to -3.575 , and the average value of the coefficients across all specifications is -3.472 . To assess the economic significance of these parameter estimates we compute the effect of a one-standard deviation increase in the scaled marginal increase in advisory fees. Ceteris paribus, if the scaled marginal increase in advisory fee rises from its mean value (0.0087) to one standard deviation higher (0.0128), this results in an *incremental* premium decline of 1.4 percentage points (-3.472 times 0.0041). Thus, these coefficients represent economically large declines in premiums.

Interestingly, the change in the compensation expense ratio is insignificant in all specifications. Even though rights offerings necessarily raise asset value, the proportionate decline in percentage fees does not “cause” a decline in the premium.⁹ More importantly, the effect of the scaled marginal increase in advisory fee is robust to this somewhat mechanical link between compensation schedules and NAV.

The affiliated broker-dealer dummy variable is negative and statistically significant at the 0.05 level (or better) across all regression specifications. The coefficients vary from -0.017 to -0.057 . The average across all coefficients is -0.040 indicating that, *ceteris paribus*, an offering employing an affiliated broker-dealer to solicit subscriptions suffers a premium decline that is 4 percentage points larger than an offering that does not. The magnitude of this decline is also economically significant; it is sufficient to eliminate the average premium of 2% prior to the offering. Thus, shareholders appear to penalize funds conducting offerings in which solicitation payments are directed to entities affiliated with fund management. This effect is not simply due to higher transaction costs when the services of an affiliated dealer are used, since the scaled fee itself is insignificant in all models. Moreover, the interaction effect between the affiliated dealer indicator variable and the fee is negative, implying that higher fees, when charged by affiliated dealers, are associated with larger premium declines.

C. Specification Issues

⁹ We also estimate the regressions with the change in the marginal compensation rate (a change in the APPMGRT measure used by Coles, Suay and Woodbury (2000)) and find that coefficient on this variable is also insignificant. As discussed earlier, this is most likely due to the fact that the marginal compensation rate changes in only 6 offerings. Moreover, scaling the change in compensation expense ratio by NAV instead of market value also has no material influence on our results.

Our results thus far suggest a negative relation between premium changes and explicit payments to investment advisors. This conclusion may, however, be sensitive to measurement problems and specification issues in both the dependent and independent variables. We briefly discuss these measurement issues next.

The regressions in Table 4 are parsimonious and, in some models, account for dependencies in the data. However, averaging in the construction of the dependent variables may be problematic and could potentially alter our conclusions. For instance, serial correlation in premium changes is typically quite high. To assess the robustness of our results, we estimate a number of alternative models that explicitly account for serial correlation. Specifically, we follow Bonser-Neal, Brauer, Neal, and Wheatley (1990) and stack two years of premium changes centered around the announcement week and estimate a regression using Hansen's (1982) Generalized Method of Moments with weekly premium changes as the dependent variable and three indicator variables. The indicator variables, D_{1t} , D_{2t} , and D_{3t} , take on a value of 1 if t is between week -10 to -6 , -5 to $+5$, and $+6$ to $+10$ respectively.¹⁰ The coefficient on D_{2t} measures the change in premium over the announcement period; D_{2t} , and D_{3t} are included in the regression to allow for delayed reporting of NAVs and prices and for non-synchronous trading.

¹⁰ The instruments are the regressors in the above regression. Therefore, while the coefficient estimates are the same as those obtained using OLS, the standard errors are robust to heteroskedasticity and serial correlation. Pre-testing reveals that the autocorrelation coefficients for premium changes in our data are $-0.43, -0.21, -0.14, -0.11, -0.06, -0.04, -0.01, -0.00$ for the first 8 lags; auto-correlations are insignificant after 8 lags. Therefore, we employ a Newey-West correction of 8 lags. We note that while the variance-covariance matrix used in this regression accounts for serial correlation, it does not account for cross-correlations due to multiple offerings by the same fund.

The coefficient on D_{2t} for the entire sample is -0.002 (t-statistic = -2.52) and the coefficient on D_{3t} is -0.005 (t-statistic = -2.86). Thus, premium declines are robust to serial correlation in the data and are consistent with the results in Table 3. We also estimate similar regressions with an interaction effect between the scaled marginal increase in advisory fees and D_{2t} and with an interaction effect between the affiliated solicitation dealer dummy and D_{2t} . In both cases, the interaction effects are negative; the t-statistic on the first interaction is -1.98 and the t-statistic on the second is -2.04 .

In addition to serial correlation, it could be that clustering in calendar time influences our results. We re-estimate all regressions reported in Table 4 with indicator variables for calendar years 1992, 1993, 1994 and 1995 but our major results remain unchanged. It is also unlikely that fund-specific factors explain our results since only two of the firm-specific dummy variables in the fixed effects models [(iii) and (vii)] are statistically significant. In the portfolio regressions [models (iv) and (viii)], we also include the average number of rights offerings per year as an additional regressor to account for the possibility that some offerings may be anticipated. The coefficient on this variable is not significant and our basic results remain unchanged.

