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# **Compensation Consultant Fees and CEO Pay**

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# Compensation Consultant Fees and CEO Pay

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**ABSTRACT:** While compensation consultants are known to play an important role in the design of executive compensation contracts, evidence on the effect of consultant incentives on CEO pay is mixed. Using compensation consultant observations with mandatory fee disclosures, which a prior study identifies as an optimal pay setter, we examine whether CEO pay is associated with consultants' incentives to retain clients, measured by fees for executive compensation services. In contrast to previous studies that find no support for repeat business incentives, we find evidence that CEO pay is higher when consultants receive abnormally high fees, demonstrating a strong incentive to retain the client, and that this positive association occurs only in weakly governed firms. This finding highlights the importance of consultant incentives and corporate governance in executive compensation settings.

**JEL Classifications:** M12; G34; G38.

**Data Availability:** Data used in this study are publicly available.

**Keywords:** compensation consultant; consulting fee; executive compensation; corporate governance.

## I. INTRODUCTION

Chief executive officer (CEO) compensation has long been a subject of interest among regulators, market participants, and researchers, with numerous studies examining the factors that determine compensation levels and whether such compensation is optimal or excessive. However, the role that compensation consultants play in compensation decisions has received less attention due to data limitations. In this paper, we examine whether compensation consultants' incentives affect CEO pay, by using consulting fee data as measures of their monetary incentives.

In recent years, compensation consultants have played an increasingly important role in helping boards set executive compensation (henceforth, "EC") because of increased demand for companies to align executive pay with shareholder interests (Higgins 2007; Cadman, Carter, and Hillegeist 2010; Murphy and Sandino 2010; Armstrong, Ittner, and Larcker 2012). Compensation consultants often collect proprietary data on EC practices across industries and are experts on additional factors affecting compensation design, such as relevant regulations. Thus, compensation consultants can assist the compensation

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committee in designing an optimal compensation structure based not only on a firm's own performance but also on peer group performance and other important benchmarks (Brancato 2002; Cadman et al. 2010).

While compensation consultants may have resources and capabilities, whether or not they actually suggest optimal pay is a different question. Prior research suggests that compensation consultants could have two different incentives to recommend higher-than-appropriate CEO compensation (e.g., Waxman 2007; Murphy and Sandino 2010). First, the repeat business hypothesis suggests that compensation consultants could recommend higher CEO compensation to secure future EC fees from a client firm. Second, the cross-selling hypothesis argues that consultants could recommend higher CEO compensation to secure non-EC fees, for services such as employee pension plan design, particularly since the CEO holds the ultimate decision right with respect to non-EC services. Evidence on whether compensation consultants facing such incentives recommend more generous executive pay packages is mixed, with no study based on U.S. data finding support for the repeat business hypothesis (Conyon, Peck, and Sadler 2009; Cadman et al. 2010; Murphy and Sandino 2010; Armstrong et al. 2012). However, data limitations force these studies to use indirect proxies for consultants' conflicts of interest and are thus unable to capture the full implications of compensation consultant incentives.

We begin this study by re-examining whether consultants' repeat business and cross-selling incentives affect CEO pay levels. We use the fees paid for each type of service, which became publicly available in 2009 following the SEC's new fee disclosure requirement, as direct proxies of consultants' monetary incentives.<sup>1</sup> Using 952 EC fee observations (546 mandatory and 406 voluntary fee disclosures) from 2009 to 2014, we find strong empirical support for the repeat business hypothesis, suggesting that consultants receiving higher EC fees recommend higher total compensation in an effort to secure future engagements with clients. In addition, we model the determinants of EC fees to derive abnormal EC fees and analyze their relation to CEO pay. We find that the relation between abnormal EC fees and CEO pay is positive when EC fees are higher than expected, as high EC fees can increase consultants' incentives to recommend more generous pay in an effort to secure future EC engagements with the clients. However, in contrast to Murphy and Sandino (2010), but consistent with Conyon et al. (2009) and Cadman et al. (2010), we find no evidence that CEO pay is higher when non-EC fees are higher, providing no support for the cross-selling hypothesis.

More recently, Chu, Faasse, and Rau (2018) use the 2009 disclosure rule as a separating device distinguishing between rent extracting and optimal pay setting firms.<sup>2</sup> They suggest that, since the SEC's rule requires fee disclosure only when the same consultant provides both EC and non-EC services, firms using consultants to seek rent would switch to spun-off specialists to avoid fee disclosure while maintaining the rent extracting bond. However, firms using consultants to set CEO pay optimally have no such motives and stay with the same multi-service consultants. They also find that CEO pay is higher in firms that switch from a multi-service consultant to a related specialist consultant (*related switchers*) than in firms that stay with a multi-service consultant (*stayers*).

Our findings provide evidence that the 2009 disclosure rule change may not be a "perfect" device to distinguish between rent-seekers and optimal pay setters, as Chu et al. (2018) suggest. We argue that not all firms choosing to stay with a multi-service consultant (*stayers*) do so to set executive pay optimally. While some *stayers* may choose to stay with a multi-service consultant to enjoy the cross-learning benefits of receiving all HR service from a single consulting firm, others are likely to stay with their multi-service consultant to maintain a relationship with familiar consultants, given that only selected EC partners/advisors of the multi-service firms will move to a spun-off specialist firm. We test this using the *mandatory* fee disclosure sample firms that hire a consultant to provide both EC and non-EC services, which represent optimal pay setting firms as defined by Chu et al. (2018), since the vast majority of mandatory disclosures come from firms that stay with the same multi-service consultant. We find support for the repeat business hypothesis only in the weaker governance subsample, and the evidence is consistent with the idea that governance quality serves as another distinguishing device between efficient and opportunistic motives for *stayers* to remain with an existing multi-service consultant. Moreover, we find that the relation between abnormal EC fees and excess CEO pay is only significant for longer tenured consultants, lending further support to our argument. We thereby extend and complement the findings of Chu et al. (2018).<sup>3</sup> Lastly, results from a path analysis suggest that when consultants receiving abnormally high fees recommend overgenerous pay for their client CEOs, they, in return, face lower probability of turnover in the subsequent period.

<sup>1</sup> Most prior studies on the role of EC consultants in setting CEO pay rely on simple indicator variables utilizing the 2006 SEC requirement to disclose the *identity* of EC consultants (See Sections II and III).

<sup>2</sup> To address concerns about compensation consultants' potential conflicts of interest, in 2006 the SEC required firms to disclose whether they retain compensation consultants and whether such consultants are employed by the board or by firm management. The 2009 regulation strengthened the 2006 regulation by requiring firms to disclose fees when a consultant has been hired to provide both EC and non-EC services, if non-EC fees exceed \$120,000. Section II discusses the regulations in more detail.

<sup>3</sup> The lack of support for cross-selling hypothesis in our study may be due to adjustments multi-service consultants made in response to changes in the EC consulting market. They strengthened internal safeguards to ensure that their EC services are independent, including full disclosure of their business relationship, rigorous peer review/audit, and restrictions on cross-selling services by EC consultants (i.e., internal Chinese wall). These internal safeguards implemented by multi-service consulting firms are likely to drive the insignificant relation between non-EC fees and CEO pay in mandatory disclosure firms.

A sample selection issue exists in our sample due to the SEC's *asymmetric* disclosure rule that does not require fees to be disclosed when consultants only provide EC services, which potentially limits the generalizability of our findings. However, we believe our findings on repeat business incentives in the sample of firms retaining a same consultant for both EC and non-EC services have important implications for all public firms. Following the change in the disclosure rule in 2009 that triggered the emergence of pre-existing EC specialist consultants and spun-off specialist consultants as major players in the EC consulting market, most firms now engage a specialist consultant instead of a multi-service consultant for EC services. Unlike some arguments or perceptions that EC specialists are optimal pay setters, our findings suggest that EC specialists may still have conflicts of interest and strong repeat business incentives. That is, incentives to retain EC fees could induce economic dependence of an EC specialist on its clients, especially since an "average" EC fee from a client can make up a considerable portion of an EC specialist consultant's total revenue.

From a regulatory standpoint, our findings on repeat business incentives suggest that regulators should re-consider the current asymmetric fee disclosure rule that merely limits the cross-selling incentive, and require all firms to disclose EC fees regardless of whether they purchase non-EC services from the same consultant. As shown by [Chu et al. \(2018\)](#), firms are concerned about how shareholders interpret and respond to fee disclosures, thus mandatory EC fee disclosure for all firms could restrain rent-seeking behaviors by firms via consultants' repeat business conflicts of interest.

The remainder of the paper is organized as follows. Section II provides background on the SEC regulations, discusses the related literature, and states our formal hypothesis. Section III describes the sample and variables. Section IV discusses the empirical design and presents results on the association between compensation consultants' incentives and CEO pay. Section V concludes the paper.

## II. BACKGROUND, RELATED LITERATURE, AND HYPOTHESIS

### The Board, Management, and Compensation Consultants

The board's compensation committee often hires compensation consultants to help design pay packages for the CEO and other top executives ([Cadman et al. 2010](#); [Hermanson, Tompkins, Veliyath, and Ye 2012](#)). Consultants can provide expert advice to the committee on the issues related to EC plans, including peer and industry compensation benchmarking data and compensation trends. [Hermanson et al. \(2012\)](#) describe the board's consultant recruitment process after interviewing U.S. compensation committee members, and show that the compensation committee carefully considers many factors, such as relevant knowledge, experience, reputation, and fit when selecting consultants. However, EC fees are rarely mentioned as a major consultant selection criterion for the board, possibly because these are relatively small in amount ([Hermanson et al. 2012](#)). Their findings also suggest that while the EC consultant market is very competitive, and thus consultants can use a lowballing strategy to retain a client, the board does not simply select a consultant who offers the lowest fee.

From a consultant's standpoint, the incentive to compromise their independence from a client depends on *client importance*, similar to what the economic theory on auditor independence suggests ([DeAngelo 1981](#)). A consultant concerned about the possible loss of EC fees (and non-EC fees for multi-service consultants) could recommend generous pay packages for client CEOs if the economic loss resulting from the client's departure is substantial. At the same time, the fact that boards rarely mention EC fees as a major consultant selection criterion implies that charging a higher EC fee does not necessarily result in less chance of retention, raising the possibility that successful EC consultants could charge higher fees without fear of being replaced.

### The SEC Fee Disclosure Requirement

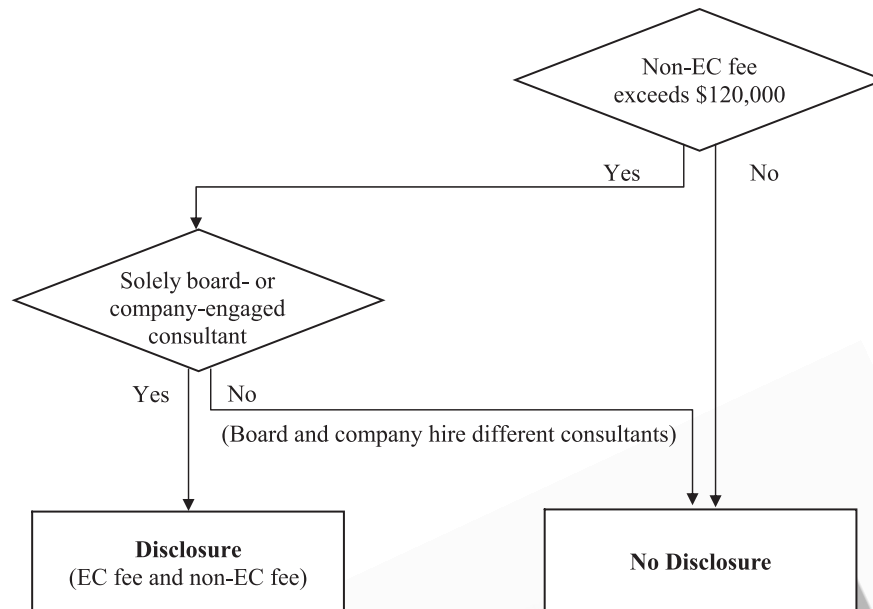
Coupled with a lack of formal policy regarding compensation consultant independence in U.S. public firms ([Hermanson et al. 2012](#)), concerns that the economic bond between consultants and clients could compromise compensation consultant independence led to a new SEC requirement to disclose the fees paid to compensation consultants.

Until 2006, U.S. companies were not required to disclose any information on the use of compensation consultants. However, in response to concerns about CEO rent extraction in firms that employ compensation consultants, starting in 2006 the SEC required companies to identify their EC consultants, describe the range of services provided by these consultants, and disclose whether the consultants were retained by the board's compensation committee or by the management ([SEC 2006](#)).

The SEC extended this regulation in December 2009 by requiring firms to disclose fees paid for all services provided (EC and non-EC), if the board receives advice from a consultant on CEO compensation issues, and if the same consultant or the consultant's integrated affiliates provide non-EC services for fees exceeding \$120,000. The rule also requires companies to disclose whether the company's management made or recommended the decision to engage a consultant or a consultant's non-EC services, and whether the board approves such non-EC services. If the board and the management endorse different compensation consultants, then no fee disclosure is required. General services involving non-discretionary plans not customized for the company (e.g., surveys) are excluded from the scope of EC service disclosure ([SEC 2009](#)). Figure 1 provides a summary of the 2009 SEC fee disclosure requirement.



**FIGURE 1**  
**2009 SEC Fee Disclosure Requirement**



The SEC requires companies to disclose fees paid for receiving both EC and non-EC services in certain circumstances. Specifically, if the board or the compensation committee engages its own compensation consultant to get advice or recommendations on EC design, and if the consultant or the consultant's integrated affiliates provide the company with services other than EC consulting, then disclosure of the fees related to all services provided is required, as long as the fees for non-EC services amount to more than \$120,000. If the board and the company's management engage separate compensation consultants, then no disclosure is required (SEC 2009).

