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The Pricing of Assurance Services in Secondary Equity Offerings

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This paper examines the pricing of assurance services in secondary equity offerings (SEOs). Our empirical model extends initial public offering (IPO) fee specifications to include variables that are unique to, or more relevant for, secondary offerings. We document an inverse relationship between SEO fees and a client's ability to delay its secondary offering, suggesting that auditors do not charge as much for SEOs made by relatively mature firms. The relationship reverses, however, when the client is required to use more comprehensive types of filings (i.e., when assurance effort is higher). We also show that fees are higher when the SEO comes to market during the client's annual audit period. This finding is consistent with the shifting of year-end audit fees to SEO engagements in an effort to boost earnings for both clients and auditors (at the expense of shareholders). We cannot, however, unambiguously conclude that fee shifting exists, as the observed fee premium could be explained by other factors.

1. Introduction

This paper examines the pricing of assurance services provided as part of a client's secondary equity offering (SEO). A number of previous studies have examined the role of auditors in initial public offerings (IPOs) (e.g., Menon & Williams [1991], Hogan [1997], Willenborg [1999], Fargher, Fields & Wilkins [2000], Mayhew & Wilkins [2003]). However, there has been no research to date on the assurance provided for secondary equity offerings. Because SEOs typically provide infusions of equity capital that are much larger than those associated with IPOs, the study of secondaries is an economically important issue (e.g., Spiess & Affleck-Graves [1995]; Loughran & Ritter [1997]; Teoh, Welch & Wong [1998]; Rangan

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[1998]; Koop & Li [2001]). Furthermore, the SEO setting facilitates research questions that differ from those associated with initial public offerings.

Both the scope of services and the primary risk for the auditor are likely to differ for SEO engagements relative to IPO engagements. For example, SEOs occur primarily among firms that have matured and experienced some degree of financial success since their initial equity offering. As a result, such firms should have lower levels of inherent risk and business risk than IPO firms. Furthermore, assurance work in a secondary offering is comprised mainly of analyses of subsequent events rather than the extensive substantive testing associated with initial offerings. Because the types of firms involved and the types of assurance work involved differ between SEOs and IPOs, fee determinants may differ as well. It is our purpose in this paper to investigate this issue empirically. More generally, our analysis of SEO fees allows insights into how accounting firms price a particular type of nonaudit service. Investigations such as this are important, given the concerns of regulators and the public about the provision of nonaudit services.

Our tests begin with a model used extensively in the IPO fee literature. We augment this model with additional measures that we believe to be particularly important in the context of providing SEO assurance. First, the results of Koop and Li (2001) and Eberhart and Siddique (2002) suggest that a firm that successfully develops beyond its initial public offering will have a decline in its operating and default risk. Based on this, we assume that IPO firms that do not have to return quickly to the public equity markets—those which are able to generate additional financing more cheaply from internal operations or external debt—have lower levels of risk.¹ As a result, we propose that assurance fees should be lower for firms that are able to delay their secondary offerings. Our results support this prediction. We also find, however, that a fee premium exists for firms that delay their SEOs if the offerings are registered using Form S-1—a filing that requires greater assurance effort.²

We also consider the timing of the offering relative to the annual financial statement audit. We conjecture that fees will be higher, the closer the SEO is to the annual audit date, for at least two potential reasons. First, certain factors may exist—such as higher billable rates and greater involvement of high-level staff and partners during the busiest time of the year—that would lead to a natural premium for SEO engagements that overlap with the client's annual financial statement audit. Second, incentives exist for opportunistic behavior on the part of both managers and auditors. Corporate managers have an incentive to shift fees from the audit engagement to the SEO engagement because fees associated with the SEO—appropriately classified as a direct cost of raising equity capital—do not reduce net

1. In an audit pricing framework, we assume that SEO fees are increasing primarily in inherent risk and business risk.

2. Firms required to use Form S-1 must include all financial information in the prospectus. Those eligible to use other filings may choose to include such information by reference. Details are provided later in the paper.

income. Similar incentives exist for auditors because an audit firm's margins for nonrecurring work typically exceed the margins for its standard audit work.³

Empirically, we find that fees are significantly higher for secondary issues that come to market during the annual audit period, even after controlling for the potential effects associated with audit firms' "busy season." We also find that fees are significantly higher among SEO firms that have the greatest incentive to prevent fees from flowing through the income statement. Because data limitations prevent us from being able to provide a direct test of the fee-shifting explanation, we cannot specifically attribute the premium we observe empirically to opportunistic behavior on the part of clients or auditors. However, our findings certainly are consistent with this notion.

The remainder of this paper is organized as follows. The next section provides background on the nature of assurance for SEOs. We then briefly consider factors specific to SEO assurance that potentially impact fees. Next, we describe our sample, develop our fee model, and present our results. The final section provides concluding remarks and suggestions for future research.

2. Background

In this section, we briefly outline the mechanics of secondary equity offerings and the auditor's role in the process. Our understanding of the SEO process was developed through a review of the professional literature and via discussions with both practicing and former public accountants with significant SEO experience.

To initiate an SEO, a company must file the necessary registration statement with the SEC. The registration statement consists of two parts. Part 1—the prospectus—contains all of the information about the offering, including the firm's financial statements. Part 2 contains supplemental data and SEC procedural information (Aftermann [1995]). The main liability associated with SEOs stems from the registration statement. Under Section 11 of the 1933 Securities Act, an investor can sue the participants in the SEO by claiming that the registration statement is flawed.

Three professional groups assist clients participating in SEOs—attorneys, underwriters and accountants (Aftermann [1995]). The main role of attorneys is to prepare the registration statement and to manage the issuer's compliance with all applicable securities laws. The underwriter's role is to market the offering to investors. The underwriter bears two significant sources of risk: (1) market risk—in most cases it purchases the issuer's shares and resells them on the open market—and (2) litigation risk—as an expert in the issuance process, it faces liability under Section 11 of the 1933 Securities Act. The accountant serves two roles in a secondary offering. First, the 1933 Act requires the filing of three years of audited financial statements (or audited financials for the life of the entity if it is less than

3. Discussions with audit practitioners lead us to believe that both parties have an incentive to shift fees from the annual audit to the secondary offering.

three years). The accountant must attest to the financial statements to meet this requirement. Second, the accountant in most cases provides a comfort letter to the underwriter as part of the underwriter's due diligence process (AU, Section 634). The comfort letter qualifies the auditor as an expert in the filing process and accordingly enables the underwriter to share Section 11 litigation risk with the auditor. With respect to the prospectus, Section 11 differentiates between expertised and nonexpertised information. The primary example of expertised information is the financial statements, for which the auditor (as expert) assumes primary responsibility.