D. Confounding Issues

It is possible that the premium declines are caused by factors entirely unrelated to agency problems in closed-end funds. Myers and Majluf (1984) argue that the equity issuance decision signals overvaluation of existing assets and therefore results in a price decline. Unlike industrial firms, however, the assets of most closed-end funds are traded in liquid markets. As a result, there is little (if any) information asymmetry about the value of assets-in-place. It is, of course, possible that information asymmetry about investment opportunities drives our results. For instance, it could be that premium

changes are related to unique investment opportunities provided by some funds; some country funds may provide access to otherwise restricted capital markets and/or investment securities. To determine if this is the case, we estimate the regressions with two explanatory variables to capture this effect: a restricted-country fund dummy variable and the average premium prior to the offering (to approximate a measure of growth opportunities such as Tobin's Q). The former is a dummy variable equal to one if the fund invests in countries with restricted access to capital markets and zero otherwise. The latter is computed as the average premium over a 26-week period prior to the announcement of the offering. These variables are not statistically significant.

It is also possible that price pressure accounts for the premium declines. Accordingly, we re-estimate our regressions with an explanatory variable controlling for the size of the offering because large offerings are likely to put more pressure on the price of a security. We do not find a relation between the size of the offering and premium changes. Burch and Hanley (1996) and Miles and Peterson (1996) report an increase in short selling after announcements for transferable offerings, which, they argue, can cause price pressure and depress fund premiums. We include a transferable offering indicator variable in the regressions but it also is not statistically significant.

For a subsample of funds for which we could obtain data, we also include the unrealized capital gain per share scaled by the announcement day price. If a fund has unrealized capital losses (gains), then the expected personal tax advantage (disadvantage) could cause a fund to trade at a premium (discount). New assets added through a rights offering do not possess this tax advantage (disadvantage) and could cause the premium (discount) to fall [see Brickley, Manaster, and Schallheim (1991) for a description of this tax timing option]. This variable also does not have any explanatory power in our regressions.

Finally, some of our explanatory variables may simply proxy for fund type rather than agency costs associated with the rights offering. For example, advisory fees (and therefore, advisory fee increases) vary systematically across types of funds. However, our basic results remain unchanged when we add equity or country fund indicator variables to the regressions in Table 4.

We do not report these specifications in additional tables but overall, alternative econometric specifications and additional control variables do not appear to materially influence our results. The battery of robustness checks returns us to our original conclusion: the decline in premiums is systematically related to the pecuniary benefits derived by investment advisors from rights offerings. In the next section, we explore the magnitude and form of these benefits.

IV. Direct and Indirect Benefits of Rights Offerings to Investment Advisors

In this section, we start our analysis of the direct and indirect benefits of rights offerings to investment advisors by providing full sample evidence on the direct benefits of rights offerings to investment advisors. We first document the magnitude of the projected advisory fee increases and fees to affiliated solicitation dealers. In the course of reading offering prospectuses and public press reactions to fund offerings, we discovered a wide array of other benefits derived by investment managers. Unfortunately, large sample study of these benefits is made difficult by the lack of systematic archival data. In addition, the heterogeneity in techniques employed by funds to derive benefits is quite large; as a result, even if we could obtain systematic data, the number of parameters to be estimated from the cross-sectional regressions of the type described earlier would be prohibitively large. Thus, we employ a clinical approach to study the diversity in pecuniary benefits.

A. Full Sample Evidence of Benefits

We present statistics on financial benefits that investment advisors can derive from the offering in Table 5. First we report the increases in investment advisory fees in panel A. Prior to the offering, the average advisory fee is \$2.2 million, with a median of \$1.1 million. As reported in Section III.A, there are 61 offerings in which the compensation contract has a staggered fee structure and 57 that have flat fee structures (and we do not have the data for 2 internally managed funds). Since fees are always computed as a function of the asset base, regardless of the structure, rights offerings always result in an increase in the dollar value of the fees. For the entire sample, the advisory fee is projected to increase by \$396,000 on average (with a median increase of \$264,000). The average percentage increase in advisory fee over the previous year is almost 24%.

This percentage increase is clearly economically meaningful. But the cumulative effect of the fee increase is even larger. If we (conservatively) assume no growth in asset size, and discount the average projected increases for each fund by its expected return, then the average of the present value of the fee increases is \$3.5 million.¹¹ In addition, the cumulative impact of multiple offerings is obviously larger than for one-time offerings. For example, prior to its first offering, the total assets of Gabelli Equity Trust were approximately \$500 million and the investment advisory fee was \$3.3 million. The fund conducted four offerings in 1991, 1992, 1993, and 1995 raising almost \$350 million and increasing investment advisory fees by almost \$3 million. These results suggest that the pecuniary benefits to investment advisors from rights offerings can be quite large.

