

DO AUDITORS PROVIDE COMPLIANCE ASSURANCE FOR REGULATORY REQUIREMENTS BESIDES VERIFICATION OF INFORMATION IN THE ANNUAL REPORT? EVIDENCE FROM LADDERING ARRANGEMENTS

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ABSTRACT

We investigate whether auditors can detect shareholder expropriation by the parties in control of the firm's resources at the time of an initial public offering (IPO). Our tests are conducted on a unique sample of IPOs where illegal laddering arrangements have been explicitly identified by regulators in Securities and Exchange Commission settlement agreements. Protecting clients against resource diversion occurring in these transactions is beyond the auditor's formal auditing responsibilities. However, providing this protection is consistent with a hypothesis that self-interested auditors will play a protectionist role to avoid potential legal costs and reputational damages associated with inappropriate resource diversion by corporate insiders. Our findings indicate that higher assurance service levels are associated with laddering cases and the probability that a laddering arrangement has been made is associated with lower audit quality. Overall, the results suggest that auditors may play an investor protection role beyond the verification of financial statement information in the market for new issues.

Keywords: Auditing, Investor Protection, Initial Public Offering, Laddering.

INTRODUCTION

Using a unique sample of observations where regulators have identified illegal capital market transactions (i.e., laddering transactions), we test for evidence that auditors possibly detected the illegal arrangements. Laddering, a form of expropriation that harms secondary investors by contributing to the long-run underperformance of a new stock issue, is an illegal tie-in arrangement that violates Rule 101 of Regulation M. We examine whether or not auditors can possibly detect these expropriations at the time of an initial public offering (IPO), a time when the information asymmetry between stakeholders and agents can be significant and provides an occasion for opportunistic behavior by controlling agents of the IPO. In our stylized example of shareholder expropriation, an executive decision-maker, who is likely to be a controlling shareholder (i.e., the majority-owner entrepreneur) or an influential agent (i.e., the managing underwriter), prices and allocates the IPO shares in a way that decreases the future value of the shareholdings. We explore whether any evidence exists to suggest that auditors possibly detected such expropriations.

While minority, or non-controlling, shareholders are included as those being expropriated, the focus of our study is not specifically on whether auditors, in fact, resolved

expropriation problems between non-controlling shareholders and controlling agents, but rather whether evidence exists to suggest that auditors may have detected the shareholder expropriation. Detecting and deterring an expropriation is consistent with the incentives of self-interested auditors who want to avoid potential reputation and litigation damages. We conduct our tests using a unique set of IPOs identified in Securities and Exchange Commission (SEC) settlements where top executives or controlling agents have been identified in laddering expropriation cases. Liu & Ritter (2010) describe laddering as one of the four “scandals” associated with IPOs that have attracted the attention of regulators and the interest of finance scholars for decades. In these scandals, the primary decision-makers agree to the recommendations of the underwriter, which underprices the IPO more than expected or allocates the IPO shares inappropriately, reducing the proceeds received by certain IPO owners or hurting the long-run performance of the IPO stock in the aftermarket.

Laddering is the practice where IPO share allocations are tied to after-listing purchases as a condition of receiving the initial share allocations at the offer price. Underpricing of the IPO is greater than expected because the offer price is not increased as much as the first-day closing price is increased by laddering. Laddering harms secondary investors by artificially boosting the immediate aftermarket price, which contributes to the subsequent long-run underperformance of the stock.

Our hypotheses primarily rely on the argument that self-interested auditors play a role in detecting and deterring expropriation by insiders and managers in order to protect their reputation from the damages of an association with a scandalous or litigious event. The U.S. IPO market provides a setting where an auditor could be motivated to detect and deter illegal activities given the higher liability for auditors and other financial intermediaries under the 1933 SEC Act. Section 11 of the Securities Act provides that any signer, director of the issuer, preparing or certifying accountant, or underwriter may be liable if

“Any part of the registration statement, when such part became effective, contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading.”

15 U.S.C. § 77k (a). Material facts may

“Include not only information disclosing the earnings and distributions of a company but also those facts which affect the probable future of the company and those which may affect the desire of investors to buy, sell, or hold the company’s securities.”

Kronfeld v. Trans World Airlines, Inc., 832 F.2d 726, 732 (2d Cir.1987). While the wording in these precedent setting cases appears to expose the auditor to possible litigation, to our knowledge, an auditor has never been held liable for laddering charges. However, they have been initially named as co-defendants and in each case the court dismissed the auditors as co-defendants.