Most issuers register their secondary offerings using an S-1, S-2, or S-3 filing (SB filings may be used by small businesses and F filings may be used by foreign entities). The S-filings may be updated a number of times prior to the stock issuance, without an apparent increase in risk to the auditor.⁴ S-2 and S-3 filings are available as streamlined alternatives to the S-1 filing for qualified issuers. Essentially, to use these forms, the issuer must have been filing periodic information under the 1934 Securities Act for more than a year, must have adequate public float, and must be in good standing with the SEC. The S-2 and S-3 filings enable the issuer to include by reference financial and other company-specific information filed previously, whereas an S-1 filing requires all financial information to be included in the prospectus. Our discussions with practitioners indicate that inclusion of the financial statements in the prospectus requires appreciably more effort on the part of the auditor. However, the S-1 filing does not appear to directly increase litigation risk to the auditor because the financial statements are considered part of the prospectus in all filings (even when they are included by reference only).

In providing assurance services for an SEO, the auditor consents to allow the client to incorporate the 10-K, 10-Q, or audit opinions either directly (S-1) or by reference (S-2, S-3). The auditor also updates his or her most recent audit report to include any events that have occurred since the last audit report.⁵ If there is a material subsequent event, the auditor is required to perform additional audit work to ensure that all disclosures are complete and reasonably presented. However, the assurance work for an SEO typically is much less extensive than that required for an IPO, in that the auditor can rely on past audit work.⁶ The client and/or under-

4. In some cases, clients file registration statements well in advance of the actual offering and then try to time the offering to take advantage of favorable market conditions. This strategy requires firms to update the registration statement a number of times before issuing the final prospectus. In addition, in most cases the SEC will issue a comment letter to the company based on a preliminary prospectus filing, and the company will respond with a revised registration statement. Only the final registration statement and the prospectus appear to bear risk for the auditor.

5. Auditing standards require specific procedures to identify and classify subsequent events. AU 560 covers events after the balance sheet date but prior to the issuance of the auditor's report. In the SEO context, the audit firm agrees to incorporate or include reference to its most recent audit report in the client's registration statement and thus must update its review of subsequent events.

6. The ability to rely on prior audit work is the key difference between the accountant's work in an IPO and in an SEO. In most IPOs the accountant must conduct extensive audit procedures to issue an audit opinion on the previous three years. In a secondary offering, the client already has been audited as part of the IPO or as part of filing under the 1934 Act (i.e., 10-Ks and 10-Qs). The previous audit work and opinion can therefore be included by reference in the SEO's registration statement, and the auditor need only evaluate events occurring after the most recent audit report date.

writer can also request that the auditor perform additional procedures to provide additional assurance on interim financial information. If this extra assurance is sought, it typically is in the form of a review, although there is nothing to prevent the request of a full audit of the interim financial results.⁷

As mentioned previously, the auditor must also provide a comfort letter to the underwriter (similar to that which is required with an initial public offering). The letter essentially outlines a set of agreed-upon procedures, the extent of which can be the subject of some negotiation with the underwriter. The auditor generally provides the following assurances in a comfort letter (Aftermann [1995]):

1. *Positive assurance* that the accountant is independent of the issuing company
2. *Positive assurance* that the audited financial statements comply with the SEC's accounting requirements
3. *Negative assurance* that the unaudited financial statements conform to GAAP and comply with the SEC's requirements
4. *Negative assurance* that from the date of the latest unaudited financial statements contained in the registration statement to the effective date of the registration statement there have not been any substantial increases in the company's long-term debt or decreases in its equity.⁸

The underwriter uses the assurances provided in the comfort letter to formally document its reliance on the auditor as an expert in the event of Section 11 litigation. The prospectus appears to serve partially as a risk-sharing device for issuers, underwriters, and accountants. Underwriters in particular are able to share risk with or shift risk to the auditors via the comfort letter, given auditors' status as "experts" under the 1933 Act. The underwriter would prefer that the auditor take responsibility for as much of the information in the registration statement as possible, because the underwriter thereby obtains insurance against any subsequently disclosed errors or omissions. The auditor's incentive, however, is only to provide expert opinion on the audited financial statements. As a result, auditors and underwriters may negotiate extensively—in conjunction with attorneys—with respect to the scope of the work required and the level of assurance the auditor will provide regarding the accuracy of financial (and sometimes nonfinancial) data in the registration statement. We talked to numerous practitioners who mentioned that the negotiations between the auditor and underwriters about the scope of the auditor's services are one of the key steps in the SEO process.

7. We reviewed approximately 100 registration statements at random and noted only one case where the auditor performed a review rather than referencing or incorporating the most recent audit report. We found no cases where an interim audit was performed.

8. *Positive assurance* implies that the auditor undertook specific procedures to determine whether or not the standard of interest or assertion was met. *Negative assurance* implies that the auditor is not aware of information that contradicts the assertion in question. For example, the auditor provides positive assurance concerning audited financial information, but only negative assurance concerning subsequent changes in equity or debt after the date of the audit report.

3. Hypothesis Development

Extant research typically classifies audit fee determinants into measures of client size, complexity, and risk (e.g., Simunic [1980], Simunic and Stein [1987, 1996]). In this section we consider aspects of the secondary offering environment that may be particularly important in explaining the cross-sectional variation in SEO assurance fees.