¹¹ To calculate the expected return, we use the beta for the fund prior to the announcement of the offering (as reported by Bloomberg), the prevailing 10-year T-Bond yield and a market risk premium of 7%.

In panel B, we provide statistics on the use of and payments to affiliated broker-dealers. About 60% of all offerings involve broker-dealers used to solicit subscriptions and slightly less than half of these offerings (or 28% of all offerings) involve broker-dealers who are affiliated with the investment advisor. This affiliation can take a variety of forms but frequently the affiliation is direct, such as when the brokerage arm of the investment advisor is employed as a solicitation dealer. For example, the investment advisor of the Japan Equity Fund is Daiwa Securities Trust Co and in its 1994 offering, the fund employed Daiwa Securities as a dealer to solicit subscriptions to rights from shareholders. Unaffiliated broker-dealers are paid an average of \$1.6 million per offering or 2.6% of net proceeds for their services. Affiliated broker-dealers, on the other hand, are paid an average of \$3.3 million per offering or 4.6% of proceeds. A t -test of differences in means rejects equality across the two categories (p -value = 0.00), suggesting that affiliated broker-dealers earn significantly higher fees than non-affiliated broker-dealers. While we do not know what proportion, if any, of the fees paid to affiliated solicitation dealers accrue to investment advisors, the benefits to the dealers themselves appear to be quite large.

B. Clinical Evidence of Benefits

We summarize our clinical findings into two sections. The first section explores explicit fee arrangements and the second section describes transfer payments via the allocation of brokerage transactions.

1. Data Collection

Clinical evidence is extracted from a variety of data sources. Information on the resetting of fee structures is derived from offering prospectuses and proxy statements. Details of shareholder lawsuits and public reactions to rights offerings are obtained by searching for any mention of a fund's name on the *Dow Jones News Retrieval* database between 1988 and 1998. Brokerage allocation data are obtained from fund-level N-SAR filings available on the SEC's Edgar Database for the period closest to the rights offering.

2. Explicit Fee Arrangements

2.1. Shareholder Lawsuits

Compensation arrangements coincident with rights offerings have been the subject of several shareholder lawsuits.¹² In March 1996, an investor in the Brazil Fund filed a class action lawsuit against Scudder, Stevens & Clark, the investment advisor of the fund, following a rights offering. The suit alleged that fund directors approved the offering, hurting existing shareholders but increasing management fees, and that several "independent" directors were so highly compensated that they should no longer retain their independent status. While the investor eventually lost the lawsuit, a Maryland judge issued an interim ruling refusing to dismiss the investor's claims and arguing that the
 ng relationship...is sufficient to call into question (director's independence)." The same shareholder also subsequently filed a lawsuit against the Brazilian Equity

¹² The press has also viewed many rights offerings with skepticism, pointing to the coercive nature of rights offerings (because investors have to exercise/sell their rights or face dilution) and to the dramatic increases in investment advisory fees (see, for example, Power (1992, 1993), Gould (1993), Norton (1995)).

Fund and its investment advisor, BEA Associates, alleging “excessive” fees.¹³ The Brazilian Equity Fund raised \$20 million in a rights offering. This offering resulted in a projected one-time increase in investment advisory fees of \$193,000 (an increase of 20% over the prior year). Assuming no further growth in assets and capitalizing this value at the expected rate of return for the stock, the present value of this fee increase is \$1.5 million. The decline in value of the fund from one week prior to one week after the announcement was \$4.6 million (the discount widened from 7.2% to 12%). Thus the ratio of the fee increase to the decline in value is 33%, suggesting that the magnitude of the fee increase in contention is at least of the “right” order of magnitude to explain the premium decline.

Perhaps the most well publicized lawsuits associated with rights offerings concern offerings by John Nuveen and Co. In November 1993, Nuveen Premium Income and Nuveen Municipal Value announced offerings that subsequently raised \$154 million and \$259 million respectively. Even before the offerings were completed, several investors filed class-action lawsuits seeking to block Nuveen Premium Income’s offering alleging that the offering would dilute the holdings of non-participating shareholders. In June 1994, the court dismissed the suit arguing that investors can protect themselves from dilution by buying the maximum available number of additional shares and selling an equal number of older shares to raise the necessary cash. This, of course, ignores the effects of transactions cost,

¹³ A secondary case against BEA Associates questioned the unaffiliated status of five “independent” directors because they served on multiple boards of funds managed by BEA. BEA is the investment advisor for 11 closed-end funds, of which six conducted rights offerings. Together, these offerings increased BEA’s fees by approximately \$2.2 million. As a percentage of the prior year’s advisory fee, some of these fee increases are well above the average fee increase for the entire sample.

which could be offset by the offering discount. In dismissing the case, however, the court stated that the claims would be more appropriate as a derivative action and the suit was filed again.