While we found no examples where an auditor was successfully sued for a laddering transaction, the other possible cost is a loss of reputational capital due to an association with an entity that conducted an illegal transaction. IPO settlement payments are substantial and highly publicized and prior research suggests auditors will alter their behavior in response to the simple threat of litigation (Krishnan & Krishnan, 1997).

Our results indicate that higher assurance service fees are associated with cases of laddering at the time of the IPO suggesting auditors may be expending additional resources to

detect laddering transactions that expropriate the proceeds from the new offering. We also find that the probability of a laddering arrangement is associated with lower audit quality, implying that audit quality can impact the probability of detection.

There are important caveats to our findings. First, direct proxies for a specific laddering transaction are not available. Our proxy for a laddering transaction is simply an indicator for the IPO that was identified as conducting a laddering transaction in settlement documents disclosed by the SEC. Second, we do not know if auditors specifically identified the laddering transaction or not. Our empirical analyses are tests of the association between IPOs identified as conducting laddering transactions and the level of assurance services or audit quality provided. Thus, our study is exploratory in nature and the significant associations obtained are only suggestive of a possible protectionist role of auditors against illegal laddering transactions.

Our study contributes to the stream of research that examines the factors that explain the level of assurance services and quality delivered in the audit market for new issues. Our findings suggest auditors have incentives related to self-interest in protecting investors beyond the formal charge of auditing the financial statements and S-1 disclosures. Another interesting aspect of our study is that it identifies an agency cost that is likely the result of a shareholder-to-shareholder conflict (i.e., the shareholders that benefit versus the shareholders that are expropriated), suggesting auditors have incentives to reduce this agency problem in addition to the well-known agency conflict between managers and shareholders. Empirical studies on the shareholder-to-shareholder conflict are infrequent, the lack of which may be due to the difficulty in quantifying the value of the expropriation and distinctly identifying instances where shareholders are, in fact, expropriated.

BACKGROUND

Understanding the mechanics of the expropriating transaction examined in this study is key to determining whether a response by the auditor represents a protectionist effort. Testing for illegal laddering transactions is not within the scope of a typical audit program, and therefore, observing any response might suggest that auditors are playing a protectionist role beyond the attest function.

How Does Laddering Expropriate Shareholder Wealth?

Laddering is the case where investors agree to buy aftermarket shares in an IPO in exchange for an initial allocation from the underwriter to invest in the IPO at the offer price. Promises of “*laddered*” purchases create excess demand that artificially sustains or increases the price of the IPO shares shortly after the offering date. Assuming investors willingly pay a higher price in the aftermarket than the offer price at the IPO, they must think that the true stock price is greater than the offer price established by the underwriter. Thus, laddering must occur when the underwriter deliberately underprices an IPO relative to its knowledge of the demand for the IPO.

In addition to the excessive underpricing, laddered IPOs also exhibit different long-run return patterns. Aggarwal et al. (2005) show that returns to laddered IPOs are significantly lower compared to non-laddered IPOs in the long run, which itself represents an additional way that shareholders are expropriated.

Laddering, as an obvious tie-in arrangement, is viewed as a violation of Rule 101 of Regulation M under the Securities Exchange Act of 1934, which prohibits attempts by

underwriters to induce certain customers who received allocations of IPOs to place purchase orders for additional shares in the aftermarket. Regulation M is aimed at proscribing activities that artificially influence the market for securities offered, and therefore, laddering is a straightforward violation of this regulation.

The incentives for laddering are straightforward for the underwriter. Greater underpricing for the new issue directly increases the proceeds for the underwriter in a firm commitment offering. In addition, underwriters benefit if laddered shares are allocated to clients who willingly rebate some of the underpricing profits back to the underwriter through related commissions for trading of any security. Pre-IPO insiders can benefit from the inflated IPO price in post-IPO acquisitions or follow-on equity offerings by selling a portion of their holdings immediately after the lock-up period, thereby capitalizing on the laddered prices (Aggarwal, et al. 2005). Other owners could also capitalize on the inflated prices in this fashion but may not be aware of the laddering in place.

Hypotheses

The protectionist role we are proposing that may be played by auditors focuses on protection of investor's rights, and not simply attestation to the financial representations. This implies a broader range of the penalties expected from audit deficiencies and encompasses the self-interest incentives of auditors to avoid possible litigation costs, the loss of reputational capital of being associated with a highly public laddering settlement, or the loss of reputational capital through a non-litigious disclosure of laddering (i.e., the "*rumor mill*").