### Impact of the SEC Fee Disclosure Requirement on the Compensation Consultant Industry

The 2009 SEC fee disclosure rule significantly impacted the compensation consultant market. The most notable change was that large, multi-service consultants, such as Towers Watson, Mercer, and Hewitt Associates, responded to the rules by setting up independent EC consulting firms, possibly in fear that the new rule would discourage clients from obtaining both EC and non-EC services from the same consultant.<sup>4</sup> Consistent with these concerns, the EC consultant market structure changed significantly after the new rule came into effect. While multi-service consultants were the dominant players in the market before 2009, pre-existing EC specialist consultants, such as Frederic W. Cook and Pearl Meyer & Partners, and newly spun-off specialist firms, such as Pay Governance and Meridian Compensation Partners, gained significant market share and became major players after 2009 (Appendix A).<sup>5</sup>

We note two major implications of the changes in the compensation consultant industry caused by the new fee disclosure rule. First, the 2009 fee disclosure requirement and resulting scrutiny of EC consultants' cross-selling incentives have likely made compensation consultants' less visible repeat business incentives more important than in the pre-fee disclosure regime, since the rule does not require fees to be disclosed when consultants only provide EC services. Second, the emergence of spun-off specialist firms after 2009 makes EC fees (as opposed to non-EC fees) particularly important to such consultants.<sup>6</sup>

<sup>4</sup> For example, Pay Governance LLC (Meridian Compensation Partners) was spun off from Towers Watson (Hewitt Associates) in early 2010 and Compensation Advisory Partners was spun off from Mercer in late 2009. Hewitt Associates and Aon Corporation merged in October 2010 to form Aon Hewitt.

<sup>5</sup> Appendix A shows the market shares of the top 20 EC consultants in our EC consultant sample ( $n = 6,154$ ). The SEC rule requiring disclosure of fees paid to compensation consultants initiated a significant change in the compensation consultant industry. The market share held by multi-service consultants fell sharply from 53.5 percent in 2009 to 24.2 percent in 2014 and existing EC specialist consultants together with spun-off specialists became the dominant players in the market.

<sup>6</sup> Although EC fees appear smaller than non-EC fees—the average annual EC fees for the samples used by Waxman (2007) and in our study being \$220,000 and \$166,000, respectively—they might be more important to EC specialist consultants as they might depend on specific clients for a large portion of their revenue. For example, Frederic W. Cook, Pay Governance LLC, and Meridian Compensation Partners have 73, 47, and 51 individual consultants, respectively, as of 2014. While these consulting firms' total revenues are not publicly available, if we apply the "talent and rewards" segment revenue per employee in Towers Watson's 2014 annual report (about \$230,000) to the number of consultants in each firm, we can estimate the 2014 total revenues of Frederic W. Cook, Pay Governance LLC, and Meridian Compensation Partners to be \$16,790,000, \$10,810,000, and \$11,730,000, respectively. This suggests that the potential loss of the average EC fee in our sample, \$166,000, could damage their business prospects considerably.

## Literature on Compensation Consultant Incentives and CEO Pay

A report by the Corporate Library in 2007 argues that executive pay levels are significantly higher in companies that retain external compensation consultants, and that such pay levels do not appear to be related to increased shareholder returns (Higgins 2007). In December 2007, the U.S. House of Representatives Committee on Oversight and Government Reform issued a report based on proprietary data from six leading compensation consultants that provided EC and non-EC services to Fortune 250 companies between fiscal years 2002 and 2006 (Waxman 2007). This report also suggests that compensation consultants' conflicts of interest are a concern, especially since non-EC fees are usually significantly greater than EC fees. In particular, the Waxman Report documents that the average annual EC (non-EC) fee for the sample is \$220,000 (over \$2.3 million), and that firms with higher non-EC to EC fees ratios have higher median executive pay.

Data resulting from the SEC's 2006 regulation requiring disclosure of compensation consultant engagement have inspired several studies on compensation consultants' conflicts of interest.<sup>7</sup> Murphy and Sandino (2010) examine the extent to which repeat business and cross-selling incentives influence compensation consultants' recommendations on CEO pay. To test for cross-selling incentives, they use an indicator variable for whether the firm also receives actuarial or other services from the consultant (for U.S. firms) and whether the firm voluntarily disclosed EC and non-EC fee information (for a small number of Canadian firms). They find evidence consistent with the cross-selling hypothesis that CEO pay is indeed higher when compensation consultants provide additional services, but find no evidence to support the repeat business hypothesis.

Cadman et al. (2010) also test for effects of cross-selling and repeat business incentives. They use three proxies for cross-selling incentives—namely, voluntary non-EC service disclosures made by companies, consultant engagement other than Fredrick W. Cook or Pearl Meyer (which provide EC services only), and significant non-audit services. In contrast to Murphy and Sandino (2010) and Waxman (2007), Cadman et al. (2010) fail to find widespread evidence of higher pay in firms that retain compensation consultants with greater cross-selling incentives. They also find no support for the repeat business hypothesis, using an indirect proxy for the firm's importance to the consultant.

Armstrong et al. (2012) investigate the effect of governance on the relationship between compensation consultant engagement and CEO pay. They find that CEO pay is higher in firms with weak corporate governance and that such firms are more likely to have hired compensation consultants. The authors further find that while the use of compensation consultants leads to higher CEO pay, this effect disappears when governance characteristics are considered, indicating that weak governance explains much of the higher pay in companies that hire consultants. A recent work by Murphy and Sandino (2019) also examines the relation between compensation consultants and high CEO pay and concludes the association is driven by firms with high and complex pay structure retaining consultants rather than consultants driving the increase in CEO pay.

Overall, aforementioned studies suggest that compensation consultants' repeat business incentives are not associated with CEO pay levels, while evidence on the effect of cross-selling incentives is mixed. Thus, in contrast to Higgins (2007) and Waxman (2007), studies based on data resulting from the SEC's 2006 regulation suggest that compensation consultants do not compromise their role as expert advisors, despite potential conflicts of interest. This finding is in line with work in the audit literature showing that the provision of non-audit services does not compromise auditor independence (Ashbaugh, LaFond, and Mayhew 2003; Chung and Kallapur 2003). However, while research on the effect of non-audit services on auditor independence shows that audit and non-audit fees best capture the explicit economic bond between auditors and clients (Ashbaugh et al. 2003; Chung and Kallapur 2003), the data used in compensation consultants' studies lack fee information and force them to rely on indirect proxies for conflicts of interest (typically a simple indicator variable). Thus, these studies fail to capture the full implications of compensation consultants' repeat business and cross-selling incentives.

## The 2009 Fee Disclosure Rule and Hypothesis Development

The most relevant study for our paper is Chu et al. (2018), who also use the 2009 disclosure rule as their research setting. Importantly, they use the disclosure rule as a separating device, distinguishing firms using consultants to extract rents (firms that switch to a spun-off EC specialist to avoid fee disclosure) from firms using consultants to set executive pay optimally (firms that stay with a multi-service consultant). They find that CEO pay is higher in firms that switch from a multi-service consultant to a related specialist consultant than in firms that stay with a multi-service consultant, and interpret the result as evidence that firms that previously retained "conflicted" consultants for rent-seeking purposes switch to specialist consultants

<sup>7</sup> Other studies on the effect of consultants on CEO pay use data from U.K. firms. Based on a sample of U.K. firms, Conyon et al. (2009) find little evidence that hiring compensation consultants who also supply non-EC services leads to higher CEO pay. Goh and Gupta (2010) provide evidence that consultant switching is associated with higher salary and less risky compensation, and Kabir and Minhat (2014) find that firms with multiple consultants offer their CEOs higher equity-based pay.

to avoid disclosure of consulting fees under the new regulation.<sup>8</sup> As we discussed in the previous section, the SEC's *asymmetric* disclosure rule does not require fees to be disclosed when consultants are hired only to provide EC services. Consequently, the vast majority of our base sample firms that are mandatorily required to disclose fees are likely to consist of firms using consultants to set executive pay optimally according to the [Chu et al. \(2018\)](#) framework.<sup>9</sup> Hence, the research setting makes it less likely for us to find any significant relation between fees and CEO pay.

However, we predict that not all firms choose to stay with a multi-service consultant to set executive pay optimally. While some *stayers* may do so to enjoy the cross-learning benefits of receiving all HR services from a single consulting firm, other *stayers* are likely to stay with existing multi-service firms to maintain the relationship with familiar individual consultants. Indeed, many multi-service consulting firms announced that only a selected number of EC partners or advisors of the multi-service firms moved to their spun-off specialist firms.<sup>10</sup> In other words, the disclosure rule change may not be a “perfect” separating device as [Chu et al. \(2018\)](#) argue and there could be a significant “within group” variation in terms of motives for staying with an existing multi-service consultant.

[Hermanson et al. \(2012\)](#) suggest that while the compensation committee retains full decision rights over hiring consultants, management is often involved in the consultant identification and selection process. Moreover, management typically selects the consultant for non-EC matters (sometimes the same EC consultant), such as firm-wide compensation, benefits, and actuarial services ([Cadman et al. 2010](#); [Hermanson et al. 2012](#)). Consequently, we argue that the extent to which CEOs can influence the compensation committee's decision to retain a particular compensation consultant could serve as another separating device for *stayers*, distinguishing between efficient and opportunistic motives for staying with a multi-service consultant. This argument leads us to predict that the relation between fees and CEO pay in our mandatory sample will be more pronounced in weak governance firms.

Using data resulting from the SEC's 2009 fee disclosure requirement, we are able to re-examine the effect of consultants' incentives on CEO pay.<sup>11</sup> In particular, we test whether compensation consultants' conflicts of interest, as proxied by the actual fees paid for their services, are positively associated with CEO pay levels. Our main hypothesis is as follows:

**H1:** The fees paid to compensation consultants are positively related to CEO pay levels.

### III. SAMPLE, VARIABLES, AND SUMMARY STATISTICS

#### Sample Construction

We hand-collect compensation consultant fees paid for EC and non-EC services from S&P 1500 companies' annual proxy statements (DEF-14A) for fiscal years 2009 to 2014. The initial hand-collected sample has 8,748 available firm-year observations, from which we omit 1,563 observations due to missing variables from merging the databases. Next, we remove 1,031 observations without a compensation consultant engagement. Of the 6,154 firm-year observations involving the use of compensation consultants, 546 firm-year observations include both EC and non-EC consulting services with non-EC service fees exceeding \$120,000—that is, observations subject to mandatory EC and non-EC fee disclosure. We note that another 406 (100) observations have voluntary EC (non-EC) fee disclosures. Our final sample thus comprises 952 firm-year observations of EC fee disclosures and 646 observations of non-EC fee disclosures. Panels A and B of Table 1 summarize the sample selection process.

We also categorize the 952 EC fee observations by consultant switch type, extending the classification by [Chu et al. \(2018\)](#). Table 1, Panel C shows that for 80 percent of 546 mandatory disclosures the firm stayed with the same multi-service

<sup>8</sup> One potential problem with the “*stayer*” classification in [Chu et al. \(2018\)](#) is that it also includes client firms that stay with a multi-service consulting firm that did not set up a specialist spin-off firm after the rule (e.g., Radford, McLagan, Hay Group, Deloitte, PwC, and E&Y). Hence, it is not possible for them to switch to a spun-off firm. In addition, not all firms engaging a multi-service consultant purchase non-EC service from the same provider, and they need not switch to a related spun-off firm to avoid fee disclosure.

<sup>9</sup> However, our mandatory fee disclosure sample could include the following cases that do not exactly match the definition of “*stayer*” in [Chu et al. \(2018\)](#): (1) firms that had no EC consultant but hired a multi-service consultant after 2009; (2) firms that switched from a non-related specialist to a multi-service consultant after 2009; and (3) firms that switched to a different multi-service consultant after 2009. See the sample composition by consultant switch type in Table 1, Panel C.

<sup>10</sup> When Towers Watson announced the partial spin-off of its executive compensation consulting business in 2010, the Global Head of EC at Towers Watson, Doug Friske, said that the SEC fee disclosure rule and political environment were pressuring some clients to avoid the issue entirely by moving to completely independent advisors. He mentioned two merits of the spin-off: (1) the spin-off keeps clients' best interests in mind—they can continue to work with their current executive compensation advisor and team, without compromising the appearance of independence; (2) it creates opportunities for multi-service consultants to expand relationships with clients who were previously concerned about independence issues.

<sup>11</sup> For example, numerous auditing studies have examined whether non-audit services compromise auditor independence since the SEC's audit and non-audit fee disclosure requirement was introduced in 2001 (e.g., [Frankel, Johnson, and Nelson 2002](#); [Ashbaugh et al. 2003](#); [Chung and Kallapur 2003](#)).

**TABLE 1**  
**Sample Selection**

**Panel A: Sample Selection—Observations with Compensation Consultants**

Initial Sample from S&P 1500 for Fiscal Years 2009 to 2014	Firm-Year Observations	Unique Firm
S&P 1500 firms (initial DEF-14A hand-collected sample from FY 2009 to FY 2014)	8,748	
Deduct firms with missing variables due to database merging	(1,563)	
Deduct firms without compensation consultant	(1,031)	
EC consultants sample	6,154	1,272
Deduct firms without EC fee	(5,202)	
EC fee sample	952	313
Mandatory fee disclosures	546	223
Voluntary fee disclosures	406	148

**Panel B: Sample Selection—EC Fee and Non-EC Fee Observations**

Consultant Engagement Condition	Total (a) + (b) + (c) + (d)	No Disclosure (a)	EC Fee Only (b)	Non-EC Fee Only (c)	Both EC and Non-EC Fees (d)	Total EC Fee (b) + (d)	Total Non-EC Fee (c) + (d)
(1) Non-EC fee not exceeding \$120,000 or multiple consultants (voluntary disclosure case)	5,608	5,193	315	9	91	406	100
(2) Solely board- or company-engaged consultant (mandatory disclosure case)	546	—	—	—	546	546	546
	6,154	5,193	315	9	637	952	646

**Panel C: Sample Composition by Consultant Switch Type**

Switch Type	Total (a) + (b) + (c) + (d) + (e) + (f)	Stayed w/ the Same Multi-Service Firm (a)	Initially Engaged w/ Multi-Service Firm (b)	Switched to Multi-Service Firm (c)	Switched to Related Specialist (d)	Switched to Non-Related Specialist (e)	Engaged w/ Multi-Service Firm at Least Once (a) + (b) + (c) + (d) + (e)	Always Engaged w/ Specialist (f)
(1) Mandatory Disclosure	546	439	46	61	—	—	546	—
(2) Voluntary Disclosure	406	124	18	30	44	45	261	145
Total	952 (100%)	563 (59.1%)	64 (6.7%)	91 (9.6%)	44 (4.6%)	45 (4.7%)	807 (84.8%)	145 (15.2%)

(continued on next page)

consultant throughout the sample period, which are classified as *stayers* in line with [Chu et al. \(2018\)](#). In 46 disclosures, the firm hired a multi-service consultant for the first time during our sample period, and in the remaining 61 mandatory disclosures, the firm switched from either a different multi-service or a specialist consultant. Of 406 voluntary disclosures, 261 observations are categorized as one of five consultant switch categories (*stayers*, initially engaged with a multi-service consultant, switched to a multi-service consultant, *related switchers*, or non-related switchers), while 145 observations do not fall into the five switch types as they are firm-year observations for firms that always engaged a specialist consultant.<sup>12</sup>

<sup>12</sup> One hundred forty-five voluntary disclosures comprise 122 *stayers* with the same specialist throughout the sample period and 23 switchers from a specialist to another specialist at one point.