Meanwhile, the law firm representing Nuveen in the suit “discovered” that the charter of both funds prohibited the sale of shares below NAV. Therefore, both offerings clearly violated the charter. Nuveen calculated that difference between the offering price and NAV amounted to a combined total of \$46.3 million. The lawsuit was eventually settled for \$24 million and while Nuveen apparently blamed its lawyers for the mistake, some commentators argued that the blame should rest with management and that the offering was motivated by the desire to increase advisory fees (see Savitz (1994)). According to the prospectuses, the offerings would result in a fee increase of \$1.64 million and \$1.67 million for Nuveen Premium Income and Nuveen Municipal Value respectively. The present value of these increases (capitalized at their respective expected rates of return and assuming no further growth), are \$20.5 and \$20.9 million respectively, and also represent substantial portions of the decline in market value of the funds during the announcement of offering (\$72 million and \$124 million respectively). (For Nuveen Premium Income the premium declined from 8.5% to 0.6% and for Nuveen Municipal Value the premium declined from 5.0% to –1.8%.)

An important caveat is in order with respect to the lawsuits described above. Allegations of excessive fees do not imply that the fee increases are necessarily excessive. Indeed, it is only the connection between fee increases and the negative coefficients on the scaled fee increase in regressions in Table 4 that may (cautiously) permit such an interpretation.

2.2. Ineffectiveness of Fee Rebates

Even if lawsuits or shareholder pressure are successful in ‘reducing’ fees, rights offerings can provide an indirect way to dissipate (if not remove entirely) the effects of the negotiated fee reduction. For example, in April 1988, the Three Bridges Investment Group filed a class action lawsuit against the management of the Liberty All-Star Equity Fund, alleging excessive advisory fees. Soon thereafter, in November 1988, the Vanguard Group submitted a proposal to the management of the fund seeking to replace Liberty Asset Management as the investment advisor. This change was expected to lower the fund’s expenses by approximately \$2 million a year. The proposal was rejected but was followed by another shareholder lawsuit filed seeking unspecified damages for excessive fees and for refusing to adequately consider Vanguard’s proposal.

In March 1991, Liberty Asset Management agreed to provide monthly rebates on a portion of its fees, to avoid “additional costs arising from the litigation”. Based on the fund’s then asset base of \$554 million, this rebate would reduce annual expenses by approximately \$142,000, only 7% of the fee reduction proposed by Vanguard. Interestingly, the reduction in dollar fees resulting from a resetting of the fee structure was more than offset by the increase in fees which resulted from three successive rights offerings in 1992, 1993, and 1994. The one-year projected increases in total fees from the three offerings were \$542,000, \$597,000 and \$315,000. These annual increases correspond to present values of \$6.0 million, \$6.6 million and \$3.5 million (using the expected rate of return on the stock and assuming no growth in assets). The value of these fee increases represent 28%, 48% and 41% respectively of the decline in market value of the fund in each offering.

The case of a 1994 rights offering by Pilgrim Prime Rate Trust provides another example of a situation where a fee rebate was more than offset by an increase in the asset base. Prior to the offering, the investment advisor was paid 0.85% of net assets up to \$700 million and 0.75% of assets thereafter

(net assets at the time were \$724 million generating advisory fees of \$6.1 million). The rights offering raised \$155 million, increasing assets to \$879 million. In its prospectuses, the fund recognized that the offering would increase advisory fees and voluntarily agreed to (ostensibly) lower fees on the second part of the staggered fee function (from 0.75% to 0.65% of net assets). However, the change in the structure of the contract was more complex. In fact, the new structure called for fees to be 0.85% of assets up to \$800 million (up from the prior \$700 million breakpoint) and 0.65% thereafter. As a result, advisory fees after the offering increased by almost \$1.1 million.

In sum, external attempts (whether through lawsuits or shareholder pressure) to reduce fees appear to have had limited success. Rights offerings provide a way for investment advisors to sidestep negotiated fee reductions and the present value of the fee increases correspond to a sizeable proportion of the value lost in the offerings.

3. Brokerage Allocations

Since rights offerings increase the asset base of the fund, commission income is generated by the investment of these assets. The investment advisor has almost exclusive control over the trading activities of the fund, and it can use this control to direct commission income to itself or affiliated entities. To examine these “directed” commissions, we gather data from filings by investment advisory firms with the SEC. The SEC requires all investment companies to file an N-SAR statement on a semi-annual basis, listing the names of up to five affiliated broker-dealers. The filing contains the names and commissions paid to the top ten broker-dealers used by the fund (in terms of transaction values). Thus, if an affiliated dealer is also one of the ten largest dealers (for the fund), we can determine the

amount of commissions paid to that dealer. The filing also contains total commissions paid by the fund and annual portfolio turnover.