3.1 Maturing Firm

Koop and Li (2001) document that IPO firms tend to be younger and to have higher risk than SEO firms. Many IPO firms subsequently suffer financial distress (Beatty [1993]), and hence many do not survive to seek SEO funding. One implication of these findings is that a firm that successfully develops from IPO to SEO is likely to be both larger and more profitable at the SEO stage than it was at the IPO stage. In essence, a history of successful operations reduces both the firm's operating risk and its risk of default.⁹

By extension, we assume that among IPO firms that do eventually have secondary offerings, an inverse relationship exists between firm risk and the delay between the IPO date and the SEO date. Stated differently, more successful IPO firms should be able to finance operations from debt or internally generated funds, thereby making them less likely to return quickly to the equity markets for financing (at higher costs). From an audit perspective, we expect that these firms will have lower levels of business risk (the risk that the client's business will fail) (Johnstone [2000]) and inherent risk (the risk of misstatement in the absence of controls), thereby allowing audit firms to expend less effort in achieving adequate assurance for the secondary offering. The reduction in inherent risk is a result of the increased financial stability of a mature company.¹⁰ As a result, we expect fees to be lower for firms that have a significant delay between their IPO and their first SEO.¹¹

We do not, however, anticipate that this relationship will hold uniformly across all levels of assurance effort. For example, as indicated previously, appreciably more effort is required for offerings filed using Form S-1 because the associated prospectus must include all of the offering firm's financial information. Further-

9. Alternative arguments can be made suggesting that SEO financing could result in increased risk, due to dilution of insider holdings or funding of higher-risk projects. However, SEOs have been shown empirically to be associated with reductions in default risk (Eberhart & Siddique [2002]). Consistent with such a decline in risk, we find that IPO firms that successfully reach the SEO stage experience increases in size, profitability, and liquidity, relative to their IPO levels.

10. Less mature firms are more likely than mature firms to face greater cash flow problems, poor liquidity, insufficient capital, or unusual pressure to meet expectations. Hence there is greater incentive for managers of these firms to try to make the financial statements look better than the true situation (Gay & Simnett [2000]).

11. In common with most audit fee studies, we cannot specifically identify audit effort, nor can we completely identify the different types of risks that may exist. However, we believe that business risk and inherent risk are likely to be the main fee drivers for secondary offerings.

more, firms required to use Form S-1 either do not have adequate public float or have not been filing under the 1934 Securities Act for more than one year. These factors lead us to propose that *among firms that delay their SEOs*, those that use an S-1 filing will require more assurance effort and will therefore be subject to a significant fee premium. Such a premium would not necessarily be anticipated for firms that quickly bring a secondary issue to market because the close proximity of the IPO S-1 filing should result in less incremental effort for the SEO S-1 filing. Based on these relationships, we present the following hypotheses:

H_{1a} : Among firms that do not use Form S-1, SEO fees will be lower if a significant delay exists between the IPO and the SEO.

H_{1b} : Among firms that have a significant delay between the IPO and the SEO, SEO fees will be higher if Form S-1 is used.

3.2 Fee Premiums During the Audit Period

Two distinct factors lead us to believe that SEO fees will be higher when the engagement coincides with the annual audit. One stems from opportunism. Hours allocated to SEO procedures tend to be billed at a higher rate than hours allocated to the annual audit.¹² From a revenue maximization perspective, the audit firm therefore has an incentive to classify a given task as relating to the SEO rather than to the annual financial statement audit. Furthermore, from the client's perspective, direct costs of raising equity capital reduce paid-in capital, not net income. In other words, fees that are allocated to the secondary equity offering do not impact corporate earnings at all, whereas the annual audit fee is a standard period expense. Assuming that SEO firm managers prefer to maximize reported earnings, an incentive exists for clients to shift fees from the annual audit to the secondary offering. As a result, we anticipate that SEO assurance fees will be higher for offerings that coincide with the year-end financial statement audit. We assume that the ability to shift fees in this fashion is reduced when the secondary offering is not closely aligned with the end-of-year audit. Practitioners with significant audit experience have corroborated this assumption, noting that most relatively young firms have all of their external audit work performed and billed at year-end.

Although incentives do exist for both parties to shift fees from the audit to the SEO, we do not explicitly suggest that evidence of a fee premium would indicate unethical practices by either audit firms or clients. First, as mentioned previously, such a premium could stem from higher billable rates and greater involvement in SEO engagements by high-level staff and partners during the annual audit period. Second, our discussions with practitioners suggest that when SEOs occur concurrently with audit work, it often is extremely difficult to know which types of services should be billed to the audit engagement and which should be billed to

12. We do not have specific data to support this statement, but it was a recurring theme in all of our discussions with experienced practitioners.

the secondary engagement. That is, even if misclassifications do exist, they may well be completely unintentional. As a result of these factors, we stop short of stating that intentional fee shifts do occur. We simply note that incentives to classify audit work as SEO work do exist for both parties, and we implement as many controls as possible in our empirical tests. Our hypothesis with respect to SEO fees does not depend on whether fee premiums are attributable to auditor/client opportunism or to other reasons.

H_2 : SEO fees will be higher when the SEO engagement coincides with the annual audit.

4. Data and Summary Statistics

We used the Securities Data Company (SDC) Worldwide New Issues database to identify all secondary public equity offerings brought to market between 1991 and 2000.¹³ Like most previous researchers, we eliminated best-efforts IPO underwritings, unit offerings, closed-end mutual offerings, and REIT offerings. Our initial sample included 2,473 firms having both secondary and initial offerings listed on SDC. The sample was reduced to 1,508 by requiring that each firm have non-missing values for critical variables (e.g., accounting fees, auditor, etc.) for both the initial offering and the secondary offering.¹⁴ We included only the first SEO for each available sample firm, thereby reducing the available sample to 1,194 observations. Finally, we required companies to have COMPUSTAT data available for the fiscal year immediately preceding their first secondary offering and CRSP data for the calculation of standard deviation of returns; we also required all sample companies to be audited by a Big 6 accounting firm.¹⁵ We removed 16 observations identified as excessively influential, using the methods of Belsley et al. (1980). The significance of our test variables is not affected by the inclusion or exclusion of

13. Our sample period includes two institutional changes to the litigation risk of auditors. First, audit firms reorganized as limited liability organizations in August and September 1994. This reduced the risk to audit partners who did not participate in an engagement, but not to partners associated with an engagement; hence we expect no impact on SEO fees as a result of the change in business form. Second, the 1995 Private Securities Litigation Reform Act (PSLRA) was passed in December 1995. This Act changed the laws governing litigation primarily under Rule 10b-5 of the 1934 Act. SEOs generally are covered by Section 11 of the 1934 Act (although, given the inclusion of financial statements filed under the 1934 Act, they remain open to 10b-5-type litigation). Nonetheless, Beatty, Drake and Hogan (2003) find very little evidence of an effect on audit fees due to the 1995 Act. Similarly, our SEO results are no different for the pre- and post-LLP and PSLRA periods.