TABLE 1 (continued)

## Panel D: Sample Composition by EC Consultant Engagement

Type	Definition	# Obs. (%)	# Obs. w/ Mandatory EC Fee Disclosure (%)	Mandatory EC and Non-EC Fee Disclosure if Non-EC Fee Paid to a EC Consultant is More than \$120,000 <sup>a</sup>	Board Engagement	Multiple Consultants
I	Only one consultant engaged by committee	893 (93.8%)	526 (96.3%)	Yes	Yes	No
II	Multiple consultants engaged by committee	10 (1.1%)	8 (1.5%)	Yes	Yes	No
III	Only one consultant engaged by management	15 (1.6%)	12 (2.2%)	Yes	No	No
IV	Multiple consultants engaged by management	—	—	Yes	No	No
V	Additional consultant engaged by management, primary consultant engaged by committee	34 (3.6%)	—	No	No	Yes
Total		952	546			

The sample consists of 952 firm-year observations of S&P 1500 firms for the fiscal years 2009–2014. S&P 1500 firms are selected as of fiscal year 2014. Data on consultants were hand-collected from companies' proxy statements.

<sup>a</sup> If the non-EC fees paid to a firm's EC consultant do not exceed \$120,000, fee disclosure is not required.

Panel D of Table 1 summarizes the sample composition according to five types of consultant engagement. We find that 4 percent of the EC fee sample firms retained multiple consultants where the compensation committee hired the primary consultant and firm management hired an additional consultant (Type V). The vast majority of our sample (95 percent of the EC fee sample and 98 percent of the mandatory disclosures) comprises cases in which the firm did not explicitly state that a consultant worked for the management or did not state that the management separately engaged an additional consultant (Types I and II). We refer to these cases as board-only engagements.<sup>13</sup> Finally, 2 percent of our sample describes consultants as working exclusively for the management.<sup>14</sup> Appendix B provides an example of compensation consultant disclosure and describes how fees and consultant types are categorized.

## Proxies for Compensation Consultants' Incentives

The key independent variables in our analyses are proxies for compensation consultants' incentives. We construct these proxies following prior literature on compensation consultants and auditor independence. First, we use fees paid for EC services (*EC Fee*) to test the repeat business hypothesis. We expect higher EC fees to increase consultants' incentives to secure reappointment by recommending higher CEO pay. Similarly, in line with Kinney and Libby (2002) and Ashbaugh et al. (2003), we use non-EC fees (*NEC Fee*) to test the cross-selling hypothesis. We expect higher non-EC fees to increase consultants' incentives to recommend excessive CEO pay, since CEOs retain the decision rights to select or change non-EC service providers. We also test for the effect of total fees (*Total Fee*), which is the sum of EC and non-EC fees, as Ashbaugh et al. (2003) argue that total fees best capture the economic bond between a service-provider and its client. Following Waxman (2007), Cadman et al. (2010), and Murphy and Sandino (2010), we use the ratio of non-EC to EC fees (*Fee Ratio*) as an alternative proxy for consultants' cross-selling incentives. The fee ratio captures the relative value of EC and non-EC services provided by a consultant to its client.

<sup>13</sup> In comparison, Murphy and Sandino (2010) define board-only engagements more narrowly as cases in which the consultant reports only to the board.

<sup>14</sup> Murphy and Sandino (2010) show that only 41 percent of compensation consultants work exclusively for the compensation committee or the board rather than for the management.

In an attempt to test the repeat business hypothesis using a more powerful measure, we next construct a measure of abnormal EC fees (*Residual*) by estimating the expected level of EC fees (see Section IV). Kinney and Libby (2002) suggest that abnormal fees, which reflect revenue above the level implied by firms' economic and governance characteristics, could be viewed as bribes, and hence could better capture the economic rents arising from the auditor-client relationship than actual fees (DeFond, Raghunandan, and Subramanyam 2002; Choi, Kim, and Zang 2010; Hope and Langli 2010; Kanagaretnam, Krishnan, and Lobo 2010). We also define positive and negative abnormal EC fees separately to test how higher- versus lower-than-expected fees affect consultants' compensation recommendations. Abnormally high EC fees would correspond to revenues that consultants receive above levels consistent with their effort, thus increasing their incentives to secure repeat business from the client firms.

### Summary Statistics

Table 2 reports descriptive statistics for our sample and Appendix C provides detailed definitions of all variables used in the study. We winsorize all continuous variables at the top and bottom 1 percentiles to mitigate the concerns on effect of outliers or data error. In our sample, 546 firm-year observations are mandatory disclosures. Their mean disclosed EC and non-EC fees are \$177,000 and \$1,651,000, respectively,<sup>15</sup> with the mean *Fee Ratio* being about 13. In contrast, the average *EC Fee* (*NEC Fee*) reported in the Waxman Report is \$220,000 (\$2,300,000) for Fortune 250 firms between 2002 and 2006. The report's mean values for both *EC Fee* and *NEC Fee* differ from those in our sample because our sample encompasses both small and large companies over a more recent period. Additionally, as discussed above, incentives regarding the disclosure of *EC Fee* and *NEC Fee* after the SEC's 2009 rule enhancement could affect the sample composition.

## IV. RESEARCH DESIGN AND RESULTS

### Empirical Design

To examine the impact of compensation consultants' incentives on CEO pay levels, we regress CEO total compensation on various proxies for consultants' incentives (*CC Variable*) as well as firm, CEO, and compensation consultant characteristics that may also influence CEO pay. The regression model is as follows:<sup>16</sup>

$$\begin{aligned} \text{CEO Total Pay}_t = & \alpha_0 + \alpha_1 \text{CC Variable}_t + \alpha_2 \ln(\text{Mve})_t + \alpha_3 \text{Leverage}_t + \alpha_4 \text{Btm}_t + \alpha_5 \text{SP500}_t + \alpha_6 \text{Adjusted Roa}_t + \alpha_7 \text{Loss}_t \\ & + \alpha_8 \text{Return}_t + \alpha_9 \text{Return}_{t-1} + \alpha_{10} \text{Return Volatility}_t + \alpha_{11} \text{Chairman CEO}_t + \alpha_{12} \ln(\text{CEO Tenure})_t \\ & + \alpha_{13} \text{Institutional Ownership}_t + \alpha_{14} \ln(\# \text{Analyst Following})_t + \alpha_{15} \text{Foreign Operations}_t + \alpha_{16} \text{Switch}_t \\ & + \alpha_{17} \text{Board Engagement}_t + \text{Fixed Effects} + e, \end{aligned} \quad (1)$$

where *CC Variable*<sub>*t*</sub> is *EC Fee*<sub>*t*</sub>, *NEC Fee*<sub>*t*</sub>, *Total Fee*<sub>*t*</sub>, or *Fee Ratio*<sub>*t*</sub>.

We obtain CEO pay and CEO characteristics from the Execucomp database.<sup>17</sup> *CEO Total Pay* (TDC1 in Execucomp) consists of salary, bonus, any non-equity incentive plan, grant-date fair value of option and stock awards, deferred compensation, and other remaining compensation. Following the literature (e.g., Core, Holthausen, and Larcker 1999), we include standard firm-level determinants of CEO pay obtained from the Compustat and CRSP databases: both market value of equity (*Mve*) and indicator variable *SP500* to proxy for firm size, leverage ratio (*Leverage*) captures a firm's financial condition, book-to-market ratio (*Btm*) measures a firm's growth opportunities, and foreign operation dummy captures a firm's operational complexity (*Foreign Operation*). We also include number of analysts following (*#Analyst Following*) and shares held by institutional investors (*Institutional Ownership*) to incorporate the effect of external monitoring on CEO pay. We measure a firm's accounting performance using industry-adjusted return on assets (*Adjusted Roa*) and negative net income (*Loss*), and proxy for stock price performance using stock returns (*Return*). We additionally include stock return volatility (*Return Volatility*) as a proxy for a noisier environment.

<sup>15</sup> As shown in Table 2, 646 firm-year observations disclose non-EC fees averaging \$1,431,000. The mean EC fee for the 952 full EC fees sample is \$166,000, which amounts to 12 percent of the average non-EC fee.

<sup>16</sup> In all regressions in this study, we corrected standard errors for heteroscedasticity using Huber-White robust standard errors clustered by firm, and controlled for industry fixed effects based on the two-digit Standard Industrial Classification (SIC) code industry classification. All the results remain unchanged if we replace one-way clustering (by firm) and year fixed effects with a two-way clustering method (by both year and firm). Our results are also robust when we replace the two-digit SIC codes with the Fama and French (1997) 48-industry classification and when we estimate the regressions without winsorization.

<sup>17</sup> We use the natural log of the CEO pay variables (*CEO Total Pay*, *CEO Cash Pay*, and *CEO Equity Pay*), consulting fee variables (*EC Fee*, *NEC Fee*, and *Total Fee*), and *#Analyst Following* by adding 1 to the original values.

**TABLE 2**  
**Descriptive Statistics**

<b>Variable</b>	<b>n</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Q1</b>	<b>Median</b>	<b>Q3</b>
<b>Consultant Characteristics (Mandatory Disclosures):</b>						
<i>EC Fee (\$K)</i>	546	177	126	81	147	240
<i>NEC Fee (\$K)</i>	546	1,651	2,509	300	681	1,789
<i>Total Fee (\$K)</i>	546	2,116	4,814	437	879	2,016
<i>Fee Ratio</i>	546	13.45	24.09	2.42	5.13	12.65
<i>Residual</i>	546	0.00	0.41	-0.17	0.00	0.21
<i>Multiple Consultants</i>	546	0.00	0.00	0.00	0.00	0.00
<i>Board Engagement</i>	546	0.98	0.15	1.00	1.00	1.00
<i>Big Consultants</i>	546	0.83	0.38	1.00	1.00	1.00
<i>#Cda Words</i>	546	16,223	4,542	12,761	15,837	19,231
<i>Switch</i>	546	0.04	0.20	0.00	0.00	0.00
<i>Herfindahl Index</i>	546	0.20	0.10	0.13	0.17	0.21
<i>Consultant Tenure</i>	546	5.02	2.16	4.00	5.00	6.00
<b>Consultant Characteristics (Full Sample):</b>						
<i>EC Fee (\$K)</i>	952	166	126	66	136	230
<i>NEC Fee (\$K)</i>	646	1,431	2,377	210	532	1,514
<i>Total Fee (\$K)</i>	637	1,871	4,505	350	733	1,706
<i>Fee Ratio</i>	637	11.97	23.14	1.83	4.34	10.59
<i>Residual</i>	952	0.00	0.55	-0.29	0.00	0.34
<i>Multiple Consultants</i>	952	0.04	0.19	0.00	0.00	0.00
<i>Board Engagement</i>	952	0.95	0.22	1.00	1.00	1.00
<i>Big Consultants</i>	952	0.74	0.44	0.00	1.00	1.00
<i>#Cda Words</i>	952	16,176	4,712	12,746	15,941	19,406
<i>Switch</i>	952	0.06	0.23	0.00	0.00	0.00
<i>Herfindahl Index</i>	952	0.20	0.10	0.14	0.17	0.21
<i>Consultant Tenure</i>	952	4.94	2.25	3.50	5.00	7.00
<b>CEO Characteristics:</b>						
<i>CEO Total Pay (\$K)</i>	952	7,334	5,607	3,270	6,060	9,668
<i>CEO Cash Pay (\$K)</i>	952	2,780	2,100	1,371	2,236	3,486
<i>CEO Equity Pay (\$K)</i>	952	4,218	3,793	1,331	3,352	5,942
<i>CEO Pay Mix</i>	952	0.75	0.19	0.71	0.81	0.87
<i>Chairman CEO</i>	952	0.61	0.49	0.00	1.00	1.00
<i>CEO Old</i>	952	0.04	0.21	0.00	0.00	0.00
<i>CEO Tenure</i>	952	7.39	5.40	3.00	6.00	10.00
<i>CEO Ownership</i>	952	0.01	0.03	0.00	0.00	0.01
<i>New CEO</i>	952	0.10	0.30	0.00	0.00	0.00
<b>Firm Characteristics:</b>						
<i>Mve (\$M)</i>	952	14,955	28,025	1,665	4,776	14,027
<i>Leverage</i>	952	0.60	0.20	0.47	0.59	0.73
<i>Btm</i>	952	0.57	0.34	0.32	0.50	0.76
<i>SP500</i>	952	0.50	0.50	0.00	1.00	1.00
<i>Adjusted Roa</i>	952	0.01	0.06	-0.02	0.00	0.03
<i>Loss</i>	952	0.10	0.30	0.00	0.00	0.00
<i>Return</i>	952	0.21	0.34	0.01	0.17	0.35
<i>Return Volatility</i>	952	0.11	0.04	0.08	0.10	0.13
<i>Sales Growth</i>	952	0.05	0.17	-0.04	0.04	0.11
<i>Foreign Operation</i>	952	0.63	0.48	0.00	1.00	1.00
<i>#Biz Segment</i>	952	3.63	2.36	1.00	4.00	5.00
<i>#Employees (K)</i>	952	16.02	1.60	15.02	16.09	17.09
<i>Institutional Ownership</i>	952	0.40	0.36	0.13	0.13	0.80
<i>Independent IO</i>	952	0.37	0.35	0.12	0.12	0.76
<i>Blockholder Ownership</i>	952	0.08	0.10	0.04	0.04	0.11

(continued on next page)

TABLE 2 (continued)

Variable	n	Mean	Standard Deviation	Q1	Median	Q3
<i>IO Concentration</i>	952	0.01	0.01	0.01	0.01	0.02
<i>#Analyst Following</i>	952	8.29	9.24	0.00	5.08	15.71
<i>Voting Dissent</i>	704	0.10	0.12	0.03	0.05	0.11
Board and Compensation Committee Characteristics:						
<i>Board Size</i>	952	10.21	2.25	9.00	10.00	12.00
<i>Board Independence</i>	952	0.81	0.10	0.75	0.83	0.89
<i>Board Busy</i>	952	0.25	0.17	0.11	0.22	0.38
<i>Board Old</i>	952	0.24	0.16	0.11	0.22	0.36
<i>Committee Size</i>	952	3.99	1.10	3.00	4.00	5.00
<i>Committee Independence</i>	952	0.96	0.20	1.00	1.00	1.00
<i>Committee Busy</i>	952	0.29	0.25	0.00	0.25	0.50
<i>Committee Old</i>	952	0.27	0.25	0.00	0.25	0.40
<i>Committee Meet</i>	952	6.40	2.50	5.00	6.00	7.00
<i>Committee Tenure</i>	952	9.90	3.99	7.00	9.33	12.20

The sample consists of 952 firm-year observations of S&P 1500 firms for the fiscal years 2009 to 2014. Data on consultants were hand-collected from companies' proxy statements. The CEO characteristics were obtained from Execucomp, firm financial data were obtained from Compustat and the Center for Research in Security Prices (CRSP), institutional holdings data were obtained from the FactSet/LionShares database, analyst data were obtained from I/B/E/S, and board and compensation committee variables were obtained from Institutional Shareholder Services (ISS, formerly RiskMetrics). All continuous variables are winsorized at the 1st and 99th percentiles.