Of the 73 unique funds (120 offerings) in our sample, we find N-SARs for 57 funds (93 offerings). Out of these 57 funds, over 61% (35 funds) employ at least one affiliated broker-dealer. When we are able to match affiliated broker-dealer names with the top ten list of brokers, we calculate the percentage of total commissions paid to affiliated broker-dealers. We are able to do this for 20 funds.¹⁴

Table 6 provides a list of these funds along with the percentage of commissions directed to affiliated broker-dealers. The table shows that the magnitude of commission payments to affiliated broker-dealers can sometimes be quite large; across the 20 funds for which we have data, on average, 21% of the commission payments are paid to affiliated broker-dealers. Consider, for example, Gabelli Equity Trust. The 1996 N-SAR statement reports that the fund employed three affiliated broker dealers: Gabelli and Company Inc. (a directly owned institutional brokerage firm), Keeley Investment Corporation, and IFG Network Securities Inc. Of these three dealers, one (Gabelli and Company Inc) is in the list of top ten broker-dealers for the fund. In fact, Gabelli and Company Inc is the largest broker-dealer for the fund, earning \$85,000 in commissions in a six-month period in which the fund paid a total of \$361,000 in commissions (corresponding to 23.5% of total commissions).

Simple back-of-the envelope calculations show the likely impact of rights offerings on commission income to affiliated broker-dealers. If we assume that the incremental assets raised by Gabelli Equity

¹⁴ For this particular analysis we shift our unit of analysis to funds rather than to offerings. This is because N-SAR filings on Edgar are a relatively recent phenomenon and as a result, we are often only able to obtain one filing for funds with multiple offerings.

Trust in each of its rights offerings were fully invested, that Gabelli and Company continued to receive 23.5% of commission income in the investment of these assets, and that the ratio of commissions to assets remains constant, then the implied *one-time* increase in commissions to Gabelli and Company from four rights offerings is approximately \$60,000 for six months or about \$120,000 annually (Gabelli has a portfolio turnover rate of approximately 50%).

V. Conclusion

We examine the pecuniary benefits derived by investment advisors from rights offerings conducted by closed-end funds. For a sample of 120 offerings by 73 funds, we show that, on average, funds trade at a premium prior to the offering. This premium changes to a discount over the course of the offering. The change in premium is negatively related to fees paid to investment advisors and to the use of affiliated broker-dealers to solicit subscriptions to rights. These relations are not only statistically significant, but also economically quite important. For example, if the marginal increase in advisory fees increases from its mean value to one standard deviation higher than its mean value, then the premium declines by 1.4 percentage points. This is an important effect given that the average pre-offer premium is about 2%.

Our paper contributes to two literatures. First, our results indicate that agency costs play an important role in the management of closed-end funds. Indeed, managerial discretion appears to be related to premium changes, in addition to the effects of managerial discretion on premium levels documented by other authors. Second, our results suggest that agency costs are relevant for the capital acquisition process. To the extent that our focus on closed-end funds allows us to abstract from industrial-firm-specific effects (such as information asymmetry about the value of assets in place or

growth opportunities), our results indicate that managerial opportunism is important in capital acquisition.

References

- Ambarish, Ramasastry, Kose John, and Joseph Williams. "Efficient signaling with dividends and *Journal of Finance*, 42 (1987), 321-344.
- Asquith, Paul and Mullins. "Equity issues and stock price dilution," *Journal of Financial Economics*, 15 (1986), 61-89.
- Barclay, Michael J., and Robert H. Litzenberger. "Announcement effects of new equity issues and *Journal of Financial Economics*, 21 (1988), 71-99.
- Barclay, Michael J., Clifford G. Holderness, and Jeffrey Pontiff. "Private benefits from block ownership and discounts on closed-end funds," *Journal of Financial Economics*, 33 (1993), 263-291.
- Bonser-Neal, Catherine, Gregory Brauer, Robert Neal, and Simon Wheatley. "International investment restrictions and closed-end country fund prices," *Journal of Finance*, 45 (1990), 523-547.
- Boudreaux, Kenneth J. "Discounts and premiums on closed-end funds: A study in valuation," *Journal of Finance*, 28 (1973), 515-522.
- Brauer, Gregory A. "Open-ending closed-end funds," *Journal of Financial Economics*, 13 (1984), 461-507.
- Brauer, Gregory A. "Closed-end fund shares' abnormal returns and the information content of discounts and premiums," *Journal of Finance*, 43 (1988), 113-127.
- Brickley, James A., and James S. Schallheim. "Lifting the lid on closed-end investment companies: A case of abnormal returns," *Journal of Financial and Quantitative Analysis*, 20 (1985), 107-117.
- Brickley, James A., Steven Manaster, and James S. Schallheim. "The tax-timing option and the discount on closed-end investment companies," *Journal of Business*, 64 (1991), 267-292.
- Burch, Timothy, and Kathleen Weiss Hanley. "When are closed-end funds open? Rights offers as a response to premiums," Working Paper, University of Maryland (1996).
- Chay, J.B., and Charles Trzcinka. "Managerial performance and the cross-sectional pricing of closed-end funds," *Journal of Financial Economics*, 52 (1998), 379 - 408.
- Coles, Jeffrey L., Jose Suay and Denise Woodbury. "Fund advisor compensation in closed-end funds," *Journal of Finance*, 55 (2000), 1385-1414.