14. Because 1991 is the first year that accounting fees are included in the SDC database, our sample effectively includes only those firms having both initial public offerings and secondary offerings after 1990.

15. Over 96% of the SEOs in our initial sample were audited by Big 6 firms. Consistent with previous researchers, we do find a fee premium associated with Big 6 auditors. However, because the relationship between audit fees and client-specific measures of firm risk and complexity may be different for low- versus high-quality auditors (and because the small number of non-Big 6 auditors precludes the effective modeling of such differences), our multivariate tests exclude issues handled by non-Big 6 auditors.

TABLE 1
Selected Summary Measures for a Sample of 1,054 Secondary Equity Offerings Made Between 1991 and 2000

Variable	Mean	Median	Min	Max
Secondary proceeds (\$ millions, U.S. market)	105.71	60.90	2.30	2,733.70
Previous IPO proceeds (\$ millions, U.S. market)	53.60	34.45	2.20	1,784.80
SEO accounting fee (\$)	97,900	75,000	9,000	700,000
IPO accounting fee (\$)	236,991	175,000	7,500	2,850,000
Underwriting fee, secondary (% of issue)	5.23%	5.20%	1.103%	10.000%
Underwriting fee, IPO (% of issue)	7.02%	7.00%	2.000%	10.169%
# Trading days between IPO and secondary	420.04	280.00	44	2214
Total assets (\$ millions)	266.22	70.20	1.147	13,450.89
Leverage (liabilities/assets)	0.47	0.44	0.01	2.31
Inventory + accounts receivable/assets	0.30	0.24	0.00	0.95
Standard deviation of returns*	4.38%	3.89%	0.36%	12.50%
SEO fee/absolute value of net income	3.99%	1.04%	0.01%	412.09%
Variable	%			
% with international exposure**	20.9%	—	—	—
% changing auditors from IPO	7.1%	—	—	—
% with explanatory language in audit report	13.3%	—	—	—
% with net loss at year-end preceding secondary offer	37.2%	—	—	—
% filing Form S-1 for SEO	57.0%	—	—	—
% with first SEO more than one year after IPO	53.9%	—	—	—
% with SEO ≤ 75 trading days after fiscal year-end	31.1%	—	—	—

*Standard deviation of returns is calculated from day - 100 to day + 100 relative to the secondary offering date.

**Offerings with "international exposure" include those associated with nondomestic corporations as well as those involving domestic companies with nonzero current or deferred foreign income taxes.

these observations; however, the fit of the model is appreciably better when they are excluded. After applying these screens, our final sample includes 1054 secondary equity offerings. Similar to recent IPO studies (e.g., Fargher, Fields & Wilkins [2000], Mayhew and Wilkins [2003]), we find that Ernst and Young and Arthur Andersen have the greatest share of the SEO market (26% and 19%, respectively). At 10%, Coopers and Lybrand had the smallest market share during our sample period, though the combined PriceWaterhouseCoopers entity captured an SEO market share of 26–28% in postmerger years.

Table 1 presents summary statistics for our sample of firms. Two things are particularly striking about the data. First, the mean size for U.S. secondary issues is \$105.71 million, which is roughly double the mean previous IPO proceeds. As a source of financing, a firm's first secondary equity issue greatly exceeds its initial public offering. At the same time, the mean assurance fee associated with secondary

offerings (\$97,900) is less than half the fee associated with initial public offerings (\$236,991). This same general trend exists for the gross underwriting fee as well; it decreases from 7.02% to 5.23% from the initial offering to the secondary offering. These data suggest that relative to initial public offerings, secondary offerings are not associated with as much risk and/or do not require as much effort from accounting firms and underwriters.

Table 1 also reveals that half of the firms had their secondary offerings within a little more than one year of their initial public offering. The mean value of approximately 420 days is quite a bit higher than the median, however, suggesting that some firms did not need additional equity financing for a considerable period of time. With respect to filings and SEO timing, 57% used Form S-1 and roughly a third reentered the equity market during the annual audit period (within 75 trading days after fiscal year-end).

The companies in our sample are less highly leveraged than IPO firms, with a mean ratio of total liabilities to total assets of 47%. Fargher, Fields and Wilkins (2000) report a preissue value of approximately 79% for their sample of Big 6-audited IPOs, suggesting that the infusion of equity capital associated with the initial public equity offering decreases the company's immediate financial risk. Consistent with recent SEO studies (e.g., Koop and Li [2001]), Table 1 shows that there is a good bit of variation in both the size of the companies issuing equity and the dollar proceeds raised. Our sample firms have total assets ranging from just over \$1 million (Solopoint, Inc.) to \$13.45 billion (Espirito Santo Financial Holdings). Secondary issue size ranges from \$2.3 million (First Cash, Inc.) to roughly \$2.73 billion (Genentech, Inc.). Like previous researchers, we use log transformations of these values in our empirical tests.

In Table 2 we present median values for selected summary statistics based on the proximity of the SEO to the prior fiscal year-end (Panel A) and to the original IPO date (Panel B). Panel A reveals that firms having their secondary offerings during the annual audit period have significantly higher SEO assurance fees than other firms. This finding is consistent with our prediction in Hypothesis 2. However, because these firms are also significantly larger than other firms, we defer drawing more concrete conclusions until this and other factors are controlled for in our multivariate model.

With respect to the timing of the SEO relative to the IPO, Panel B of Table 2 shows that firms that waited for at least a year after their initial offering before returning to the equity markets were larger, had a lower rate of net losses, and had a smaller returns variance and market-to-book ratio than other firms, even though they raised less capital in both offerings. In total, Panel B supports our earlier assumption that, all else being equal, firms that are able to delay their secondary offerings are more successful and less risky than firms that quickly reenter the public equity market. These univariate findings are examined more fully in the following section.