Variable definitions are provided in Appendix C.

Turning to CEO characteristics, we first include an indicator variable capturing whether the CEO is also the chair of the board of directors (*Chairman CEO*) to control for the extent to which the CEO could influence his or her own compensation decisions. We also include CEO tenure (*CEO Tenure*) to examine whether compensation varies with a CEO's length of service at the firm.

Finally, we control for compensation consultant characteristics that could affect CEO pay. Specifically, we include an indicator of whether a firm engages a different consultant from the one in the previous year (*Switch*),<sup>18</sup> to consider the effect of change in the consultant industry and the firm's decision to engage a different consultant on CEO pay. In addition, because managerial influence over consultant appointments could be related to firms' incentives to avoid disclosing fees and to conceal higher CEO pay (Cadman et al. 2010; Murphy and Sandino 2010), we include an indicator for whether a consultant is engaged by the committee (*Board Engagement*).

### Impact of Compensation Consultant Incentives on CEO Pay

Table 3 presents the results from estimating Equation (1) using *CEO Total Pay* as the dependent variable. The results presented in Columns (1) through (4) are based on the 546 observations associated with the mandatory fee disclosures, while Columns (5) to (8) present the results using the full EC fees sample.<sup>19</sup>

In Column (1), we report results using EC fees as the independent variable. The results indicate that higher *EC Fee* is associated with higher *CEO Total Pay*.<sup>20</sup> The magnitude of the coefficient of *EC Fee* (0.061) suggests that if *EC Fee* increases

<sup>18</sup> We define the indicator variable *Switch* to be 1 if the primary consultant is switched to another unrelated consultant and 0 otherwise. By this definition, changes in consultant engagement through mergers and acquisitions (M&As) (e.g., Towers Perrin's and Watson Wyatt's merger into Towers Watson), spin-offs (e.g., Pay Governance's spin-off from Towers Watson), or temporary disengagement (e.g., the firm and the consultant's agreement on periodical engagement such as retaining the consultant once every two years) are not considered a switch in our study. Chu et al. (2018) also identify switches to another non-related consultant or related spun-off specialist but assume non-immediate effects and roll the indicator variable into every subsequent year once a switch occurs.

<sup>19</sup> Our sample is subject to multiple sample selection issues. First, we removed from our sample firms that did not retain compensation consultants during our sample period. Second, firms that must disclose fee information (i.e., their EC consultants also provide non-EC services, and these non-EC services exceed \$120,000) might be fundamentally different from other firms. Third, our sample includes a substantial number of firms that disclosed EC and non-EC fees, but were not mandated to do so. We acknowledge our inability to address these multiple selection issues simultaneously.

<sup>20</sup> We also test whether our results are driven by financial firms, which are fundamentally different from non-financial firms in terms of CEO pay, CEO characteristics, firm characteristics, and compensation committee characteristics. In untabulated results, our main findings hold when excluding financial firms from the sample. Specifically, the association between *EC Fee* and *CEO Total Pay* remains significant at the 1 percent level and the variables related to the cross-selling hypothesis are insignificant.



TABLE 3  
Impact of Compensation Consultant Incentives on CEO Pay

Dependent Variable = <i>ln(CEO Total Pay)<sub>t</sub></i> Independent Variable = ( <i>CC Variable</i> )	Mandatory Disclosure				Full Sample			
	(1) <i>ln(EC Fee)<sub>t</sub></i>	(2) <i>ln(NEC Fee)<sub>t</sub></i>	(3) <i>ln(Total Fee)<sub>t</sub></i>	(4) <i>Fee Ratio<sub>t</sub></i>	(5) <i>ln(EC Fee)<sub>t</sub></i>	(6) <i>ln(NEC Fee)<sub>t</sub></i>	(7) <i>ln(Total Fee)<sub>t</sub></i>	(8) <i>Fee Ratio<sub>t</sub></i>
<i>CC Variable</i>	0.061** (2.08)	-0.006 (-0.23)	0.003 (0.10)	-0.001 (-0.87)	0.118*** (4.17)	0.017 (0.94)	0.037 (1.41)	-0.000 (-0.52)
<i>ln(Mve)<sub>t</sub></i>	0.450*** (11.95)	0.466*** (10.64)	0.460*** (10.45)	0.468*** (12.15)	0.419*** (13.03)	0.439*** (11.53)	0.430*** (10.59)	0.453*** (12.10)
<i>Leverage<sub>t</sub></i>	0.379** (1.99)	0.453** (2.27)	0.441** (2.17)	0.448** (2.37)	0.416*** (2.79)	0.471** (2.52)	0.444** (2.30)	0.508*** (2.77)
<i>Btm<sub>t</sub></i>	0.175 (1.37)	0.192 (1.43)	0.187 (1.38)	0.193 (1.48)	0.189* (1.96)	0.160 (1.38)	0.157 (1.33)	0.180 (1.53)
<i>SP500<sub>t</sub></i>	-0.051 (-0.50)	-0.056 (-0.53)	-0.050 (-0.48)	-0.057 (-0.54)	-0.013 (-0.17)	-0.038 (-0.38)	-0.033 (-0.31)	-0.060 (-0.57)
<i>Adjusted Roa<sub>t</sub></i>	-0.521 (-1.16)	-0.499 (-1.11)	-0.479 (-1.07)	-0.519 (-1.17)	-0.563 (-1.41)	-0.293 (-0.65)	-0.265 (-0.59)	-0.341 (-0.76)
<i>Loss<sub>t</sub></i>	-0.127 (-1.56)	-0.120 (-1.43)	-0.117 (-1.40)	-0.124 (-1.49)	-0.128* (-1.68)	-0.105 (-1.26)	-0.104 (-1.25)	-0.118 (-1.41)
<i>Return<sub>t</sub></i>	-0.023 (-0.25)	-0.029 (-0.31)	-0.025 (-0.28)	-0.029 (-0.31)	-0.041 (-0.56)	-0.034 (-0.41)	-0.025 (-0.29)	-0.037 (-0.42)
<i>Return<sub>t-1</sub></i>	0.022 (0.55)	0.025 (0.63)	0.027 (0.68)	0.024 (0.60)	0.104** (2.16)	0.058 (1.51)	0.058 (1.44)	0.053 (1.32)
<i>Return Volatility<sub>t</sub></i>	1.687* (1.69)	1.676* (1.69)	1.653* (1.66)	1.747* (1.78)	0.176 (0.19)	1.369 (1.37)	1.250 (1.20)	1.447 (1.42)
<i>Chairman CEO<sub>t</sub></i>	0.062 (0.73)	0.068 (0.79)	0.068 (0.79)	0.067 (0.78)	0.059 (1.00)	0.084 (1.08)	0.086 (1.09)	0.086 (1.09)
<i>ln(CEO Tenure)<sub>t</sub></i>	0.010 (0.25)	0.010 (0.25)	0.010 (0.26)	0.009 (0.24)	0.011 (0.39)	0.010 (0.30)	0.009 (0.25)	0.008 (0.23)
<i>Institutional Ownership<sub>t</sub></i>	-0.016 (-0.19)	-0.021 (-0.25)	-0.021 (-0.24)	-0.018 (-0.22)	0.064 (0.89)	0.025 (0.33)	0.026 (0.33)	0.025 (0.31)
<i>ln(#Analyst Following)<sub>t</sub></i>	0.002 (0.08)	-0.000 (-0.01)	-0.001 (-0.03)	-0.000 (-0.00)	-0.009 (-0.48)	-0.002 (-0.10)	-0.003 (-0.13)	0.002 (0.08)
<i>Foreign Operation<sub>t</sub></i>	0.097 (1.00)	0.111 (1.14)	0.106 (1.10)	0.116 (1.16)	0.083 (1.11)	0.116 (1.34)	0.108 (1.22)	0.135 (1.49)
<i>Switch<sub>t</sub></i>	0.086 (0.74)	0.081 (0.70)	0.083 (0.72)	0.081 (0.71)	-0.010 (-0.15)	0.044 (0.42)	0.046 (0.44)	0.046 (0.44)
<i>Board Engagement<sub>t</sub></i>	-0.043 (-0.27)	-0.007 (-0.04)	-0.003 (-0.02)	-0.010 (-0.06)	-0.236** (-2.40)	-0.211** (-2.05)	-0.213** (-2.06)	-0.212** (-2.08)
Intercept	2.393*** (4.44)	2.967*** (6.23)	2.906*** (5.94)	2.866*** (5.88)	2.546*** (6.79)	4.584*** (10.76)	4.461*** (10.04)	4.594*** (10.39)

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TABLE 3 (continued)

Dependent Variable = $\ln(\text{CEO Total Pay})_t$ Independent Variable = $(\text{CC Variable})$	Mandatory Disclosure				Full Sample			
	(1) $\ln(\text{EC Fee})_t$	(2) $\ln(\text{NEC Fee})_t$	(3) $\ln(\text{Total Fee})_t$	(4) $\text{Fee Ratio}_t$	(5) $\ln(\text{EC Fee})_t$	(6) $\ln(\text{NEC Fee})_t$	(7) $\ln(\text{Total Fee})_t$	(8) $\text{Fee Ratio}_t$
Fixed Effects	Year and Industry	Year and Industry	Year and Industry	Year and Industry	Year and Industry	Year and Industry	Year and Industry	Year and Industry
No. of Observations	546	546	546	546	952	646	637	637
Adjusted R <sup>2</sup>	0.687	0.684	0.684	0.685	0.686	0.689	0.689	0.687

\*, \*\*, \*\*\* Indicate 10 percent, 5 percent, and 1 percent significance levels for two-tailed t-tests, respectively.

The t-statistics are reported in parentheses under the estimated coefficients. Standard errors are corrected for heteroscedasticity using Huber-White robust standard errors clustered by firm. To mitigate the influence of outliers, the top and bottom one percentiles of all continuous variables are winsorized.

by \$1,770 (1 percent of the average *EC Fee*), *CEO Total Pay* increases by \$4,474 (0.061 percent of the average *CEO Total Pay*). Considering that the change in CEO total compensation is almost three times larger than that of EC fees, the additional compensation that a client CEO could reap appears economically significant. This evidence supports the notion that when compensation consultants receive higher EC fees (i.e., they have greater incentive to secure future engagements with the client), they are more inclined to recommend higher CEO pay. This finding contrasts with those in Cadman et al. (2010), and Murphy and Sandino (2010), who fail to find evidence that compensation consultants' repeat business incentives are related to CEO pay levels.

Column (2) presents results on testing compensation consultants' cross-selling incentives using *NEC Fee* as the key explanatory variable. Inconsistent with the cross-selling hypothesis, we find that higher non-EC fees are not associated with higher CEO pay.<sup>21</sup> In contrast to arguments by Ashbaugh et al. (2003) that total fees paid to an auditor captures the economic bond between the auditor and its client, results in Column (3) show that *Total Fee* is not significantly related to CEO pay levels.<sup>22</sup> Furthermore, unlike Murphy and Sandino (2010), who report a positive relation between fee ratio and CEO pay using voluntary EC and non-EC fee disclosures by a small number of Canadian firms, the coefficient on *Fee Ratio* is insignificant in Column (4).

We further explore whether the association between consultant incentives and CEO pay varies between the mandatory and voluntary disclosure groups. Voluntary EC and/or non-EC fee disclosures could signal that the engagement of a compensation consultant is not related to managerial rent-seeking motives (i.e., seeking consultant advice to set executive pay optimally). On the other hand, we would not expect voluntary fee disclosure firms to be significantly different from those that provide no voluntary fee disclosures, given that the magnitude of voluntarily disclosed EC fees and non-EC fees are small (e.g., disclosed non-EC fees, if any, will not exceed \$120,000). Furthermore, Panel C of Table 1 shows that our voluntary fee disclosure sample includes *stayers*, *related switchers*, and non-related switchers as classified by Chu et al. (2018), which makes it difficult for us to predict the effect of voluntary fee disclosure on the relation between fees and CEO pay.