Journal of Financial Economics, 15 (1986), 91-118.

Mikkelsen, Wayne H. and Megan Partch. "Valuation effects of security offerings and the issuance process," *Journal of Financial Economics*, 14 (1986), 165-194.

Miles, James, and Mark Peterson. "The reprise of the rights issue," Working paper, Penn State University (1996).

Myers, Stewart C. and Nicholas S. Majluf. "Corporate financing and investment decisions when firms have information that investors do not have," *Journal of Financial Economics*, 13 (1984), 197-221.

Noreen, Eric W. and Mark Wolfson. "Equilibrium warrant pricing models and accounting for *Journal of Accounting Research*, 19 (1981), 384-398.

Norton, Leslie P. "The wrong stuff: closed-end rights offerings help fund managers, not investors", *Barrons* (12/04/95), page 20.

Power, William. "Gabelli asks for more, again", *Wall Street Journal* (9/25/92), page C1.

Power, William. "Rights offerings proliferate as funds entice investors to buy more stock", Wall Street Journal (10/25/93), page 14.

Roenfeldt, Rodney and Donald L. Tuttle. "An examination of the discounts and premiums of closed-end investment companies," *Journal of Business Research*, 1(1973), 129-140.

Savitz, Eric J. "Oops! Nuveen discovers two large rights offerings weren't exactly kosher," Barrons (8/1/94), page 35.

Scholes, Myron S. "The market for securities: Substitution versus price pressure and the effect of information on share prices," *Journal of Business*, 45 (1972), 179-211.

Securities and Exchange Commission. "Opening remarks at the SEC roundtable on the role of independent investment company directors," <http://www.sec.gov/news/speeches/spch253.htm> (1999).

Shleifer, Andrei. "Do demand curves for stock slope down?" *Journal of Finance*, 41 (1986), 579-590.

TABLE 1

Distribution and sequencing of rights offerings

Panel A: Time-series distribution of rights offerings

Announcement Year	All Offerings		Repeat Offerings	
	Number of offerings	Frequency	Number of offerings	Frequency
1988	1	0.8%	0	0.0%
1989	1	0.8%	1	0.8%
1990	1	0.8%	1	0.8%
1991	4	3.3%	3	2.5%
1992	18	15.0%	14	11.7%
1993	41	34.2%	20	16.7%
1994	19	15.8%	10	8.3%
1995	17	14.2%	15	12.5%
1996	10	8.3%	6	5.0%
1997	3	2.5%	3	2.5%
1998	5	4.2%	2	1.7%

Panel B: Prior offerings

Number of prior offerings	Number of offerings	Frequency
0	46	38.3%
1	27	22.5%
2	27	22.5%
3	11	9.2%
4	6	5.0%
5	2	1.7%
6	1	0.8%

This table reports the number and frequency of rights offerings by closed-end funds from 1988 to 1998. Repeat offerings are offerings by funds that have done at least one other prior offering. The number and frequency of offerings, classified by the number of prior offerings is shown in panel B.

TABLE 2
Fund and Offering Characteristics

	Min	Mean	Median	Max
Equity funds	-	64.2%	-	-
Country funds	-	49.1%	-	-
Market value (\$ million)	24.7	317.7	152.9	1,892.5
Net proceeds of offering (\$ million)	4.4	52.7	33.9	299.2
Transferable offerings	-	35.0%	-	-
Offerings with solicitation broker-dealers		60.0%		
Premium on announcement day	-0.30	0.021	0.020	0.399
Funds with a friendly blockholder	-	10.0%	-	-
Funds with antitakeover provisions	-	61.0%	-	-

This table provides details of fund and offering characteristics for 120 rights offering over 1988-1998. Market value is calculated by multiplying the number of shares outstanding by the closing price on the announcement date of the rights offering. Net proceeds represent the total dollar value raised from the offering including oversubscription privileges but not including fees and expenses. Transferable offerings include those in which the rights can be sold to another party. The premium on the announcement day is the closing price of the fund minus the net asset value, divided by the net asset value. A friendly blockholder is a blockholder that is not identified as hostile in Barclay, Holderness, and Pontiff (1993) and that has not pressured the fund to open-end.