TABLE 2

**Median Values for Selected Summary Measures Based on SEO Timing
Relative to the Prior Annual Audit (Panel A) and the Initial Public Offering
(Panel B)**

Panel A: Timing of SEO relative to prior annual audit

Variable	SEO ≤ 75 Trading Days from Prior Annual Audit	SEO > 75 Trading Days from Prior Annual Audit
Number of firms	328	726
Secondary proceeds (\$ millions, U.S. market)	66.50*	59.25
Previous IPO proceeds (\$ millions, U.S. market)	39.00*	32.60
Secondary accounting fee (\$)	96,250*	75,000
IPO accounting fee (\$)	175,000	175,000
# trading days between IPO and SEO	246	295
Total assets (\$ millions)	86.81*	60.26
Leverage (liabilities/assets)	0.38*	0.46
Inventory + accounts receivable/assets	0.21*	0.26
Standard deviation of returns	3.93%	3.86%
Market-to-book ratio	5.97*	3.79
% changing auditors from IPO	5.49%	7.85%
% with explanatory language in audit report	10.37%*	14.60%
% with net loss at year-end preceding secondary offer	37.20%	37.19%
% filing Form S-1 for SEO	58.84%	56.20%

Panel B: Timing of SEO relative to IPO

Variable	SEO ≤ 1 Year After IPO	SEO > 1 Year After IPO
Number of firms	486	568
Secondary proceeds (\$ millions, U.S. market)	69.45*	55.00
Previous IPO proceeds (\$ millions, U.S. market)	41.60*	28.30
Secondary accounting fee (\$)	75,000	75,000
IPO accounting fee (\$)	200,000*	150,000
# trading days between previous year-end and SEO	112	120
Total assets (\$ millions)	61.17*	84.51
Leverage (liabilities/assets)	0.42	0.46
Inventory + accounts receivable/assets	0.23	0.26
Standard deviation of returns	4.05%*	3.72%
Market-to-book ratio	5.28*	3.88
% changing auditors from IPO	4.32%*	9.51%
% with explanatory language in audit report	12.55%	13.91%
% with net loss at year-end preceding secondary offer	40.33%*	34.51%
% filing Form S-1 for SEO	91.97%*	27.11%

*values are significantly different between partitions ($p < 0.05$)

5. Empirical Method and Results

5.1 Empirical Method

Our multivariate model investigates the pricing of assurance services in secondary equity offerings. The model builds on the work of previous IPO researchers and is specified as follows:

$$\begin{aligned}
 \text{ACCTFEE}_j = & \gamma_1 + \gamma_2 \text{ASSETS}_j + \gamma_3 \text{PROCEEDS}_j + \gamma_4 \text{FOREIGN}_j \\
 & + \gamma_5 \text{INVREC}_j + \gamma_6 \text{DEBT}_j + \gamma_7 \text{STDDEV}_j + \gamma_8 \text{QUAL}_j \\
 & + \gamma_9 \text{AUDCHG}_j + \gamma_{10} \text{RELYEAR}_j + \gamma_{11} \text{DELAY}_j \\
 & + \gamma_{12} \text{S-1}_j + \gamma_{13} \text{DELAY}_j * \text{S-1}_j + \gamma_{14} \text{AUDIT}_j \\
 & + \gamma_{15} \text{LOWEARN}_j + \varepsilon_j
 \end{aligned} \tag{1}$$

In eq. (1), ACCTFEE is the natural logarithm of the accounting fee associated with the secondary equity offering. The first two independent variables in equation (1) are proxies for size and/or complexity of operations. ASSETS represents the logged total asset value for the firm at its last fiscal year-end before the secondary offering and PROCEEDS represents the logged dollar proceeds from the secondary offering in U.S. markets. FOREIGN, which takes a value of 1 if the secondary offering is an ADR or if it is associated with a domestic firm with foreign subsidiaries (proxied by the presence of foreign income taxes), and INVREC (inventory and receivables as a percentage of total assets) are included as proxies for general audit-related duties associated with the secondary offering. Both of these measures typically are included and are significant in IPO fee studies, presumably because the complexities of international operations and the greater substantive testing required for firms with higher levels of noncash current assets should impact fees positively. Because of the nature of SEO assurance work, however, it is less clear that these measures should be priced in our setting. We include them to be consistent with IPO fee studies and perhaps to reveal differences that exist between fees associated with these two types of equity offerings.

The next two variables—DEBT and STDDEV—represent total liabilities as a percentage of total assets and standard deviation of returns from day -100 to day $+100$ relative to the secondary offering, respectively.¹⁶ These measures are included as general controls for client risk. We also model the effects of modified audit reports (QUAL, an indicator variable equal to 1 if explanatory language was included in the previous year-end audit report) and auditor changes (AUDCHG, an indicator variable equal to 1 if the firm's SEO auditor is not the same as its IPO

16. The shortest interval between the IPO date and the SEO date is 44 trading days. For this observation, the standard deviation of returns is calculated from day -44 through day $+100$ relative to the SEO date. The same approach is used for all other firms having SEOs less than 100 trading days after their IPO. As a sensitivity test we also defined STDDEV as the standard deviation of returns for 200 trading days after the SEO for all firms. Our results are not sensitive to this alternative specification.

auditor) on SEO assurance fees.¹⁷ Based on previous fee literature, we expect both of these variables to be positive; however, the influence of QUAL on ACCTFEE is likely to be less significant in the SEO context because much of its effect should have been priced in the previous year-end audit. Finally, we include RELYEAR to control for inflationary trends during the sample period. RELYEAR takes values from 1 to 10 for SEOs occurring from 1991 through 2000, respectively.¹⁸

The next three variables—DELAY, S-1, and DELAY*S-1—are used to test Hypothesis 1. DELAY (S-1) is an indicator variable taking the value of 1 if the SEO occurred more than one year after the IPO (filed using Form S-1), and 0 otherwise. Because S-1 and DELAY*S-1 are included in the model, the coefficient for DELAY measures the marginal fee effect associated with a delayed SEO for all firms that do not use Form S-1. As previously discussed, firms that do not have to return to the equity markets as quickly after their initial public offering are likely to be less risky. This notion is confirmed by the data presented in Panel B of Table 2. We therefore expect, consistent with Hypothesis 1a, the coefficient for DELAY to be negative.

Our primary interest in S-1 relates to its interaction with DELAY, in that we are interested in testing the marginal impact that an S-1 filing has on fees of firms that delay their SEOs. Because S-1s are more complicated filings and entail more assurance effort, we anticipate fees to be higher if Form S-1 is used. That is, Hypothesis 1b will be supported if the sum of the S-1 coefficient and the DELAY*S-1 coefficient (i.e., $\gamma_{12} + \gamma_{13}$) is positive.¹⁹ It is important to note that in eq. (1), the coefficient associated with S-1 in isolation (i.e., γ_{12}) captures the marginal fee affect attributable to *nondelaying firms* that use S-1 filings—not to S-1 filings in general. We do not have any formal expectations for the S-1 coefficient, although a reasonable argument could be advanced that it should be negative, given that nondelaying firms, by definition, previously filed a comparable form for their IPO in the same year.