We re-estimate Equation (1) using the full EC fees sample and report the results in Columns (5) to (8) in Table 3, where *EC Fee* is positively related to CEO total pay while *NEC Fee*, *Total Fee*, and *Fee Ratio* remain insignificant.<sup>23</sup> Thus, the positive and significant relation between EC fees and CEO compensation holds regardless of whether fee disclosures are voluntary or mandatory, whereas we continue to find no support for the cross-selling hypothesis.

Other firm characteristic variables, such as firm size (*Mve*), return volatility (*Return Volatility*), and leverage (*Leverage*) are positively related to CEO pay. Moreover, while switching to another consultant (*Switch*) has no effect on CEO pay,<sup>24</sup> consultants who work exclusively for the board (*Board Engagement*) recommend lower CEO pay,<sup>25</sup> lending further support for the repeat business hypothesis.<sup>26</sup> These findings, together with evidence from Chu et al. (2018) suggesting CEO pay is lower

<sup>21</sup> In an untabulated regression, we use *NEC Service* (dummy variable, equal to 1 if firm retains non-EC services from the same compensation consultant who provides EC services, 0 otherwise) as the explanatory variable. We find that CEO total pay is not significantly related to *NEC Service*, suggesting that compensation consultants do not recommend higher CEO pay when they have incentives to provide client firms with non-EC services. This result is consistent with that in Cadman et al. (2010) but goes against that in Murphy and Sandino (2010). Taken together, our results provide no evidence that compensation consultants' cross-selling incentives are associated with higher CEO pay.

<sup>22</sup> In an untabulated regression, we simultaneously include both EC and non-EC fees in Equation (1) and find that only EC fees significantly affect CEO pay.

<sup>23</sup> We also test the effect of consultant fee variables on CEO pay by restricting the sample to the voluntary fee disclosures, and find similar results to those in Table 3. We also re-estimate Equation (1) by replacing every variable for a specific firm with the average value of the firm's year observations to address the concern that sticky fees and firm characteristics may spuriously drive the positive relation between EC fees and CEO pay. Our untabulated results are similar to those in Table 3, indicating that our results are not driven by a small number of firms disclosing the same or similar EC fees multiple times. Moreover, we expect cash and equity compensation to have different implications, since risk-averse CEOs could prefer guaranteed cash payments, while equity compensation could be used to increase a CEOs' risk-taking incentives. To shed further light on how EC fees affect CEO pay, we separately examine the relation between EC fees and cash or equity components of CEO pay, proxied by *CEO Cash Pay* and *CEO Equity Pay*, respectively. Our untabulated regression shows that only *EC Fee* is significantly related to both CEO cash and equity pay, which supports the repeat business hypothesis.

<sup>24</sup> Chu et al. (2018) test the effect of switch differently, by using matching analyses of *stayers* versus *related switchers*, and *stayers* versus non-related switchers, and conclude that only CEOs in firms that switch to related spun-off consultants receive higher pay than those in non-switchers. The difference in the definition of *Switch* variables and the models could have led to the differences between our findings and those in Chu et al. (2018).

<sup>25</sup> Including both *Board Engagement* and *Multiple Consultants* in a model could result in high multicollinearity (correlation = -0.90). To avoid this problem, we include only *Board Engagement* in our analysis. When we replace *Board Engagement* with *Multiple Consultants*, we find that firms with multiple consultants (*Multiple Consultants*) have higher CEO pay, in line with the results of Kabir and Minhat (2014).

<sup>26</sup> To check the robustness of our results to the choice of proxies for consultants' repeat business incentives, we follow Cadman et al. (2010) and use *Percent Client Size*, which captures a client's relative importance to a consultant in terms of the client's share of the aggregate total assets of the consultant's clients, as an alternative proxy. The initial intent of Cadman et al. (2010) is to capture the strength of a consultant's repeat business incentives using the amount of the client's revenues (i.e., sum of *EC Fee* and *NEC Fee*). However, since client revenues were not publicly available before the 2009 disclosure rule, they use the indirect proxy of *Percent Client Size*. For firms disclosing EC fees, the correlation between *Percent Client Size* and *EC Fee* is -0.13 (p-value = 0.00). Our results (untabulated) indicate that, when we include *Percent Client Size* in Equation (1), the coefficient on *EC Fee* remains positive and significant at the 1 percent level. The coefficient of *Percent Client Size*, however, is negative and significant at the 5 percent level, suggesting that the relative importance of clients is *inversely* related to CEO total pay. We argue that our proxy (*EC Fee*) is a more direct measure of repeat business incentives, because consulting firms often consist of multiple partners who only share a small portion of their revenue with other partners and thus, *Percent Client Size* does not fully capture the importance of the client with respect to the EC partner. Thus, in line with the insignificant results of Cadman et al. (2010), our findings cast doubt on the validity of *Percent Client Size* as a proxy for consultants' repeat business incentives.

when the consultant is retained only by the board, are inconsistent with findings in [Murphy and Sandino \(2010\)](#), who report that CEO pay is greater when the consultant works for the board.<sup>27</sup>

### Impact of Abnormal EC Fees on CEO Pay

The auditing literature suggests that auditors' incentives to deter biased financial reporting depend on their clients' fee relative to the fee that would be expected given the auditors' efforts ([Kinney and Libby 2002](#); [Choi et al. 2010](#)). In line with the literature that interprets audit fee residuals as auditor rents ([DeFond et al. 2002](#); [Choi et al. 2010](#); [Hope and Langli 2010](#); [Kanagaretnam et al. 2010](#)),<sup>28</sup> we estimate expected EC fees using a determinant model of EC fees and calculate fee residuals to test whether our findings in support of the repeat business hypothesis are driven by abnormally high EC fees.

Since little theory or evidence exists to guide us on the determinants of compensation consulting fees, we generally follow the determinant model of audit fees ([DeFond et al. 2002](#); [Choi et al. 2010](#); [Hope and Langli 2010](#); [Kanagaretnam et al. 2010](#))<sup>29</sup> by including firm-, CEO-, consultant-, and compensation committee-level characteristics that are likely to affect EC fees. Specifically, we estimate the following model:

$$\begin{aligned} EC\ Fee_t = & \alpha_0 + \alpha_1 \ln(Mve)_t + \alpha_2 \ln(\#Employees)_t + \alpha_3 SP500_t + \alpha_4 Adjusted\ Roa_t + \alpha_5 Return_t + \alpha_6 Return_{t-1} \\ & + \alpha_7 Leverage_t + \alpha_8 Sales\ Growth_t + \alpha_9 Chairman\ CEO_t + \alpha_{10} CEO\ Old_t + \alpha_{11} New\ CEO_t \\ & + \alpha_{12} CEO\ Ownership_t + \alpha_{13} Board\ Engagement_t + \alpha_{14} Multiple\ Consultants_t + \alpha_{15} \ln(\#Cda\ Words)_t \\ & + \alpha_{16} Switch_t + \alpha_{17} \ln(Consultant\ Tenure)_t + \alpha_{18} Big\ Consultants_t + \alpha_{19} Herfindahl\ Index_t \\ & + \alpha_{20} Committee\ Old_t + \alpha_{21} Committee\ Independence_t + \alpha_{22} Committee\ Busy_t + \alpha_{23} \ln(Committee\ Meet)_t \\ & + Fixed\ Effects + e. \end{aligned} \quad (2)$$

Because the demand for EC consulting services is likely to increase with firm size, we include market value of equity (*Mve*), number of employees (*#Employees*), and an indicator variable for whether the firm is listed in the S&P 500 (*SP500*) as measures of firm size. Next, since consultants charge higher EC fees to riskier clients ([Simunic and Stein 1996](#)), we include *Adjusted Roa*, *Return*, and *Leverage* to proxy for firm risk. In addition, the demand for consultant services is greater for high-growth firms than for low-growth firms ([Choi and Wong 2007](#)), so we also include *Sales Growth*. We next include variables measuring the complexity of the CEO's compensation, namely, the number of words in the Compensation Discussion and Analysis (CD&A) report (*#Cda Words*), as [Bettis, Bizjak, Coles, and Kalpathy \(2016\)](#) find that the use of compensation consultants is associated with more complex compensation schemes.

We also consider several consultant-related variables in the model. First, we include *Board Engagement* and *Multiple Consultants* to control for consultant selection effects on EC fees. To account for possible fee premiums for high-quality EC consultants, we further identify the use of six market-leading consultants, each with at least 5 percent of the market share as of 2009 (*Big Consultants*). To account for the effect of competition in the consultant industry on EC fees, we include *Herfindahl Index*, defined as the sum of the squares of the market shares of the consultants within the industry, *Consultant Tenure*, and *Switch*. We also include four variables obtained from the ISS (formerly RiskMetrics) database to reflect the compensation committee's monitoring ability ([Cadman et al. 2010](#); [Armstrong et al. 2012](#)): committee age (*Committee Old*), committee busyness (*Committee Busy*), committee independence (*Committee Independence*), and the number of compensation committee meetings held in the fiscal year (*Committee Meet*). Additional CEO characteristics include three indicator variables *Chairman CEO*, *CEO Old*, and *New CEO*, and a continuous variable *CEO Ownership*. Finally, we include industry and year indicators to control for industry and year effects, respectively.

Table 4 presents the results from estimating Equation (2), where the dependent variable is the natural logarithm of *EC Fee*. In line with the greater demand for consulting services by large and high-growth firms, we find positive coefficients for *ln(#Employee)* in Column (1) and *ln(Mve)* and *Sales Growth* in Column (2). The coefficient of *Leverage* is positive, suggesting that compensation consultants are likely to demand higher fees for financially distressed firms, since evaluating CEO performance could be more challenging in such firms. We find that *Committee Meet* (*Committee Old*) is positively (negatively) related to EC fees, indicating that EC fees are higher in firms with more active compensation committees and lower in firms with a higher fraction of old committee members. Compensation consultants tend to demand higher fees for firms with a newly hired CEO (*New CEO*) because they spend more time and effort preparing customized packages for the new CEO. We also find

<sup>27</sup> To rule out the possibility that omitted correlated variables could be driving the result, we estimate Equation (1) using a firm fixed effect model to control for time-invariant unobserved heterogeneity (e.g., [Himmelberg, Hubbard, and Palia 1999](#)). Our results are robust to this inclusion and continue to support the repeat business hypothesis.

<sup>28</sup> We note that few recent studies, such as [Doogar, Sivadasan, and Solomon \(2015\)](#), argue that audit fee residuals are a combination of auditor rents and unobserved audit production costs, and that interpreting fee residuals as a measure of auditor rents is problematic.

<sup>29</sup> [Simunic \(1980\)](#) argues that the audit engagement fee reflects both auditor effort and potential litigation costs.



**TABLE 4**  
**Determinants of EC Fees**

Dependent Variable = $\ln(EC\ Fee)_t$	(1) Mandatory Disclosure		(2) Full Sample	
	Coefficient	t-statistic	Coefficient	t-statistic
$\ln(Mve)_t$	0.046	(0.57)	0.108*	(1.73)
$\ln(\#Employees)_t$	0.153**	(2.50)	0.034	(0.72)
$SP500_t$	-0.048	(-0.33)	0.107	(0.81)
$Adjusted\ Roa_t$	0.758	(1.03)	0.259	(0.39)
$Return_t$	-0.101	(-0.92)	-0.046	(-0.53)
$Return_{t-1}$	0.024	(0.33)	-0.034	(-0.60)
$Leverage_t$	0.679**	(2.18)	0.831***	(2.95)
$Sales\ Growth_t$	0.124	(0.79)	0.291**	(2.06)
$Chairman\ CEO_t$	0.110	(1.24)	0.011	(0.14)
$CEO\ Old_t$	0.236	(1.38)	0.263	(1.48)
$New\ CEO_t$	0.297***	(3.31)	0.162**	(2.05)
$CEO\ Ownership_t$	-0.941	(-0.70)	-1.398	(-0.83)
$Board\ Engagement_t$	0.469	(1.53)	0.284	(1.32)
$Multiple\ Consultants_t$			0.242	(0.94)
$\ln(\#Cda\ Words)_t$	0.352**	(1.97)	0.448***	(2.98)
$Switch_t$	0.026	(0.15)	-0.054	(-0.41)
$\ln(Consultant\ Tenure)_t$	0.147	(1.11)	0.036	(0.33)
$Big\ Consultants_t$	0.176	(1.09)	0.199*	(1.82)
$Herfindahl\ Index_t$	0.748	(1.25)	0.494	(0.72)
$Committee\ Old_t$	-0.455**	(-2.08)	-0.505***	(-3.40)
$Committee\ Independence_t$	0.194	(1.03)	0.214	(1.42)
$Committee\ Busy_t$	-0.014	(-0.07)	0.113	(0.74)
$\ln(Committee\ Meet)_t$	0.298**	(2.46)	0.228**	(2.18)
Intercept	6.206***	(3.68)	2.974**	(2.17)
Fixed Effects	Year and Industry		Year and Industry	
No. of Observations	546		952	
Adjusted R <sup>2</sup>	0.378		0.404	

\*, \*\*, \*\*\* Indicate 10 percent, 5 percent, and 1 percent significance levels for two-tailed t-tests.

Standard errors are corrected for heteroscedasticity using Huber-White robust standard errors clustered by firm. To mitigate the influence of outliers, the top and bottom 1 percentiles of all continuous variables are winsorized.

evidence supporting fee premiums for major consultants (*Big Consultants*) when we use the full EC fees sample. Pay design complexity, as captured by *#Cda Words*, is positively related to EC fees, suggesting that more complex pay packages take more time for consultants to prepare.

We note that while the adjusted R<sup>2</sup> values of 38 and 40 percent in Table 4 are lower than those in conventional audit fees determinant models, they show that our EC fees determinant model provides reasonable explanatory power. Thus, using the estimated coefficients from Equation (2), we compute the fitted values of the EC fees, which we refer to as expected EC fees. We then obtain the residuals (*Residual*) from individual *annual* estimations of Equation (2) (excluding the year indicators) to estimate the extent to which  $\ln(EC\ Fee)$  deviates from the expected level. The resulting abnormal EC fees explain the idiosyncratic relationship between a given firm-consultant pair. Following Kinney and Libby (2002) in the audit literature, we consider positive abnormal EC fees as the additional revenue that consultants receive beyond the fees for associated level of effort. We expect such excess revenue to increase consultants' incentives to secure their relationship with the firm by recommending higher CEO pay.