TABLE 3

Univariate Tests on Premium Changes

<i>Panel A: Sample partitions</i>	Premium change [(-5,-1) to (+1,+5)]		Premium change [(-5,-1) to (+1,subscription)]	
	Mean	Median	Mean	Median
Full Sample (N=120)	-0.009 (0.04)	-0.010 (0.00)	-0.007 (0.07)	-0.017 (0.05)
Offerings with scaled marginal increase in advisory fee above median (N=59)	-0.013 (0.06)	-0.012 (0.00)	-0.013 (0.07)	-0.010 (0.03)
Offerings with scaled marginal increase in advisory fees below median (N=59)	-0.003 (0.38)	-0.004 (0.25)	0.008 (0.45)	-0.000 (0.79)
<i>p-value for difference</i>	<i>0.14</i>	<i>0.13</i>	<i>0.01</i>	<i>0.05</i>
Offerings with affiliated broker-dealers (N=33)	-0.029 (0.00)	-0.033 (0.00)	-0.033 (0.00)	-0.030 (0.00)
Offerings without affiliated broker-dealers (N=87)	-0.001 (0.88)	-0.001 (0.59)	0.010 (0.25)	0.000 (0.59)
<i>p-value for difference</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
<i>Panel B: Pearson correlation coefficients</i>				
	Premium change [(-5,-1) to (+1,+5)]		Premium change [(-5,-1) to (+1,subscription)]	
Scaled marginal increase in advisory fee	-0.15 (0.00)		-0.14 (0.00)	
Affiliated broker-dealer dummy variable	-0.26 (0.00)		-0.25 (0.00)	

This table presents univariate tests of two types of premium changes surrounding the announcement of rights offerings. First, premium changes are calculated by subtracting the average premium over weeks -5 to -1 from the average premium over weeks $+1$ to $+5$ $[(-5,-1)$ to $(+1,+5)]$. Second, premium changes are calculated by subtracting the average premium over weeks -5 to -1 from the average premium over week $+1$ through the subscription week $[(-5,-1)$ to $(+1,\text{subscription})]$. Panel A presents results for the full sample, and partitions based on the distribution of advisory fee increases scaled by net proceeds, and whether the offering employed an affiliated solicitation dealer. P-values, in parentheses below the mean (median), indicate whether the premium changes are significantly different from zero using a t-test (Wilcoxon Rank-Sum test). P-values for differences within subsample means (medians) are from standard t-tests (Wilcoxon Rank-Sum) tests. Panel B shows Pearson correlation coefficients (with associated p-values) for the same variables.

TABLE 4**Cross-sectional Analysis of Premium Changes**

	Premium change [(-5,-1) to (+1,+5)]				Premium change [(-5,-1) to (+1,subscription)]			
	Model (i)	Model (ii)	Model (iii)	Model (iv)	Model (v)	Model (vi)	Model (vii)	Model (viii)
Intercept	0.010 (0.47)	0.007 (0.63)	0.017 (0.29)	0.023 (0.17)	0.023 (0.36)	0.016 (0.51)	0.035 (0.26)	0.023 (0.32)
Friendly blockholder	0.026 (0.12)	0.030 (0.16)	0.026 (0.12)	0.041 (0.10)	0.018 (0.49)	0.026 (0.32)	0.014 (0.65)	0.029 (0.36)
Antitakeover provision	0.018 (0.06)	0.019 (0.06)	0.005 (0.65)	0.015 (0.21)	0.022 (0.12)	0.028 (0.07)	0.015 (0.50)	0.019 (0.21)
Scaled marginal increase in advisory fee	-2.412 (0.05)	-2.474 (0.04)	-2.407 (0.06)	-3.453 (0.02)	-3.151 (0.07)	-3.275 (0.05)	-3.575 (0.05)	-3.454 (0.04)
Change in the compensation expense ratio	5.607 (0.51)	6.807 (0.42)	9.146 (0.27)	16.506 (0.12)	1.374 (0.92)	3.625 (0.79)	7.505 (0.63)	13.207 (0.35)
Affiliated broker-dealer	-0.027 (0.01)	-	-0.017 (0.05)	-0.032 (0.04)	-0.051 (0.00)	-	-0.057 (0.04)	-0.054 (0.01)
Broker-dealer fee	-0.079 (0.70)	0.039 (0.86)	-0.265 (0.29)	-0.134 (0.61)	0.085 (0.80)	0.310 (0.42)	0.015 (0.97)	0.078 (0.82)
Interaction: affiliated broker-dealer * broker-dealer fee	-	-0.593 (0.01)	-	-	-	-1.110 (0.00)	-	-
Number of prior offerings	-0.005 (0.25)	-0.006 (0.19)	-0.009 (0.07)	-	-0.005 (0.45)	-0.007 (0.33)	-0.007 (0.42)	-
Fixed effects for multiple offerings	-	-	Yes	-	-	-	Yes	-
Averages for multiple offerings	-	-	-	Yes	-	-	-	Yes
N	118	118	118	71	118	118	118	71
Adjusted R ²	0.10	0.10	0.24	0.14	0.07	0.07	0.18	0.10