As alluded to previously, we believe the heightened legal exposure for auditors on IPOs under the 1933 SEC Act could provide a pathway for recourse against auditors in cases of laddering. Under the 1933 Act, auditors' responsibilities do not end as of the date of their report but continue to the effective date of the S-1 registration statement. The auditor must also ensure that the textual body of the S-1 registration statement does not conflict with the financial statements and disclosures and that all material facts that could affect potential investors are disclosed. Ensuring that the disclosed offer price in the registration statement is consistent with the financial information or material facts presented appears to be within the auditor's responsibility under this requirement of the 1933 Act. Finally, auditors typically provide a comfort letter to the underwriter for assurance on information in the registration statement not covered in the auditor's report and on events that occur subsequent to the audit report date. Note that the comfort letter provides another path for possible recourse against the auditor.

Other additional penalties for auditors under 1933 Act are also due to higher adjudication standards (Venkataraman et al., 2008). Under the 1933 Act, the burden of proof is transferred from the plaintiff to the defendant auditor, and the basis for liability to third parties is ordinary negligence, not the more difficult threshold of gross negligence, fraud, or constructive fraud. In sum, the regulatory requirements of the 1933 Act are more demanding and expose the auditor to greater consequences than the requirements of the 1934 Act.

Given auditors' self-interest incentives to avoid the threat of litigation and reputation losses, and the environment of heightened auditor responsibilities and liabilities under the 1933 SEC Act for IPOs, we hypothesize that auditors will play a detection role against direct laddering expropriations of shareholder wealth. Note that auditors do not necessarily have to ascertain whether the underpricing is appropriate or not. There is documentation available before the date

of the IPO that could point the auditor to possible laddering transactions. According to Hao (2007)

“when the order books with book building are viewed, all IPOs typically have a varying number of institutions that submit indication of interest with “color” of “will by 2X” or “will by 3X”, referring to the multiple of the IPO allocation that they will buy in the aftermarket.”

If “indications of interest” are made during the book building process, the SEC requires specific information (i.e. number of investors, shares requested, investor names, etc.) pertaining to the indicated investors be included in the IPO prospectus, a document that falls within the scope of the auditor’s responsibility. Thus, the documented “indications of interest” in the prospectus provide a starting point for the auditor to pursue concerns related to laddering.

The economic effects of laddering do not depend on whether the laddering arrangement is a completed transaction according to the legal definition of laddering. We quote Hao (2007) to describe the economic effects as follows:

“Although the legal definition of laddering requires that the underwriter insists on an investor purchasing shares in the aftermarket as a condition for receiving IPO allocations, the economic effects do not depend on whether an investor volunteers to buy additional shares or the underwriter requires that additional shares be purchased. What is relevant is that actual IPO allocations are affected by an initial “willingness” to buy additional shares in the aftermarket when the shares would not have been purchased by the investor except for the linkage with the IPO allocation. Thus, to the degree that IPO allocations are conditioned on commitments to purchase additional shares in the aftermarket and this linkage induces certain investors to purchase and (temporarily) hold shares that they otherwise would not have bought, the impact of laddering on IPO pricing could be far greater than suggested by the SEC settlements.”

Therefore, the underpricing does not have to be revealed by comparing the first day market price to the offering price to establish a laddering concern. The laddered, false demand is created by the pre-IPO documents and marketing by the underwriters.

Detecting a laddering expropriation depends on the amount of resources invested in the audit, including personnel and staff costs, which are expected to be recovered through the assurance fee. Thus, an increase in detection activities will increase the service level provided by the auditor leading to our first testable hypothesis:

H1: The level of auditing services provided is higher in cases where shareholder expropriation is detected.

While most auditors have similar self-interest incentives to conduct a high quality audit, variation in audit quality is likely to exist from one audit to the next. The Public Company Accounting Oversight Board (PCAOB) framework for analyzing audit quality includes three parts, namely, the quality of audit professionals, audit processes, and audit results. The quality of audit professionals on a given audit is likely to affect the probability of detecting and deterring an expropriating transaction in this setting. Specialized audit skills and knowledge, experience, workload, and effort are among the underlying factors that drive the quality of the professionals on the audit (PCAOB, 2015). To the extent that the audit professionals on a given audit are of a higher quality and have the above mentioned attributes, we expect a higher probability that the audit will detect a possible expropriating transaction. Our second testable hypothesis stated in alternative form is:

H2: The probability of detecting a shareholder expropriation is related to audit quality.

RESEARCH DESIGN

The Laddering Proxy

The laddering indicator is based on information provided in an agreement between the U.S. Securities and Exchange Commission and a group of underwriters who settled in 2009 for allegedly conducting laddering activities at the turn of the millennium. The stipulation and settlement agreement in reference is titled IPO Securities Litigation, 21 MC 92 (SAS). The variable of interest, *Ladderer*, is coded 1 for IPOs identified in the stipulation agreement, 0 otherwise (Chincarini et al., 2012).