To test for the effect of abnormal EC fees on CEO pay, we estimate the following model:

$$CEO\ Total\ Pay_t = \alpha_0 + \alpha_1 Positive\ Residual_t + \alpha_2 Negative\ Residual_t + Controls + Fixed\ Effects + e. \quad (3)$$

Equation (3) uses the same control variables as Equation (1), except that the key independent variables are positive and negative abnormal EC fee measures calculated from Equation (2). Following Ittner, Lambert, and Larcker (2003), Wade, O'Reilly, and Pollock (2006), and Shin, Kang, Hyun, and Kim (2015), we separate positive and negative residuals to distinguish the effects of higher- and lower-than-expected EC fees. If the deviation from the expected fees is an important factor

TABLE 5  
Impact of Abnormal EC Fees on CEO Pay

Dependent Variable = $\ln(\text{CEO Total Pay})_t$	(1) Mandatory Disclosure		(2) Full Sample	
	Coefficient	t-statistic	Coefficient	t-statistic
<i>Positive Residual<sub>t</sub></i>	0.200**	(2.43)	0.122**	(2.13)
<i>Negative Residual<sub>t</sub></i>	-0.080	(-1.01)	0.066	(1.22)
$\ln(\text{Mve})_t$	0.460***	(12.30)	0.443***	(13.55)
<i>Leverage<sub>t</sub></i>	0.484**	(2.55)	0.544***	(3.59)
<i>Btm<sub>t</sub></i>	0.199	(1.55)	0.195**	(1.99)
<i>SP500<sub>t</sub></i>	-0.047	(-0.46)	0.000	(0.01)
<i>Adjusted Roa<sub>t</sub></i>	-0.461	(-1.02)	-0.536	(-1.26)
<i>Loss<sub>t</sub></i>	-0.127	(-1.53)	-0.123	(-1.58)
<i>Return<sub>t</sub></i>	-0.029	(-0.32)	-0.050	(-0.66)
<i>Return<sub>t-1</sub></i>	0.026	(0.65)	0.101**	(2.12)
<i>Return Volatility<sub>t</sub></i>	1.683*	(1.73)	0.282	(0.30)
<i>Chairman CEO<sub>t</sub></i>	0.069	(0.80)	0.061	(1.03)
$\ln(\text{CEO Tenure})_t$	0.009	(0.24)	0.001	(0.03)
<i>Institutional Ownership<sub>t</sub></i>	-0.020	(-0.25)	0.068	(0.93)
$\ln(\text{\#Analyst Following})_t$	-0.001	(-0.03)	-0.011	(-0.56)
<i>Foreign Operation<sub>t</sub></i>	0.105	(1.06)	0.080	(1.03)
<i>Switch<sub>t</sub></i>	0.096	(0.86)	-0.018	(-0.25)
<i>Board Engagement<sub>t</sub></i>	-0.014	(-0.09)	-0.234**	(-2.32)
Intercept	2.945***	(6.25)	3.452***	(10.55)
Fixed Effects	Year and Industry		Year and Industry	
No. of Observations	546		952	
Adjusted R <sup>2</sup>	0.687		0.679	

\*, \*\*, \*\*\* Indicate 10 percent, 5 percent, and 1 percent significance levels for two-tailed t-tests.

The variable *Residual* is the actual  $\ln(\text{EC Fee})$  minus the expected  $\ln(\text{EC Fee})$  estimated in Equation (2); *Positive Residual* is the residual value if *Residual* takes a positive value and 0 otherwise; and *Negative Residual* is the residual value if *Residual* takes a negative value and 0 otherwise. The t-statistics are reported in parentheses under the estimated coefficients. Standard errors are corrected for heteroscedasticity using Huber-White robust standard errors clustered by firm. To mitigate the influence of outliers, the top and bottom 1 percentiles of all continuous variables are winsorized.

influencing compensation consultants' repeat business incentives, then higher positive abnormal EC fees are expected to increase CEO pay. The association between negative abnormal EC fees and CEO pay is less clear. On the one hand, lower-than-expected fees for a given level of service could reduce consultants' incentives to retain clients by recommending higher pay. On the other hand, consultants could be reluctant to recommend lower CEO pay deliberately and risk losing clients.

Table 5 reports the regression results for Equation (3). Consistent with our expectations, Column (1) indicates that positive abnormal EC fees are positively associated with CEO pay, whereas negative abnormal EC fees have no impact on CEO pay. These results support the notion that the relation between EC fees and CEO pay is driven by positive abnormal EC fees but not by negative abnormal EC fees, which is consistent with the repeat business hypothesis. Consultants thus appear to be concerned about clients not engaging them for future EC services, especially when they can earn more for a given amount of effort. These concerns can lead consultants to bias their recommendations in favor of more lucrative CEO pay packages. The sign and significance of all the other control variables are consistent with those in Table 3.

As a sensitivity check, we also estimate Equation (2) after incorporating voluntary fee disclosures and re-examine the effect of abnormal EC fees on CEO pay. The results, reported in Column (2), continue to support the repeat business hypothesis.<sup>30</sup>

<sup>30</sup> When we run the regression using voluntary disclosure firms only, we find that the coefficient on *Positive Residual* is insignificant. However, the coefficients on *Positive Residual* from the two separate regressions (one from the mandatory disclosure subsample and the other from the voluntary disclosure subsample) are not significantly different ( $p\text{-value} = 0.203$ ). In addition, the results of pooled regressions by including an interaction term between abnormal EC fee and disclosure type indicator variable (untabulated) show that the coefficient on the interaction term is not significantly different from zero, while the coefficient is positive. Therefore, we find no evidence that the relation between EC fees and CEO pay is less pronounced in firms that voluntarily disclose these fees, which reflects the difficulty in predicting the effect of voluntary fee disclosure on the relation between fees and CEO pay, due to the heterogeneity of voluntary fee disclosure firms.

**TABLE 6**  
**Impact of Consultant Tenure on the Relation between Abnormal EC Fees and CEO Pay**

Dependent Variable = $\Delta \text{Excess}[\ln(\text{CEO Total Pay})]_t$	(1) Mandatory Disclosure (Consultant_Tenure ≤ 5)		(2) Mandatory Disclosure (Consultant_Tenure > 5)		(3) Full Sample (Consultant_Tenure ≤ 5)		(4) Full Sample (Consultant_Tenure > 5)	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
<i>Positive Residual<sub>t</sub></i>	0.085	(0.74)	0.345*	(1.68)	-0.112	(-1.43)	0.199**	(2.06)
<i>Negative Residual<sub>t</sub></i>	-0.082	(-0.83)	0.140	(0.95)	0.088	(1.04)	-0.118	(-1.37)
<i>ln(Mve)<sub>t</sub></i>	-0.005	(-0.11)	0.039	(1.03)	0.064	(1.44)	0.004	(0.15)
<i>Leverage<sub>t</sub></i>	0.109	(0.48)	0.228	(0.92)	0.134	(0.75)	0.236	(1.39)
<i>Btm<sub>t</sub></i>	-0.096	(-0.51)	0.061	(0.31)	-0.057	(-0.41)	0.093	(0.92)
<i>SP500<sub>t</sub></i>	-0.161	(-1.28)	-0.073	(-0.81)	-0.144	(-1.33)	-0.011	(-0.15)
<i>Adjusted Roa<sub>t</sub></i>	0.927	(1.40)	1.262	(1.58)	0.569	(0.90)	1.564**	(2.37)
<i>Loss<sub>t</sub></i>	-0.033	(-0.17)	-0.037	(-0.21)	-0.100	(-0.85)	0.258**	(2.00)
<i>Return<sub>t</sub></i>	-0.059	(-0.44)	-0.416**	(-2.02)	-0.196**	(-1.98)	-0.168	(-1.43)
<i>Return<sub>t-1</sub></i>	0.055	(0.78)	0.144**	(2.23)	0.062	(0.94)	0.237***	(3.75)
<i>Return Volatility<sub>t</sub></i>	0.006	(0.00)	0.191	(0.21)	2.190	(1.31)	-0.242	(-0.37)
<i>Chairman CEO<sub>t</sub></i>	0.089	(0.89)	0.086	(1.24)	0.024	(0.33)	0.149**	(2.54)
<i>ln(CEO Tenure)<sub>t</sub></i>	-0.018	(-0.35)	-0.129	(-1.49)	-0.001	(-0.03)	-0.044	(-0.91)
<i>Institutional Ownership<sub>t</sub></i>	-0.016	(-0.16)	-0.022	(-0.25)	0.023	(0.25)	-0.068	(-0.78)
<i>ln(#Analyst Following)<sub>t</sub></i>	-0.003	(-0.09)	-0.009	(-0.41)	-0.025	(-1.25)	0.003	(0.22)
<i>Foreign Operation<sub>t</sub></i>	0.048	(0.40)	-0.244**	(-2.12)	-0.016	(-0.15)	-0.079	(-0.68)
<i>Switch<sub>t</sub></i>	0.153	(1.25)			-0.032	(-0.34)		
<i>Board Engagement<sub>t</sub></i>	0.064	(0.48)			0.038	(0.47)	-0.049	(-0.51)
Intercept	-0.322	(-0.68)	-0.366	(-0.68)	-1.167**	(-2.50)	-0.088	(-0.28)
Fixed Effects	Year and Industry		Year and Industry		Year and Industry		Year and Industry	
No. of Observations	217		193		418		343	
Adjusted R <sup>2</sup>	0.039		0.104		-0.011		0.196	

\*, \*\*, \*\*\* Indicate 10 percent, 5 percent, and 1 percent significance levels for two-tailed t-tests, respectively.

The variable  $\text{Excess}[\ln(\text{CEO Total Pay})]$  is the actual  $\ln(\text{CEO Total Pay})$  minus the expected  $\ln(\text{CEO Total Pay})$  estimated in Equation (4);  $\Delta \text{Excess}[\ln(\text{CEO Total Pay})]_t$  is a change in excess CEO pay ( $\text{Excess}[\ln(\text{CEO Total Pay})]$ ). The variable *Residual* is the actual  $\ln(\text{EC Fee})$  minus the expected  $\ln(\text{EC Fee})$  estimated in Equation (2); *Positive Residual* is the residual value if *Residual* takes a positive value and 0 otherwise; and *Negative Residual* is the residual value if *Residual* takes a negative value and 0 otherwise. The t-statistics are reported in parentheses under the estimated coefficients. Standard errors are corrected for heteroscedasticity using Huber-White robust standard errors clustered by firm. To mitigate the influence of outliers, the top and bottom 1 percentiles of all continuous variables are winsorized.

We next consider whether the relationships between firms and consultants varies over consultant tenure, in particular, whether firm-consultant familiarity or bond affect the relation between EC fees and CEO pay. If abnormal EC fees capture a *quid pro quo* relationship in which firms pay exorbitant EC fees for excess CEO pay, then we would expect the relation between EC fees and CEO pay to be more pronounced for longer tenured consultants. That is, if firms' opportunistic incentive to maintain existing relationships leads them to stay with their current consultants and consultants earning abnormal fees have high repeat business incentives, we predict consultant tenure to be positively associated with the relation between EC fees and CEO pay. Hence, we test the effect of EC consultant tenure by hand-collecting consultant tenure data starting from the 2006 proxy statements.<sup>31</sup> Table 6 shows that the effect of positive abnormal EC fees on change in excess CEO total pay is positive and significant when consultant tenure is 6 years or longer, but insignificant when consultant tenure is shorter than 6 years. The variable  $\text{Excess}[\ln(\text{CEO Total Pay})]$  is the actual  $\ln(\text{CEO Total Pay})$  minus the expected  $\ln(\text{CEO Total Pay})$  estimated in Equation (4);  $\Delta \text{Excess}[\ln(\text{CEO Total Pay})]_t$  is a change in excess CEO pay ( $\text{Excess}[\ln(\text{Total Pay})]$ ).

$$\text{CEO Total Pay}_t = \alpha_0 + \alpha_1 \ln(\text{Mve})_t + \alpha_2 \text{Btm}_t + \alpha_3 \text{Adjusted Roa}_t + \alpha_4 \text{Return}_t + \text{Fixed Effects} + e. \quad (4)$$

This result suggests that the opportunistic motives of firms and consultants are stronger for longer tenured firm-consultant

<sup>31</sup> Unless firms specify the initial year, we assume 2006 to be the first year of engagement in calculating consultant tenure. (i.e., tenure equals 4 if the consultant in 2006 is still engaged in 2009), as 2006 was the first year firms disclosed information on consultant engagements.

relationships. In sum, we conclude that the association between abnormal EC fees and excess CEO pay becomes stronger as the tenure of incumbent consultants becomes sufficiently long to create bonds with firms.

### Impact of Corporate Governance on the Relation between EC Fees and CEO Pay

While our results suggest that both EC fees and abnormal EC fees are positively related to CEO pay, the extent to which CEOs can influence the board's decision to retain a particular compensation consultant remains an open question. It is possible that CEOs in weak governance firms can influence the board's decision to select a specific consultant, and therefore the consultant could have a greater incentive to recommend higher pay for the CEO, resulting in a stronger association between EC fees and CEO pay. We therefore examine whether the extent of CEO influence on consultant selection serves as another separating device for our mandatory fee disclosure sample (i.e., *stayers*), distinguishing between efficient and opportunistic motives for staying with an existing multi-service consultant. We divide our sample into strong versus weak governance subsamples and re-estimate Equation (1), using EC fees and abnormal EC fees as predictor variables.

Table 7 presents the results from the subsample tests using three measures of governance strength. In Panel A, we divide the full EC fees sample into strong and weak governance groups according to a composite governance measure (*HGovernance*), calculated using nine board and compensation committee variables.<sup>32</sup> For firms with weak corporate governance (*HGovernance* ≤ 5), EC fees and abnormal EC fees are positively related to CEO pay. However, for the firms with strong corporate governance (*HGovernance* > 5), neither EC fees nor positive abnormal EC fees are significantly related to CEO pay.