This table reports cross-sectional regression results with two measures of premium changes as the dependent variables. The friendly blockholder indicator takes on a value of one if the fund has a friendly blockholder at the time of the offering, zero otherwise. The antitakeover provision indicator takes on a value of one if the fund has an antitakeover provision in place, zero otherwise. The scaled marginal increase in advisory fee is calculated by dividing the projected increase in advisory fees by net proceeds. The change in the compensation expense ratio is calculated by subtracting the advisory fee (scaled by market value) in the year prior to the offering (t-1) from the year after the offering (t). The affiliated broker-dealer indicator takes on a value of one if the fund uses a broker-dealer to solicit subscriptions that is affiliated with the fund or its investment advisor. The broker-dealer fee is the dollar amount paid to the dealer, scaled by the net proceeds of the offering. The dealer interaction term is the product of affiliated broker-dealer dummy variable and the dealer fee variable. Models (iii) and (vii) employ indicator variables for each fund conducting multiple offerings during the sample period (fixed effects). Models (iv) and (viii) employ a portfolio procedure in which, the average value of the independent and dependent variables are used for funds conducting multiple offerings. P-values appear in parentheses.

TABLE 5

Pecuniary benefits to investment advisors and affiliated entities from rights offerings

	Min	Mean	Median	Max
<i><u>Panel A: Investment advisory fees</u></i>				
Advisory fee prior to offering (\$ million)	0.150	2.198	1.144	10.822
Projected increase in advisory fee (\$ million)	0.037	0.396	0.264	1.670
Increase in advisory fee scaled by offering size	0.001	0.008	0.008	0.020
Percentage increase in advisory fee	4.5	23.8	21.9	95.4
<i><u>Panel B: Fees to solicitation-dealers</u></i>				
Offerings with unaffiliated solicitation dealers	-	32.5%	-	-
Offerings with affiliated solicitation-dealers	-	27.5%	-	-
Solicitation fee for unaffiliated dealers (\$ million)	0	1.60	0.88	17.2
Solicitation fee for unaffiliated dealers / net proceeds	0	0.026	0.034	0.114
Solicitation fee for affiliated dealers (\$ million)	0.51	3.34	1.69	17.2
Solicitation fee for affiliated dealers / net proceeds	0.023	0.046	0.039	0.114

This table reports statistics on the distribution and amount of investment advisory fees and solicitation-dealer fees paid for 120 rights offerings over 1988-1998. Panel A provides data on fees payable to investment advisors before and after the rights offerings. Increases in advisory fees are computed using details of fee structures provided in offering prospectuses. Panel B provides details on the use and compensation of solicitation-dealers employed to sell rights to investors. All data are obtained from offering prospectuses.

TABLE 6
Brokerage and commission allocation

Fund Name	Total Commissions (\$ 000's)	Commissions to affiliated brokers (%)
Adams Express	761	-
Austria Fund	64	7.8
Baker Fentress & Co	646	14.7
Bergstrom Capital	100	-
Blue Chip Value Fund	123	-
China Fund	382	7.6
Duff & Phelps Utilities Income	5,876	2.5
European Warrant Fund	274	20.8
First Australia Fund	586	0.5
France Growth Fund	361	10.5
Gabelli Equity Trust	361	23.5
Italy Fund	59	3.4
Japan Equity Fund	315	77.1
Korean Investment Fund	368	14.4
Latin American Discovery Fund	445	7.9
Latin American Equity Fund	715	11.2
Latin American Investment Fund	457	16.8
Mexico Equity & Income Fund	367	100
Mexico Fund	261	17.2
New Germany Fund	855	51.2
Pilgrim Prime Rate Trust	7	-
Pilgrim Regional Bancshares	49	-
Royce OTC Micro-Cap Fund	122	-
Royce Value	364	-
Singapore Fund	1452	6.7
Source Capital	318	-
TCW Convertible Securities	528	-
Zweig Fund	1170	17.1
Zweig Total Return Fund	526	9.7
Average	-	21.0

The table lists the total dollar amount of commissions paid by each fund in a six month period for which data are available after a rights offering. Also shown is the percentage of these commissions paid to affiliated broker-dealers and to soft dollar brokers.