IPO Audit Services and the Probability of Shareholder Expropriation

For hypothesis 1, the theoretical construct intended as the dependent variable is the level of assurance services. However, assurance services are not directly observable, and so we rely on assurance fees reported in the IPO registration statement to proxy for the level of assurance provided. Because IPO engagements are typically not performed under fixed-fee contracts, variations in the extent of assurance services provided will be reflected in fees. Earlier studies support the use of fees as a proxy for audit effort, and similarly, service level. O’Keefe, Simunic and Stein (1994) examine the determinants of auditor hours and observe that factors typically associated with audit fees also explain most of the variation in audit effort (i.e., hours). Within the IPO setting, Beatty (1989) uses residuals from an audit fee model as proxies for audit quality. He finds an inverse relationship between audit fee residuals and initial return on the public offering and interprets this as evidence of a positive relation between the extent of auditing (i.e., the compensation paid to the auditors) and the amount realized by the entrepreneur at the time of the IPO.

For hypothesis 2, the theoretical construct intended for the dependent variable is the likelihood of a laddering expropriation. Using a dichotomous variable to indicate the IPO was identified in the laddering settlement with the SEC or not, we estimate the probability of laddering with a maximum likelihood procedure (Probit) based on a cross-section of data from the time frame identified in the SEC settlement document.

Multivariable Models

We use an assurance fee regression based on previous IPO audit markets research to test hypothesis 1 (Fargher et al., 2000; Beatty, 1989). Using proxies and transformations commonly found in this stream of research, the ordinary least squares specification of our empirical model is

$$\begin{aligned} \text{LnAssuranceFee} = & \alpha_0 + \alpha_1 \text{LnAssets} + \alpha_2 \text{InvRec} + \alpha_3 \text{ROA} + \alpha_4 \text{LnProceeds} + \alpha_5 \text{Loss} + \\ & \alpha_6 \text{Internet} + \alpha_7 \text{Bubble} + \alpha_8 \text{UWRank} + \alpha_9 (\text{Ladderer}) + \varepsilon. \end{aligned}$$

The independent variable of interest is the *Ladderer* indicator described above. The coefficient is expected to be positive consistent with the hypothesis that auditors increase their service effort in response to expectations that a shareholder expropriation, such as laddering, may occur.

Our models are specified assuming the assurance fee and expropriation occur at the IPO date. In order to capture the appropriate temporal cause-and-effect between the independent and dependent variables in this setting, all financial variables are obtained from the most recent financial statement published just before the IPO date.

Established in previous empirical analyses, control variables are included for fee effects related to firm-specific and audit-firm characteristics, factors with potential association with regulatory changes, and IPO attributes (Hay, 2013; Hay et al., 2006). *LnAssets* controls for the fee impact of client size. *InvRec* controls for the fee impact of client complexity. *ROA* and *Loss* capture the impact of client risk on fees. *Internet* controls for fee effects for companies that primarily conduct business online (Liu & Ritter, 2010), and *Bubble* controls for fee differences that occurred during the stock market bubble from 12/31/1998 to 12/31/2001 (Leone et al. (2013). Underwriter reputation (*UWRank*) may have an impact on assurance fees as more highly ranked underwriters encourage issuers to engage high-quality audits to protect their own reputations (Simunic & Stein, 1987).

To test the hypothesis 2, we use a probit maximum likelihood procedure that is consistent with a model developed in Liu & Ritter (2010). The specification of our empirical model is:

$$Pr(\text{Expropriation}) = \beta_0 + \beta_1 \text{LnAssets} + \beta_2 \text{Ln}(1 + \text{Age}) + \beta_3 \text{VentureCapitalist} + \beta_4 \text{InsiderHoldings} + \beta_5 \text{Tech} + \beta_6 \text{Internet} + \beta_7 \text{SalesGrowth} + \beta_8 \text{UWRank} + \beta_9 \text{Bubble} + \beta_{10} \text{Instate} + \beta_{11} \text{Capex/Assets} + \beta_{12} (\text{SmallProfit or Restatements}) + \varepsilon$$

The variables of interest for the probit model above are proxies for audit quality, namely *SmallProfit* and *Restatements*. While there are alternative proxy options for audit quality established in the literature, we chose *SmallProfit* and *Restatements* based on a study of proxy validity by Aobdia (2015), who finds these measures to be among the best in predicting the occurrence of higher or lower quality for a particular audit engagement. If a company reports a small profit, the implication is that a loss may have been avoided due to earnings management, the practice of which is associated with lower-quality audits. Restatements are also frequently used as a proxy for audit quality because they indicate that the auditor issued an unqualified opinion on financial statements that were misstated. Thus, a restatement is a sign of poor audit quality (DeFond & Zhang, 2014). The occurrence of a *SmallProfit* or *Restatements* is a reflection of low audit quality, and therefore, the association between these quality proxies and the probability of laddering is expected to positive.