The executive compensation plan is one of the key governance issues that institutional investors pay close attention to (e.g., [Hartzell and Starks 2003](#)). Hence, it is important for us to account for the effect of the intensity of external monitoring by institutional investors. In Panel B of Table 7, we construct a composite institutional ownership measure (*HIInstitution*) based on four institutional ownership-related variables,<sup>33</sup> and use this composite measure to divide our full EC fees sample into strong and weak governance subsamples. Similar to Panel A, we find a significant association between EC fees (abnormal EC fees) and CEO total pay only in the weak governance subsample (*HIInstitution* ≤ 3).

In the audit literature, [Beck and Mauldin \(2014\)](#) find that the relative bargaining power between the CFO and the audit committee primarily determines who has more influence over fee negotiations. Following [Beck and Mauldin \(2014\)](#) to empirically measure the relative power of the compensation committee and the CEO in our setting, we divide the sample into strong compensation committee (*Powerful Committee* ≥ 0) and weak compensation committee (*Powerful Committee* < 0) subsamples.<sup>34</sup> Consistent with our expectation, estimation results in Panel C of Table 7 show that EC fees and abnormal EC fees are positively related to CEO total pay only in the subsample of firms whose compensation committee has relatively weak

<sup>32</sup> Similar to [Gompers, Ishii, and Metrick \(2003\)](#), [DeFond, Hann, and Hu \(2005\)](#), [Bharath, Jayaraman, and Nagar \(2013\)](#), and [Ettredge, Johnstone, Stone, and Wang \(2011\)](#), we create a composite measure, based on nine board- and compensation committee-related variables, to measure the strength of a board's bargaining power *vis-à-vis* the CEO. The four board variables are: board size (*Board Size*), board independence (*Board Independence*), board busyness (*Board Busy*), and the proportion of board members aged over 68 (*Board Old*). The other five variables are: compensation committee size (*Committee Size*), compensation committee independence (*Committee Independence*), compensation committee busyness (*Committee Busy*), the proportion of compensation committee members aged over 68 (*Committee Old*), and a dummy variable indicating whether the CEO is also the chair of the board (*Chairman CEO*). Each of the four board-related and four committee-related variables is a binary measure constructed by splitting the sample by the sample median. For example, firms with larger compensation committees could devote more resources in overseeing their executives' compensation plans. We code *Board Size (Committee Size)* as 1 if the firm's board (compensation committee) size is above the sample median, and 0 otherwise. Similarly, researchers have argued that independent, non-busy, younger compensation committees and a separation in CEO and chair positions indicate stronger corporate governance (e.g., [Core et al. 1999](#); [Fich and Shivdasani 2006](#); [Armstrong et al. 2012](#)) and are thus likely to indicate greater bargaining power for the board (compensation committee) *vis-à-vis* the CEO. Consequently, the sum of the nine variables above, ranging from 0 to 9, measures the strength of the committee's bargaining power (*HGovernance*). We then examine the effect of governance on the relation between EC fees and CEO pay by dividing the sample into strong governance (*HGovernance* > 5) and weak governance (*HGovernance* ≤ 5) subsamples.

<sup>33</sup> We use four institutional ownership-related variables and construct a composite variable (*HIInstitution*) to measure the strength of institutional investors' monitoring on the process of rewarding managerial performance ([Hartzell and Starks 2003](#); [Kim 2010](#)). The four variables are: institutional ownership (*Institutional Ownership*), shares held by mutual fund managers and investment advisers (*Independent IO*), shares held by blockholders holding at least 5 percent of the firm's voting shares (*Blockholder Ownership*), and each firm's Herfindahl Index of institutional ownership concentration (*IO Concentration*). For example, firms with a higher concentration of institutional investors have lower managerial compensation, because monitoring mitigates the agency problem between shareholders and managers. We code *IO Concentration* as 1 if the firm's institutional ownership concentration is above the sample median and 0 otherwise. Similarly, research has regarded greater institutional ownership, independent institutional ownership, and blockholder ownership as stronger governance (e.g., [Shleifer and Vishny 1986](#); [David, Kochhar, and Levitas 1998](#); [Hartzell and Starks 2003](#)) and thus likely to indicate greater monitoring of managerial compensation. Since we measure each of the four institutional ownership-related variables as a binary variable with regard to the sample median, the sum of the four variables above ranges from 0 to 4. The full EC fees sample is divided into strong governance (*HIInstitution* > 3) and weak governance (*HIInstitution* ≤ 3) subsamples.

<sup>34</sup> We first sort the sample into quintiles based on compensation committee tenure (*Committee Tenure*) and CEO tenure (*CEO Tenure*), and calculate *Powerful Committee* as the difference in the quintiles of *Committee Tenure* and *CEO Tenure*, which ranges from -4 to +4. The full EC fees sample is partitioned into strong governance (*Powerful Committee* > 0) and weak governance (*Powerful Committee* ≤ 0) subsamples.



**TABLE 7**  
**Impact of Corporate Governance on the Relation between EC Fees and CEO Pay**

**Panel A: Regression Results Using the *HGovernance* Variable**

Dependent Variable = $\ln(\text{CEO Total Pay})_t$	(1) Mandatory Disclosure Strong Governance ( <i>HGovernance</i> > 5)		(2) Mandatory Disclosure Weak Governance ( <i>HGovernance</i> ≤ 5)		(3) Mandatory Disclosure Strong Governance ( <i>HGovernance</i> > 5)		(4) Mandatory Disclosure Weak Governance ( <i>HGovernance</i> ≤ 5)	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
$\ln(\text{EC Fee})_t$	0.026	(0.61)	0.076**	(2.13)				
Positive Residual <sub>t</sub>					0.193	(1.11)	0.203*	(1.89)
Negative Residual <sub>t</sub>					-0.163	(-0.97)	-0.072	(-0.71)
$\ln(\text{Mve})_t$	0.479***	(10.24)	0.434***	(9.50)	0.489***	(10.87)	0.444***	(9.64)
Leverage <sub>t</sub>	0.106	(0.36)	0.345	(1.61)	0.138	(0.45)	0.445**	(2.07)
$\text{Btm}_t$	0.419**	(2.48)	0.049	(0.34)	0.389**	(2.24)	0.087	(0.61)
$\text{SP500}_t$	-0.115	(-1.13)	-0.005	(-0.04)	-0.143	(-1.44)	0.011	(0.08)
Adjusted Roa <sub>t</sub>	0.206	(0.32)	-0.092	(-0.15)	0.212	(0.33)	-0.058	(-0.10)
Loss <sub>t</sub>	-0.062	(-0.46)	-0.049	(-0.49)	-0.107	(-0.70)	-0.037	(-0.36)
Return <sub>t</sub>	-0.088	(-0.48)	-0.110	(-1.30)	-0.093	(-0.51)	-0.119	(-1.42)
Return <sub>t-1</sub>	-0.164*	(-1.86)	0.034	(0.58)	-0.168*	(-1.85)	0.044	(0.76)
Return Volatility <sub>t</sub>	0.451	(0.48)	2.090*	(1.88)	0.395	(0.41)	2.171*	(1.92)
Chairman CEO <sub>t</sub>	0.208***	(3.14)	0.191**	(2.52)	0.230***	(3.14)	0.198**	(2.55)
$\ln(\text{CEO Tenure})_t$	-0.071	(-1.08)	-0.028	(-0.67)	-0.070	(-1.07)	-0.026	(-0.64)
Institutional Ownership <sub>t</sub>	-0.046	(-0.47)	0.032	(0.29)	-0.035	(-0.36)	0.021	(0.19)
$\ln(\#\text{Analyst Following})_t$	0.007	(0.32)	0.008	(0.25)	0.012	(0.51)	0.002	(0.08)
Foreign Operation <sub>t</sub>	0.103	(0.97)	0.002	(0.02)	0.125	(1.08)	0.014	(0.14)
Switch <sub>t</sub>	0.060	(0.55)	0.055	(0.34)	0.093	(0.88)	0.036	(0.22)
Board Engagement <sub>t</sub>	-0.183	(-1.55)	0.136	(0.40)	-0.222*	(-1.89)	0.171	(0.48)
Intercept	5.295***	(6.54)	4.016***	(6.44)	5.507***	(8.04)	4.648***	(8.70)
Fixed Effects	Year and Industry		Year and Industry		Year and Industry		Year and Industry	
No. of Observations	180		366		180		366	
Adjusted R <sup>2</sup>	0.720		0.746		0.721		0.745	

**Panel B: Regression Results Using the *HIInstitution* Variable**

Dependent Variable = $\ln(\text{CEO Total Pay})_t$	(1) Mandatory Disclosure Strong Governance ( <i>HIInstitution</i> > 3)		(2) Mandatory Disclosure Weak Governance ( <i>HIInstitution</i> ≤ 3)		(3) Mandatory Disclosure Strong Governance ( <i>HIInstitution</i> > 3)		(4) Mandatory Disclosure Weak Governance ( <i>HIInstitution</i> ≤ 3)	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
$\ln(\text{EC Fee})_t$	0.057	(1.11)	0.063*	(1.78)				
Positive Residual <sub>t</sub>					-0.008	(-0.06)	0.229**	(2.09)
Negative Residual <sub>t</sub>					0.081	(0.67)	-0.135	(-1.29)
$\ln(\text{Mve})_t$	0.537***	(9.06)	0.442***	(10.26)	0.547***	(9.11)	0.456***	(10.87)
Leverage <sub>t</sub>	0.349	(1.10)	0.327	(1.38)	0.450	(1.52)	0.414*	(1.74)
$\text{Btm}_t$	0.044	(0.20)	0.289*	(1.84)	0.058	(0.26)	0.319**	(2.00)
$\text{SP500}_t$	-0.032	(-0.25)	-0.184	(-1.35)	-0.014	(-0.11)	-0.185	(-1.33)
Adjusted Roa <sub>t</sub>	-1.177	(-1.50)	-0.467	(-0.99)	-1.225	(-1.55)	-0.463	(-0.97)
Loss <sub>t</sub>	-0.095	(-0.86)	-0.215**	(-2.06)	-0.095	(-0.85)	-0.214**	(-2.01)
Return <sub>t</sub>	-0.069	(-0.46)	-0.053	(-0.54)	-0.069	(-0.45)	-0.070	(-0.70)
Return <sub>t-1</sub>	-0.097	(-0.92)	0.069	(1.54)	-0.098	(-0.93)	0.077*	(1.72)
Return Volatility <sub>t</sub>	0.182	(0.11)	1.418	(1.38)	0.469	(0.27)	1.302	(1.31)
Chairman CEO <sub>t</sub>	-0.073	(-0.55)	0.093	(1.06)	-0.079	(-0.61)	0.102	(1.16)
$\ln(\text{CEO Tenure})_t$	0.049	(0.66)	0.001	(0.02)	0.055	(0.71)	-0.002	(-0.05)
$\ln(\#\text{Analyst Following})_t$	-0.005	(-0.14)	0.017	(0.61)	-0.009	(-0.24)	0.013	(0.49)
Foreign Operation <sub>t</sub>	0.232	(1.64)	0.064	(0.56)	0.277*	(1.83)	0.076	(0.65)

(continued on next page)

TABLE 7 (continued)

Dependent Variable = $\ln(\text{CEO Total Pay})_t$	(1) Mandatory Disclosure Strong Governance ( $H\text{Institution} > 3$ )		(2) Mandatory Disclosure Weak Governance ( $H\text{Institution} \leq 3$ )		(3) Mandatory Disclosure Strong Governance ( $H\text{Institution} > 3$ )		(4) Mandatory Disclosure Weak Governance ( $H\text{Institution} \leq 3$ )	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
<i>Switch<sub>t</sub></i>	-0.109	(-0.63)	0.127	(0.78)	-0.119	(-0.66)	0.149	(0.97)
<i>Board Engagement<sub>t</sub></i>	0.821***	(3.72)	-0.121	(-0.81)	0.964***	(4.94)	-0.111	(-0.84)
Intercept	2.618***	(3.07)	4.364***	(7.06)	2.988***	(4.04)	4.906***	(9.80)
Fixed Effects	Year and Industry		Year and Industry		Year and Industry		Year and Industry	
No. of Observations	215		331		215		331	
Adjusted R <sup>2</sup>	0.700		0.679		0.6972		0.679	

Panel C: Regression Results Using the Powerful Committee Variable

Dependent Variable = $\ln(\text{CEO Total Pay})_t$	(1) Mandatory Disclosure Strong Governance ( <i>Powerful</i> <i>Committee</i> $\geq 0$ )		(2) Mandatory Disclosure Weak Governance ( <i>Powerful</i> <i>Committee</i> $< 0$ )		(3) Mandatory Disclosure Strong Governance ( <i>Powerful</i> <i>Committee</i> $\geq 0$ )		(4) Mandatory Disclosure Weak Governance ( <i>Powerful</i> <i>Committee</i> $< 0$ )	
	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic	Coefficient	t-statistic
<i>ln(EC Fee)<sub>t</sub></i>	0.037	(0.90)	0.076*	(1.68)				
<i>Positive Residual<sub>t</sub></i>					0.110	(0.90)	0.277**	(2.60)
<i>Negative Residual<sub>t</sub></i>					-0.135	(-1.36)	-0.012	(-0.10)
<i>ln(Mve)<sub>t</sub></i>	0.535***	(9.00)	0.363***	(5.64)	0.536***	(8.85)	0.366***	(5.64)
<i>Leverage<sub>t</sub></i>	0.344	(1.32)	0.185	(0.83)	0.453*	(1.78)	0.288	(1.25)
<i>Btm<sub>t</sub></i>	0.111	(0.69)	0.149	(0.85)	0.131	(0.81)	0.162	(0.98)
<i>SP500<sub>t</sub></i>	-0.221	(-1.54)	0.249	(1.30)	-0.204	(-1.42)	0.242	(1.28)
<i>Adjusted Roa<sub>t</sub></i>	-0.335	(-0.56)	-1.575**	(-2.28)	-0.276	(-0.47)	-1.438**	(-2.16)
<i>Loss<sub>t</sub></i>	-0.031	(-0.30)	-0.343***	(-3.45)	-0.042	(-0.38)	-0.340***	(-3.28)
<i>Return<sub>t</sub></i>	-0.022	(-0.18)	-0.109	(-1.04)	-0.026	(-0.20)	-0.114	(-1.16)
<i>Return<sub>t-1</sub></i>	0.012	(0.21)	0.091	(0.94)	0.011	(0.19)	0.099	(0.98)
<i>Return Volatility<sub>t</sub></i>	2.558	(1.47)	0.946	(1.16)	2.571	(1.51)	0.891	(1.09)
<i>Chairman CEO<sub>t</sub></i>	0.005	(0.04)	0.182	(1.58)	0.012	(0.10)	0.196*	(1.75)
<i>ln(CEO Tenure)<sub>t</sub></i>	0.006	(0.12)	-0.047	(-0.46)	0.001	(0.03)	-0.027	(-0.27)
<i>Institutional Ownership<sub>t</sub></i>	0.074	(0.59)	-0.086	(-0.58)	0.072	(0.58)	-0.081	(-0.55)
<i>ln(#Analyst Following)<sub>t</sub></i>	0.002	(0.07)	-0.002	(-0.06)	-0.000	(-0.00)	-0.004	(-0.11)
<i>Foreign Operation<sub>t</sub></i>	0.003	(0.02)	0.057	(0.79)	0.013	(0.07)	0.108	(1.46)
<i>Switch<sub>t</sub></i>	0.020	(0.10)	0.075	(0.57)	0.018	(0.09)	0.113	(0.95)
<i>Board Engagement<sub>t</sub></i>	-0.209	(-1.28)	-0.108	(-0.37)	-0.194	(-1.24)	-0.029	(-0.10)
Intercept	3.860***	(4.86)	4.397***	(5.22)	4.186***	(5.56)	4.996***	(7.50)
Fixed Effects	Year and Industry		Year and Industry		Year and Industry		Year and Industry	
No. of Observations	347		199		347		199	
Adjusted R <sup>2</sup>	0.627		0.820		0.627		0.824	

\*, \*\*, \*\*\* Indicate 10 percent, 5 percent, and 1 percent significance levels for two-tailed t-tests.