Our final two variables relate to the fee premiums that may exist among secondary offerings that are concurrent with the annual audit. AUDIT defines firms having issues that came to market less than 75 trading days (approximately 3½ months) after the fiscal year-end. Based on Hypothesis 2, we expect the coefficient for AUDIT to be positive. Because AUDIT could be positive for a number of reasons, we include LOWEARN in an attempt to identify clients that would have

17. Our coding of QUAL is consistent with that of Copley and Douthett (2002), though we admit that the mere existence of “explanatory language” in an audit report may not be indicative of additional audit effort or risk. Butler, Leone and Willenborg (2004) show that “explanatory language” audit opinions cover a wide range of audit reports ranging from a change in accounting principle to going concern opinions.

18. RELYEAR simply captures (in a relatively parsimonious fashion) the residual inflationary characteristics present in SEO fees that are not accounted for entirely by the other independent variables. Our inferences are unchanged when we use a series of yearly indicator variables.

19. An alternative, but equivalent, way of framing this expectation is that $\gamma_{11} + \gamma_{12} + \gamma_{13}$ (i.e., the fee effect for delaying firms using S-1 filings) minus γ_{11} (i.e., the fee effect for delaying firms not using S-1 filings) should be greater than 0.

the greatest incentive to act opportunistically.²⁰ LOWEARN is an indicator variable taking the value of 1 if the firm is in the bottom half of the SEO firm earnings per share distribution, and 0 otherwise. Our assumption is that, all else being equal, firms with lower levels of earnings have a greater incentive to try to shift fees out of the audit engagement and into the SEO engagement. As a result, the coefficient for LOWEARN should be positive. We realize that this is a noisy measure, given that firms with lower earnings are also more likely to have higher levels of assurance risk. However, to the extent that the other independent variables control for a significant proportion of such risks, the coefficient for LOWEARN may be at least somewhat indicative of an SEO firm's propensity to try to shift fees.

5.2 Initial Results

Simple correlations between the independent variables in eq. (1) are reported in Table 3. As would be expected, a number of these measures are correlated with each other. For example, large firms tend to have larger secondary offerings and are more likely to have an international presence (i.e., ASSETS is positively correlated with PROCEEDS and FOREIGN). Similarly, firms with low earnings levels tend to be smaller and to have higher earnings variation (i.e., LOWEARN is negatively correlated with ASSETS and is positively correlated with STDDEV). However, even though some of the simple correlations are relatively high, regression diagnostics reveal that multicollinearity is not a significant problem in eq. (1).²¹

The estimates for the audit fee model are reported in Table 4. Consistent with research in both audit and IPO settings across many different countries, the assurance fees for secondary offerings can be explained by variables used to proxy for client size and risk.²² SIZE and PROCEEDS are both positive and significant, indicating that fees are increasing with client and offer size. Furthermore, firms that are more highly leveraged pay a premium for their SEO assurance work. In contrast to the audit fee and IPO fee literature, however, we do not find a significant relationship between fees and FOREIGN. The insignificance of this variable suggests that auditors may not be required to devote as much time to substantive testing of international SEOs, relative to standard audit and/or IPO work for international organizations. In other words, the auditor's ability to rely on previous audited

20. For the firms in our sample, the SEO fee represents, on average, approximately 4% of the absolute value of reported net income. Given the attention paid to reported earnings, we believe that this may be of sufficient magnitude to encourage opportunistic behavior.

21. Variance inflation factors (VIFs) in excess of 10 are often indicative of problematic multicollinearity. The largest VIF in the model represented by eq. (1) is 7.67. Additional diagnostics also reveal that heteroscedasticity is not a significant problem ($p < 0.15$). When we use t-statistics calculated using the method of White (1980), our results are qualitatively unchanged.

22. The adjusted r-square for our SEO model is approximately 19%. Although this value is considerably smaller than what typically is found in audit fee models (e.g., 87% in Fields, Fraser & Wilkins [2004], 66% in Ashbaugh, LaFond & Mayhew [2003], and 70%–88% in Ferguson & Stokes [2002]), it is directly comparable with the explanatory power documented in IPO fee models (e.g., 26% in Mayhew & Wilkins [2003], 25%–30% in Willenborg [1999], and 19% in Copley & Douthett [2002]).

TABLE 3

Simple Correlation Coefficients and p-Values (in Parentheses) for Proposed Determinants of the Assurance Fees Associated with Secondary Equity Offerings (Spearman coefficients are above the diagonal and Pearson coefficients are below the diagonal)

	ASSETS	PROCEEDS	FOREIGN	INVREC	DEBT	STDDEV	QUAL	RELYEAR	AUDCHG	DELAY	S-1	DELAY*S-1	AUDIT	LOWEARN
ASSETS														
PROCEEDS	0.4864													
FOREIGN	<0.001	0.2307												
INVREC	0.2544	<0.001	0.0450											
DEBT	0.0268	<0.001	0.1439	0.3155										
STDDEV	0.3844	0.1635	0.1747	<0.001	0.1186									
QUAL	0.2721	<0.001	0.1621	0.0238	0.0001	0.1300								
RELYEAR	<0.001	<0.001	0.1143	<0.001	<0.001	<0.001	0.1208							
AUDCHG	0.0943	0.1344	0.0002	0.3232	<0.001	0.3046	<0.001	0.0199						
DELAY	0.0022	0.0734	0.0487	0.2940	<0.001	0.1008	<0.001	0.5198	0.1383					
S-1	0.3784	0.0172	0.1139	0.2290	<0.001	0.0011	0.0669	0.0573	<0.001	0.1733				
DELAY*S-1	<0.001	0.2425	0.1665	0.2205	<0.001	<0.001	0.0343	0.0349	0.1769	<0.001	0.2384			
AUDIT	0.1625	<0.001	0.0382	0.0985	0.1458	<0.001	0.1655	0.1622	0.0266	<0.001	<0.001	0.0880		
LOWEARN	<0.001	0.4364	0.0001	0.0001	<0.001	0.0077	<0.001	0.1429	0.0686	0.1685	<0.001	0.0043	0.1747	