The audit markets literature has shown that underwriter demands, Sarbanes-Oxley legislation, and market bubble euphoria affects the IPO audit (Beatty, 1989; Copley & Douthett, 2009; DeFond & Zhang, 2014; Leone et al., 2013).

Since these expropriations are conducted through the underpricing mechanism, control variables are included for the determinants of underpricing factors such as size, age, technology, and the presence of venture capital (Cliff & Denis, 2004; Lowry & Shu, 2002). *LnAssets*, *Internet*, *Tech*, and *VentureCapital* are included, respectively. Control variables to identify the expropriation but not underpricing factors would include the underwriter motivation for doing the expropriation and issuer's likelihood of accepting the expropriation. Underwriters who are more likely to expropriate may be attracted to companies that have a greater need for external financing or more investment banking services in the future. For these constructs, *Capex/Assets*, and *SalesGrowth* are included in the regression (Liu & Ritter, 2010). Including the percentage of insider ownership controls for the attractiveness of the imperfectly correlated expropriation

benefits of the decision-maker's undiversified portfolio and illiquid positions in their company (Liu & Ritter, 2010). We include a variable (*Instate*) for the proximity of the IPO's home office to New York City controlling for the physical closeness that promotes personal relations and a variable (*Insider Holdings*) corresponding to sentiment by the decision-maker to acquiesce to the decisions of the underwriter (Liu & Ritter, 2010).

Sample Period and Data Sources

Table 1 presents the details of the sample selection. The sample is drawn from the time when laddering IPOs were identified in the settlement documents, July 1, 1996, through November 5, 2000. The original draw of observations is from SDC Platinum. Consistent with previous research, observations excluded were IPOs related to closed-ended funds, REITs, ADR & ADS issues, banks and S&Ls, IPOs with an offer price less than \$5.00, and IPOs engaging Non-Big N auditors (Leone et al., 2013; Liu & Ritter, 2010). The final sample for the laddering least squares fee model is 1,430 observations, including 227 observations in the experimental group (i.e., ladderers) and 1,203 observations in the control group (i.e., non-ladderers). To alleviate potential problems with extreme values, we winsorize the bottom and top 1 percent of the continuous variables. The sample used in the laddering probit model decreases to 775 observations due to missing data for the *Age* and *Insider Holdings* variables.

Data Source/Exclusion	Number of Observations
Initial Draw from SDC Platinum	2,357
Missing Data for Compustat Variables	(351)
Closed-Ended Funds	(55)
REITs	(92)
ADRs & ADSs	(71)
Banks and S&Ls	(157)
Offer Price < \$5.00	(36)
<u>IPOs with Non-Big N Auditor</u>	<u>(165)</u>
Subsample for Assurance Fee Regression	<u>1,430</u>
Missing data for <i>Age</i> variable	(420)
<u>Missing data for <i>InsiderHoldings</i> variable</u>	<u>(235)</u>
Subsample for Probit Laddering Regression	<u>775</u>

The data source for each variable, along with the variable definition, is provided in Tables 2 and 3. The sources used include Thomson Reuters SDC Platinum, IBES, Compustat, Professor Jay Ritter's website at <http://site.warrington.ufl.edu/ritter/ipo-data/>, and various stipulation and settlement documents discussed previously.

EMPIRICAL RESULTS

Descriptive Statistics

Tables 2 and 3 provide descriptive statistics for the observations used in the study. Table 2 provides the descriptive statistics for the variables and observations used in the assurance fee

model (for hypothesis 1). 16 percent of the observations in this subsample are identified as laddered IPOs. Although we have no basis for comparison, a violation rate of 16 percent strikes us as high given laddering is explicitly illegal. All grand means and medians are statistically different from zero. The mean dollar amount mean for assurance fees (\$335,889) is consistent with assurance fees reported in previous research for this time frame. Mean and median assurance fees in the laddering partition are significantly higher than assurance fees in the non-laddering partition suggesting there is a differential effect that exists between these two partitions. This difference is consistent with the hypothesis that auditors will increase the level of assurance when the possibility of expropriation is suspected (i.e., hypothesis 1). Wilcoxon Rank Sums indicate that IPO proceeds are statistically greater for the laddering partition may reflect how laddering artificially inflates demand for the IPO shares.

Variable:	Grand Mean, Median* (n=1430)	Mean, Median* for <i>Ladderer</i> = 1 Partition (n=227)	Mean, Median* for <i>Ladderer</i> = 0 Partition (n=1203)	Difference p-value†
Assurance Fees (\$)	\$335,889 \$250,000	\$406,057 \$325,000	\$322,648 \$225,000	<0.01 <0.01
Assets (\$ Millions)	\$177.41 \$25.41	\$82.79 \$26.57	\$195.26 \$25.07	0.09 0.38
InvRec (Ratio)	0.29 0.24	0.23 0.18	0.30 0.26	<0.01 <0.01
ROA (Ratio)	-0.37 -0.05	-0.58 -0.47	-0.33 -0.01	<0.01 <0.01
Proceeds (\$ Millions)	\$96.77 \$45.50	\$101.30 \$75.00	\$84.03 \$41.90	0.30 <0.01
Loss (1:0 Indicator)	0.74 1.00	0.93 1.00	0.70 1.00	<0.01 <0.01
Internet (1:0 Indicator)	0.14 0.00	0.34 0.00	0.10 0.00	<0.01 <0.01
Bubble (1:0 Indicator)	0.40 0.00	0.97 1.00	0.29 0.00	<0.01 <0.01
UWRank (1:0 Indicator)	0.82 1.00	0.96 1.00	0.79 1.00	<0.01 <0.01
Ladderer (1:0 Indicator)	0.16 0.00	- -	- -	- -

* Medians presented for continuous variables only. † Two-tail *p*-values are reported for t-test difference in means and a Wilcoxon two-sample test for differences in rank sums for continuous variables; and a chi-square test for differences in proportions for the 1:0 indicator variables.

Variable Definitions (in alphabetical order):

Assets = Total assets (\$M) from the balance sheet preceding the IPO. *Ln Assets* is the natural log of *Assets*. (Source: Compustat)

Assurance Fees = Accounting fees (\$) paid to the auditor as reported in Part II of the S-1 or SB-2 registration statement.

Ln Assurance Fees is the natural log of *Assurance Fees*. (Source: SDC Platinum)

Bubble = 1:0 indicator for IPOs issued between December 31, 1998, and January 1, 2001. (Source: SDC Platinum)

InvenRec = Ratio computed as (inventory + accounts receivables)/total assets (\$M); based on financial information preceding the IPO. (Source: Compustat)

Internet = 1:0 indicator for IPOs coded by SDC as intending to conduct business via the Internet. (Source: SDC Platinum)

Loss = 1:0 indicator for the existence of a net loss in year preceding the IPO. (Source: Compustat)

Ladderer = 1:0 indicator for IPO companies where the allocating underwriter requires customers to buy additional shares of their issuing client in the aftermarket as a condition for receiving shares at the offer price. Laddering is also known as a tie-in agreement. IPOs in which Laddering allegedly occurred are listed in the Stipulation and Agreement Settlement for Civil Action No. 21 MS 92 (SAS).

Proceeds = IPO issue proceeds (\$M). *Ln Proceeds* is the natural log of *Proceeds*. (Source: SDC Platinum)

ROA = Ratio computed as income before extraordinary items, available for common ÷ total assets; based on financial information preceding the IPO. (Source: Compustat)

UWRank = 1:0 for underwriters ranked 6 or higher according to the Loughran and Ritter (2004) and updated by Jay Ritter at his website (<https://site.warrington.ufl.edu/ritter/ipo-data/>).

Variable:	Grand Mean, Median* (n=775)	Mean, Median* for <i>Ladderer</i> = 1 Partition (n=255)	Mean, Median* for <i>Ladderer</i> = 0 Partition (n=520)	Difference p-value [†]
Assets (\$ Millions)	\$91.81 \$20.57	\$44.34 \$22.01	\$115.09 \$19.23	0.03 0.09
Age (Count)	4.76 3.00	3.04 2.00	5.60 3.00	<0.01 <0.01
VentureCapitalist (1:0 Indicator)	0.69 1.00	0.83 1.00	0.62 1.00	<0.01 <0.01
InsiderHoldings (Ratio)	0.27 0.00	0.16 0.00	0.32 0.03	<0.01 <0.01
Tech (1:0 Indicator)	0.93 1.00	0.96 1.00	0.91 1.00	0.02 0.02
Internet (1:0 Indicator)	0.23 0.00	0.34 0.00	0.17 0.00	<0.01 <0.01
SalesGrowth (Ratio)	2.76 0.48	4.66 0.52	1.83 0.48	<0.01 <0.01
UWRank (1:0 Indicator)	0.91 1.00	0.97 1.00	0.89 1.00	<0.01 <0.01
Bubble (1:0 Indicator)	0.65 1.00	0.97 1.00	0.49 0.00	<0.01 <0.01
In state (1:0 Indicator)	0.06 0.00	0.07 0.00	0.05 0.00	0.55 0.56
Capex/Assets (Ratio)	0.10 0.06	0.10 0.07	0.09 0.06	0.17 0.02
SmallProfit (1:0 Indicator)	0.01 0.00	0.01 0.00	0.02 0.00	0.55 0.55
Restatements (1:0 Indicator)	0.002 0.000	0.007 0.000	0.00 0.00	0.15 0.43