ASSETS = log of total assets at fiscal year-end preceding the secondary offering
 PROCEEDS = log of secondary offering proceeds in U.S. market
 FOREIGN = 1 if ADR or foreign subsidiary present, = 0 otherwise
 INVREC = inventory and receivables/total assets (before secondary offering)
 DEBT = total liabilities/total assets (before secondary offering)
 STDDEV = standard deviation of returns from day -100 to day +100, relative to secondary date
 QUAL = 1 if audit opinion contained explanatory language, = 0 otherwise
 RELYEAR = 1 if auditor at secondary offering is not the same as auditor at IPO, = 0 otherwise
 AUDCHG = 1 if secondary offering occurred in 1991, = 2 if in 1992... = 10 if in 2000
 DELAY = 1 if secondary offering occurred more than one year after IPO, = 0 otherwise
 S-1 = 1 if secondary offering was filed using form S-1, = 0 otherwise
 AUDIT = 1 if secondary offering occurred within 75 trading days of previous year-end, = 0 otherwise
 LOWEARN = 1 if firm had below-median earnings per share during the SEO year, = 0 otherwise

TABLE 4

Results of an Assurance Fee Model for a Sample of 1,054 Secondary Equity Offerings Made Between 1991 and 2000

$$ACCTFEE_j = \gamma_1 + \gamma_2 ASSETS_j + \gamma_3 PROCEEDS_j + \gamma_4 FOREIGN_j + \gamma_5 INVREC_j + \gamma_6 DEBT_j + \gamma_7 STDDEV_j + \gamma_8 QUAL_j + \gamma_9 AUDCHG_j + \gamma_{10} RELYEAR_j + \gamma_{11} DELAY_j + \gamma_{12} S-1_j + \gamma_{13} DELAY_j * S-1_j + \gamma_{14} AUDIT_j + \gamma_{15} LOWEARN_j + \varepsilon_j$$

Variable	Expected Sign	Coefficient Estimate	p-value
Intercept	+	10.004*	0.001
ASSETS	+	0.046*	0.009
PROCEEDS	+	0.122*	0.001
FOREIGN	+	0.062	0.095
INVREC	+	0.156*	0.033
DEBT	+	0.147*	0.017
STDDEV	+	2.135	0.069
QUAL	+	0.071	0.101
AUDCHG	+	0.113	0.058
RELYEAR	+	0.059*	0.001
DELAY	-	-0.271*	0.003
S-1	?	-0.114	0.261
DELAY*S-1	+	0.393*	0.001
AUDIT	+	0.156*	0.001
LOWEARN	+	0.086*	0.030

F-statistic for test of (S-1 + DELAY*S-1)=0

22.66 (p<0.001)

Model F-statistic

18.74 (p<0.001)

Adjusted R-square

0.191

* denotes significance at p<0.05; where directional predictions are made, p-values are one-tailed

ACCTFEE = log of accounting fee associated with secondary equity offering

ASSETS = log of total assets at fiscal year-end preceding the secondary offering

PROCEEDS = log of secondary offering proceeds in U.S. market

FOREIGN = 1 if ADR or foreign subsidiary present, = 0 otherwise

INVREC = inventory and receivables/total assets (before secondary offering)

DEBT = total liabilities/total assets (before secondary offering)

STDDEV = standard deviation of returns from day -100 to day +100, relative to secondary date

QUAL = 1 if audit opinion contained explanatory language, = 0 otherwise

AUDCHG = 1 if auditor at secondary offering is not the same as auditor at IPO, = 0 otherwise

RELYEAR = 1 if secondary offering occurred in 1991, = 2 if in 1992 . . . = 10 if in 2000

DELAY = 1 if secondary offering occurred more than one year after IPO, = 0 otherwise

S-1 = 1 if secondary offering was filed using form S-1, = 0 otherwise

AUDIT = 1 if secondary offering occurred within 75 trading days of previous year-end, = 0 otherwise

LOWEARN = 1 if firm had below-median earnings per share during the SEO year, = 0 otherwise

financial statements appears to reduce the relative effort required in the SEO engagement.

Of particular interest to this study are the coefficients associated with DELAY, the sum of (S-1 and DELAY*S-1), AUDIT, and LOWEARN. The significant negative coefficient for DELAY and the significant positive coefficient for the sum of (S-1 and DELAY*S-1) reveal that firms that are able to postpone their secondary offerings for at least one year have significantly lower SEO assurance fees ($\gamma_1 < 0$), unless they file Form S-1 ($\gamma_2 + \gamma_3 > 0$). These findings support Hypotheses 1a and 1b, and suggest that the higher levels of assurance effort associated with S-1 filings offset the fee discount afforded to lower-risk firms that have been able to finance their operations more cheaply—whether internally or through the debt markets.

Table 4 also reveals that, consistent with Hypothesis 2, the coefficient for AUDIT is positive and significant. Although we cannot assert unequivocally that the coefficient for AUDIT reflects the intentional shifting of fees by SEO firms, the significant positive coefficient for LOWEARN does generally support this notion (assuming that firms with lower earnings have a greater incentive to try to keep fees from flowing through the income statement).²³ As previously mentioned, we realize that LOWEARN is a noisy measure and is likely to be correlated with other forms of firm risk. However, when we omit LOWEARN and include an indicator variable defining firms in net loss positions, as has been done frequently in the fee literature, the coefficient for loss firms is not statistically significant. This result gives us some confidence that LOWEARN is not simply proxying for the assurance risks associated with highly unprofitable firms.

In addition to providing support for our hypotheses, the model reported in Table 4 can be used to illustrate the economic significance (with respect to SEO fees) of our test variables. For example, when DELAY, S-1, DELAY*S-1, and AUDIT are set equal to 0, the predicted fee is \$99,972 for a domestic SEO in the year 2000 with the continuous variables entered at their mean values but with no audit qualification, auditor change, or low earnings. When DELAY is set equal to 1 and the other three test variables are held at 0, the predicted fee drops to \$76,240. Thus, firms that are able to delay their offerings and that do not file Form S-1 experience large fee discounts. When we keep DELAY at 1 and set S-1 and DELAY*S-1 equal to 1, however, the predicted fee jumps to \$100,775. In other words, among DELAY firms, an S-1 filing causes fees to increase by \$24,535 (a 32% increase from \$76,240) and effectively offsets the discount attributable to delaying the offering. If we also set AUDIT equal to 1, modeling SEOs occurring during the annual audit period, the predicted fee increases from \$100,775 to \$117,788.