* Medians presented for continuous variables only. [†] Two-tail *p*-values are reported for t-test difference in means and a Wilcoxon two-sample test for differences in rank sums for continuous variables; and a chi-square test for differences in proportions for the 1:0 indicator variables.

Variable Definitions

Assets = Total assets (\$M) from the balance sheet preceding the IPO. *Ln Assets* is the natural log of *Assets*. (Source: Compustat)

Age = the number of years from the founding year to the IPO year. If the founding year is not reported by the data source, age is set to zero. (Source: SDC Platinum)

Bubble = 1:0 indicator for IPOs issued between December 31, 1998, and January 1, 2001. (Source: SDC Platinum)

Capex/Assets = Ratio of capital expenditures to total assets from the most recent fiscal year before the IPO. (Source: Compustat)

InsiderHoldings = Percentage of insider ownership before the IPO. (Source: SDC Platinum)

Instate = 1:0 indicator for IPOs domiciled in the state of New York. (Source: Compustat)

Internet = 1:0 indicator for IPOs coded by SDC as intending to conduct business via the Internet. (Source: SDC Platinum)

Restatements = 1:0 indicator for financial restatements issued three years subsequent to the IPO. (Source: Audit Analytics)

SalesGrowth = change in sales over the two most recent fiscal years before the IPO, expressed as a fraction of the previous year. If financial information is not available from year $t-2$, then the change in sales is computed using the next two years of fiscal data. (Source: Compustat)

SmallProfit = 1:0 indicator if $0 < ROA < 0.02$. (Source: Compustat)

Tech = 1:0 indicator for IPOs in a high technology industry as determined by SDC. (Source: SDC Platinum)

UWRank = 1:0 for underwriters ranked 6 or higher according to the Loughran and Ritter (2004) and updated by Jay Ritter at his website (<https://site.warrington.ufl.edu/ritter/ipo-data/>)

VentureCapitalist = 1:0 indicator for the presence of a venture capitalist on the IPO. (Source: SDC Platinum).

Table 3 provides the descriptive statistics for the observations used in the laddering probit model (hypothesis 2). All grand means and medians are statistically different from zero. The mean and median differences between *Small Profit* and *Restatements*, the audit quality variables of interest in the probit model, are not statistically different. The other two variables that are not statistically different between the ladderer and non-ladderer partitions are *Instate* and *Capex/Assets*. Of particular note for the assurance fee subsample and the probit laddering subsample is that most of the mean and median differences are statistically significant suggesting the two partitions have identified unique attributes in the IPO observations and that including the appropriate control variables is important for making inferences related to the variables of interest.

Results of Regression Analyses

Table 4 presents the results of the assurance fee regression analysis. The F-statistic for the overall model is significant at the 0.01 level and the adjusted R-square is 27 percent. Six of the eight control variables, including *LnAssets*, *InvenRec*, *LnProceeds*, *Loss*, *bubble*, and *UWRank*, are statistically significant at conventional levels with the expected sign. The coefficient on the *Ladderer* variable is positive and statistically significant at the 5 percent level

(0.11, t-statistic=2.12) in the fee regression, which is consistent with the auditor expending more effort to possibly detect and/or investigate a laddering arrangement (hypothesis 1).

Laddering Subsample			
Construct	Independent Variable (Proxy)		At Time of IPO (7/1/1996 to 11/5/2000). (Column A)
			Coef (t-stat)
Controls for size, risk, and complexity	Intercept	?	11.08 (136.9)***
	LnAssets	+	0.07 (4.99)***
	InvenRec	+	0.13 (1.88)*
	ROA	-	-0.00 (-0.03)
	LnProceeds	+	0.18 (8.01)***
	Loss	+	0.08 (1.87)*
	Internet	?	0.02 (0.31)
	Bubble	+	0.22 (5.28)***
	UWRank	+	0.26 (5.74)***
Laddering	Ladderer ¹	+	0.11 (2.12)**
F Value			578.48***
Adjusted R ²			0.27
No. of observations			1430

***, **, * indicates significance at the 1%, 5% and 10% levels on a two-tail basis.

¹ Ladderer = 1:0 indicator for IPO companies where the allocating underwriter requires customers to buy additional shares of their issuing client in the aftermarket as a condition for receiving shares at the offer price. IPOs in which Laddering allegedly occurred are listed in the Stipulation and Agreement Settlement for Civil Action No. 21 MS 92 (SAS).

Construct	Independent Variable (Proxy)		Laddering Subsample	
			At Time of IPO (7/1/1996 to 11/5/2000) Probit of Ladderer (Column A)	At Time of IPO (7/1/1996 to 11/5/2000) Probit of Ladderer (Column B)
			Coef (χ^2 stat)	Coef (χ^2 stat)
Controls for company characteristics, pricing incentives, and valuation incentives (see Liu and Ritter, 2010)	Intercept	?	-3.17 (47.6)***	-2.91 (43.98)***
	LnAssets	-	-0.01 (0.01)	0.00 (0.01)
	Log(1+age)	-	-0.12 (5.26)**	-0.13 (5.90)**
	VentureCapitalist	-	0.26 (3.66)*	0.24 (3.04)*
	InsiderHoldings	+	-0.00 (3.33)*	-0.00 (3.03)*
	Tech	+	0.41 (2.41)	0.32 (1.50)
	Internet	?	0.34 (7.62)***	0.34 (7.68)***
	SalesGrowth	+	0.02 (11.25)***	0.02 (10.86)***
	UWRank	+	0.66 (5.80)**	0.56 (4.40)**

	Bubble	+	1.89 (89.2) ^{***}	1.82 (90.9) ^{***}
	Instate	+	0.11 (0.26)	0.10 (0.20)
	Capex/Assets	+	0.44 (0.69)	0.39 (0.59)
Audit Quality	SmallProfit ¹	+	1.12 (5.80) ^{**}	
	Restatements ¹	+		4.86 (0.01)
	Likelihood Ratio		276.83 ^{***}	275.18 ^{***}
	Max-Rescaled R ²		0.41	0.41
	No. of observations		775	775

^{***}, ^{**}, ^{*}, indicates significance at the 1%, 5% and 10% levels for a Wald χ^2 test.

¹ *SmallProfit* = 1:0 indicator if $0 < ROA < 0.02$. *Restatements* = 1:0 indicator for financial restatements issued three years subsequent to the IPO. Both of these variables are indicators of low audit quality.

The probit analysis in Table 5 shows the impact of audit quality proxies on the probability of detecting a laddering arrangement. The overall probit models are significant at the 0.01 level based on a likelihood ratio test and the Max-Rescaled R-square for both models is 41 percent. Column A presents the estimation results with *Small Profit* as the proxy for audit quality and Column B presents the results with *Restatements* as the proxy for audit quality. With the exception of the coefficient sign on *Insider Holdings*, the estimated coefficients on the control variables are consistent with Liu & Ritter (2010). *Small Profit* is positive and significant, suggesting lower audit quality is positively associated with the probability of laddering. Although *Restatements*, as an alternative proxy for audit quality, is not significant in the same regression (Column B), the significance of *Small Profit* provides some evidence that is consistent with hypothesis 2 that a lower quality audit may be associated with a greater probability of a laddering expropriation. As indicated in the descriptive statistics, the variation in mean and median *Restatements* is low and could contribute to the lack of a significant coefficient in the probit model. In sum, the empirical evidence supports hypothesis 1, and weakly supports hypothesis 2.

CONCLUSION

In theory, auditors attest to whether the financial statements reflect the underlying economics of the firm. Auditors, however, may have incentives to play a protectionist role for investors that goes beyond verification of financial disclosures. These incentives derive from the auditor's concern for legal exposure and reputational concerns, and therefore, should be evident in the service level provided and the ability to prevent problems that are not necessarily related to the general attestation function.

We analyze a unique sample of observations where the IPO shares sold are known to have resulted in shareholder expropriation through laddering transactions. The evidence indicates that expropriating transactions are associated with higher assurance fees. We infer from this that auditors may have furnished higher assurance service levels to detect a possible expropriation. Relatedly, we find that the probability of a laddering arrangement is associated with lower audit quality. We infer from this that audit quality may affect the probability of detecting a potential expropriating transaction.

These findings occur in the market for new issues, a market that places greater demands on the auditor's level of assurance as well as the legal exposure on the engagement. Auditors, interested in avoiding legal penalties and protecting their reputation, have incentives beyond their formal attest responsibilities to detect expropriations by controlling decision-makers. The

results suggest that auditors may play a role to protect investors from inappropriate resource diversion.

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