23. When we augment this measure further by restricting it to represent LOWEARN firms that report the largest ratio of SEO fees to net income (in absolute value terms), the coefficient is even more significant ($p < 0.0001$). In total, these findings suggest that clients that have the greatest incentive to shift fees away from earnings (those with poor earnings AND with fees that, if not expensed, would increase earnings dramatically) tend to have the largest SEO fees.

These values indicate that both the timing of secondary offerings and the filing form used do impact SEO fees in an economically significant fashion.

5.3 Sensitivity Tests

5.3.1 *Large Versus Small Firms*

Previous research (e.g., Craswell, Francis & Taylor [1995] and Mayhew & Wilkins 2003]) has shown that the determinants of IPO fees are not necessarily the same for small firms and large firms. To test the homogeneity of the relationship between SEO fees and firm size, we estimated our model separately for below-median total asset firms and above-median total asset firms. For below-median firms, the coefficients for DELAY, S-1, and DELAY*S-1 are insignificant, but the coefficients for AUDIT and LOWEARN remain positive and significant. For above-median firms, the significance levels for all of these variables are directly comparable to those shown for the full sample in Table 4. In total, the only difference between the two sample partitions involves the DELAY and S-1 variables. Based on this evidence, we conjecture that large firms that are able to delay their SEOs are the primary beneficiaries of the SEO fee discounts that are attributable to decreasing levels of risk (manifest in the DELAY coefficient and in the S-1*DELAY coefficient).

5.3.2 *Economies of Scale*

Fargher, Fields and Wilkins (2000) and Mayhew and Wilkins (2003) show that IPO fees are significantly lower in industries where IPOs are most prevalent. One possible interpretation of this finding is that economies of scale exist with respect to the preparation of regulatory filings in high-volume industries. To test for the presence of this effect in our sample of SEO firms, we added an indicator variable defining firms in the three industries having the most secondary offerings during our sample period.²⁴ The coefficient estimate for this variable is negative and significant ($p < 0.05$), consistent with previous research, and our inferences with respect to the other test variables are unchanged.

5.3.3 *Busy Season*

A majority of firms have fiscal years that coincide with the calendar year. Because AUDIT defines clients with SEOs coming to market during their (and most other firms') annual audit period, it is conceivable that the observed fee premium could be due to audit firms pricing their nonaudit services higher during busy season. To test this possibility, we added an additional independent variable, BUSY, to eq. (1). BUSY is equal to 1 for all SEOs occurring between January 1

24. SIC codes 28, 36, and 73 represent Chemicals and Allied Products, Electrical Equipment, and Business Services, respectively. These industries account for over 40% of our sample observations.

and March 31 of a given year and is equal to 0 for all other offerings.²⁵ When AUDIT is omitted from the model, BUSY is positive and significant ($p < 0.01$). However, when AUDIT is included in the model along with BUSY, AUDIT retains its significance while BUSY becomes insignificant. The insignificance of BUSY in the presence of AUDIT suggests that the fee premium stemming from an SEO occurring during a client's annual audit period is specific to that particular client—not to seasonality in annual audit work for all clients. These findings lend additional support to the notion that fees may be shifted from the audit engagement to the SEO engagement.

5.3.4 Alternative AUDIT Specifications

In an attempt to gain more insights into the possibility that fee premiums are attributable to opportunism, we tested the sensitivity of our model to different AUDIT specifications. First, we defined AUDIT to include, alternatively, firms having SEOs within 63 and 42 trading days (three and two months, respectively) of the previous fiscal year-end. In both of these models AUDIT remains positive and significant. This finding should not come as a surprise, given that both alternative specifications would include the window in which most of the year-end audit work is completed. That is, if fee premiums are due to opportunism, the significance of AUDIT should decrease only when the partition is altered to include firms for which fee shifting would be more difficult (i.e., firms for which the SEO is not concurrent with year-end audit procedures). When we increase the window to 84 trading days (four months), AUDIT remains positive and significant. As we push the window to 105 trading days (five months), however, the significance of AUDIT goes away. In total, these findings are consistent with the notion that fee premiums are most likely to exist when the greatest opportunities for fee management exist.

6. Concluding Remarks

This study investigates the pricing of assurance services in secondary equity offerings (SEOs). We examine fees for secondary issues using a well-established model that considers client size, complexity and risk. We also consider additional measures beyond the conventional fee model that are relevant in the context of a firm's first secondary equity offering. For example, previous research in finance suggests that a firm that successfully develops from its IPO to an SEO will have a decline in risk. If this decrease in risk is reflected in the pricing of assurance services, firms that have a longer delay between their IPO and their first SEO should have lower SEO fees. Our findings confirm this relationship. However, we also show that the relationship reverses if the SEO is filed using Form S-1, indicating

25. Under specifications where $BUSY = 1$ if the SEO occurs between January 31 and April 30 or, alternatively, between December 1 and April 30, our results are unchanged. Although the pairwise correlation between BUSY and AUDIT is significant, there is no significant multicollinearity present in the regression model.

a relative fee premium that appears to be attributable to higher levels of assurance effort. We also find that SEO fees are higher for issues that occur concurrently with the annual financial statement audit. We conjecture that bringing the SEO to market during the annual audit may facilitate the shifting of fees from the financial statement audit to the SEO engagement. This notion is supported by evidence that fees are significantly higher for firms having the greatest incentives to exclude fees from the income statement.

Like most research of this nature, the richness of our model and the inferences we make are limited by the availability of data. In particular, an adequate time series of pre- and post-SEO audit fees would be necessary to test explicitly for the shifting of fees between engagements. Future researchers may wish to investigate this issue more thoroughly as data become available and as audit fee disclosures become more standardized. Furthermore, an investigation of the audit strategy adopted in planning SEO assurance services and the allocation of audit resources would provide greater insight into the demand for and supply of assurance services in this area. The SEO context does, however, speak to issues that are relevant to other settings. Whether the fee premium documented in this study stems from opportunism or not, our analysis suggests that *incentives* certainly exist for both auditors and clients to shift fees between different engagements. Future research could potentially examine this issue in a broader context as data on fees for audit and nonaudit services become more widely available.

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