In Panel A, *HGovernance* is a composite measure that consists of nine board- and compensation committee-related variables (*Board Size*, *Board Independence*, *Board Busy*, *Board Old*, *Committee Size*, *Committee Independence*, *Committee Busy*, *Committee Old*, and *Chairman CEO*). Since we measure each of the four board-related and four committee-related variables as a binary variable by splitting the sample according to the sample median, the sum of the nine variables above ranges from 0 to 9. The full EC fees sample is partitioned into strong governance ( $H\text{Governance} > 5$ ) and weak governance ( $H\text{Governance} \leq 5$ ) subsamples. In Panel B, *HInstitution* is a composite measure that consists of four institutional investor-related variables (*Institutional Ownership*, *Independent IO*, *Blockholder Ownership*, and *IO Concentration*). Since we measure each of the four institution-related variables as a binary variable by splitting the sample according to the sample median, the sum of the four variables above ranges from 0 to 4. The full EC fees sample is partitioned into strong governance ( $H\text{Institution} > 3$ ) and weak governance ( $H\text{Institution} \leq 3$ ) subsamples. In Panel C, we first sort the sample into quintiles based on compensation committee tenure (*Committee Tenure*) and CEO tenure (*CEO Tenure*), and calculate *Powerful Committee* as the difference in the quintiles of *Committee Tenure* and *CEO Tenure*, which ranges from -4 to +4. The full EC fees sample is partitioned into strong governance ( $\text{Powerful Committee} > 0$ ) and weak governance ( $\text{Powerful Committee} \leq 0$ ) subsamples. The variable *Residual* is the actual  $\ln(\text{EC Fee})$  minus the expected  $\ln(\text{EC Fee})$  estimated in Equation (2). The variable *Positive Residual* is the residual value if *Residual* takes a positive value and 0 otherwise and *Negative Residual* is the residual value if *Residual* takes a negative value and 0 otherwise. Please see the paper for a detailed explanation of these tests. The t-statistics are reported in parentheses under the estimated coefficients. Standard errors are corrected for heteroscedasticity using Huber-White robust standard errors clustered by firm. To mitigate the influence of outliers, all continuous variables are winsorized at the top and bottom 1 percentiles.

bargaining power. Taken together, these findings suggest that CEOs in weak governance firms with higher bargaining power than their compensation committees have more influence over the board's consultant selection decision and, therefore, consultants have greater incentives to recommend higher pay for CEOs in such firms.<sup>35</sup>

In addition, these findings imply there are significant variations among *stayers* that continue to engage with incumbent multi-service consultants, despite the view by Chu et al. (2018) that they are all optimal pay setting firms. Specifically, our results show that even firms continuing to hire the same multi-service consultants offer higher CEO pay when their governance is weak, whereas Chu et al. (2018) assume that firms switch from a multi-services consultant to a spun-off specialist to enable rent extraction. Our use of the proxy that captures the relative power between the CEO and the compensation committee also shows that CEO pay is higher only when the CEO has stronger bargaining power over the committee.

### Impact of EC Fees and Changes in Excess CEO Pay on Subsequent Consultant Switch

The repeat business hypothesis assumes that a consultant concerned about losing substantial EC fees could recommend generous pay packages for client CEOs. While our previous findings document that consultants' economic incentives are associated with higher CEO pay, they do not show whether consultants are actually successful in retaining the clients by offering higher CEO pay. Therefore, we directly examine the association between current EC fees or the recommendation of excessive CEO pay and the subsequent consultant switch to confirm whether higher EC fees (or the recommendation of excessive CEO pay) indeed reduce the probability of an incumbent consultant being replaced.

Table 8 presents the estimation results from the logistic regression of subsequent consultant switch on the full EC fees sample.<sup>36</sup> Panel A shows that consultants who receive higher fees are less likely to be replaced the following year. In addition, we identify the relations between EC fees, CEO pay, and a subsequent consultant switch using path analysis. Panel B presents unstandardized path coefficients for the three variables derived from the full matrix of the structural equation. We find a direct effect of EC fees on the subsequent consultant switch and an indirect effect of EC fees on the subsequent switch through increase in CEO pay. In other words, we find that EC fees are directly associated with the likelihood of subsequent consultant turnover (path [a]). More importantly, our findings suggest that when the economic loss resulting from a client departure is substantial, consultants concerned about losing EC fees could recommend overgenerous pay packages for their client CEOs to secure business (path [b]) and, in return, such consultants are less likely to be replaced (path [c]).<sup>37</sup>

## V. CONCLUSION

In this paper, we examine whether compensation consultants' incentives affect CEO pay levels by using consulting fee data. Based on 952 EC fee and 646 non-EC fee firm-year observations collected from annual proxy statements of S&P 1500 firms over fiscal years 2009 to 2014, we find evidence that consultants recommend higher CEO pay when they receive higher EC fees, in line with the repeat business hypothesis. However, we find little evidence that CEO pay levels are higher when non-EC fees are higher, providing no support for the cross-selling incentives argument. We also find that abnormally high EC fees are positively associated with CEO pay, suggesting that consultants' repeat business incentives are stronger when they earn abnormal revenues from the clients. Additionally, we show that the association between EC fees and CEO pay is positive and significant only for firms that have weak governance, less monitoring by institutional investors, or less powerful compensation committees. Finally, we find that the change in excess CEO pay is associated with a lower probability of subsequent consultant turnover.

<sup>35</sup> While we find that the positive association between EC fees and CEO pay exists only in weak governance firms, the coefficients of *EC Fee* and *Positive\_Residual* from the two separate regressions (one from the strong governance subsample and the other from the weak governance subsample) are not significantly different. We also test the effect of governance on the relation between EC fee and CEO total pay by extending the sample to include full EC fees disclosures ( $n = 952$ ), and find similar results to those in Table 7.

<sup>36</sup> In an untabulated regression, we also examine whether shareholders' say-on-pay votes affect the *Switch* decision. First, including an indicator variable *Voting Dissent more than 30 Percent* <sub>$t-1$</sub> , a widely used cut-off point in say-on-pay literature, in Equation (2) to represent severe say-on-pay dissent on compensation packages returns an insignificant coefficient ( $t\text{-stat.} = 0.63$ ), suggesting that a high rejection rate has no impact on the level of EC fees in the subsequent year. A further test including *Voting Dissent more than 30 Percent* <sub>$t$</sub>  in the EC switch model in Table 8 also returns an insignificant result, leading us to conclude that say-on-pay votes have no significant impact on consultant switch decisions and do not mitigate consultants' repeat business incentives. We also test whether EC consultants recommend different levels of CEO pay when they have either large or small numbers of clients (*#Clients*) within a specific industry, as firms within the peer group can monitor each other. An untabulated regression dividing the sample into *Large #Client* and *Small #Client* shows that the association between positive abnormal EC fees and CEO total pay is significant only in the *Small #Client* group, supporting the claim that retaining many clients within an industry mitigates EC consultants' opportunistic behavior.

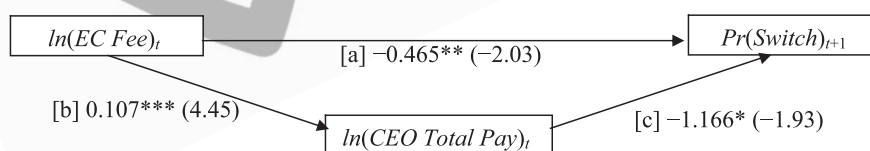
<sup>37</sup> We run the logit regression considering our model is based on a binary outcome (*Switch* <sub>$t+1$</sub> ) and continuous mediator (*CEO Total Pay* <sub>$t$</sub> ) and formally evaluate the significance of the statistic on the average mediation effect. The mediation effect (path [b] \* path [c]) is significant both economically (26.6 percent of the total effect) and statistically (significance level less than 5 percent).

**TABLE 8**  
**Impact of EC Fees and Changes in CEO Pay on Subsequent Consultant Switch**

**Panel A: Logistic Regression of Subsequent Consultant Switch**

Dependent Variable = $Pr(Switch)_{t+1}$	(1) Full Sample	
	Coefficient	z-statistic
$\ln(EC\ Fee)_t$	-0.585**	(-2.44)
$\ln(Mve)_t$	-0.984**	(-2.26)
$Btm_t$	0.166	(0.18)
$Leverage_t$	3.598	(1.44)
$\ln(\#Employees)_t$	0.136	(0.45)
$SP500_t$	0.516	(0.61)
$Adjusted\ Roa_t$	9.702*	(1.79)
$\Delta Roa_t$	-2.645	(-0.62)
$Return_{t-1}$	1.733***	(2.60)
$Return_{t-2}$	-0.559	(-1.05)
$Sales\ Growth_t$	2.024	(1.18)
$Chairman\ CEO_t$	0.622	(1.16)
$\ln(CEO\ Tenure)_t$	0.127	(0.27)
$New\ CEO_t$	1.271	(1.62)
$Big\ Consultants_t$	1.614***	(2.95)
$Herfindahl\ Index_t$	4.145	(1.06)
$\ln(\#Cda\ Words)_t$	1.562	(1.28)
$CEO\ Pay\ Mix_t$	0.859	(0.64)
$Committee\ Old$	-0.551	(-0.57)
$Committee\ Independence_t$	-3.750***	(-3.45)
$Committee\ Busy_t$	0.853	(0.89)
$\ln(Committee\ Meet)_t$	2.129**	(2.51)
$\ln(Consultant\ Tenure)_t$	1.041**	(2.16)
Intercept	-16.950	(-1.44)
Fixed Effects	Year and Industry	
No. of Observations	446	
Pseudo $R^2$	0.349	

**Panel B: Path Analysis of Indirect Impacts of CEO Pay on Subsequent Consultant Switch (n = 446)**



\*, \*\*, \*\*\* Indicate 10 percent, 5 percent, and 1 percent significance levels for two-tailed z-tests, respectively.

In Panel A, standard errors are corrected for heteroscedasticity using Huber-White robust standard errors clustered by firm. The dependent variable, *Switch*, is 1 if the primary consultant is switched to another unrelated consultant (therefore excluding changes in consultant engagement through M&As, spin-offs, or temporary disengagement due to periodical engagement agreement), 0 otherwise. Panel B presents the results of path analysis of the relations among EC fee, CEO pay, and subsequent consultant switch. We estimate a structural equation model (SEM) of the direct effect of EC fee on the subsequent consultant switch as well as the indirect effects of EC fee on the subsequent consultant through increased CEO pay. We present unstandardized path coefficients above derived from the full matrix of the structural equation. To mitigate the influence of outliers, the top and bottom 1 percentiles of all continuous variables are winsorized.

This study contributes to the literature examining the effect of outside compensation consultants on executive pay. It challenges previous findings on the relation between conflicted compensation consultants and CEO pay (Conyon et al. 2009; Cadman et al. 2010; Murphy and Sandino 2010) by using more direct proxies for consultants' incentives, and provides novel evidence suggesting repeat business incentives induce consultants to bias their CEO pay recommendations. Our results also



extend and complement the findings of Chu et al. (2018) by showing that consultant incentives vary significantly even within groups of firms that they identify as optimal pay setters. While the SEC's *asymmetric* disclosure rule, which does not require fees to be disclosed when consultants are hired only to provide EC services, appears to limit consultants' cross-selling incentives, our findings provide evidence that it could lead to unintended consequences, such as making compensation consultants' repeat business incentives greater than in the pre-fee disclosure period.

Several limitations of our study provide opportunities for future research. First, sample selection issues inherent in our sample due to the fee disclosure rule make it difficult to generalize our findings to all public firms. For example, because our results on the relation between EC fees and CEO pay are based on mandatory and voluntary disclosures of EC fees, they omit EC fee information for many firms that hire compensation consultants solely for EC services. In addition, our failure to find evidence of cross-selling incentives (i.e., no significant relation between non-EC fees and CEO pay) could result from the fact that cross-selling incentives are always high in our sample by construction. However, our evidence of consultants' repeat business incentives based on the mandatory fee disclosure sample with large multi-service consultants suggests that small EC specialist consultants, who now provide executive pay recommendations to most public firms, could have much greater repeat business incentives. We suspect that our results on repeat business incentives would be even stronger for EC specialist consultants.

Second, in line with the audit literature that interprets audit fee residuals as auditor rents, we interpret EC fee residuals as consultant rents associated with economic ties between a consultant and its client firm. However, fee residuals could simply capture noise and unobserved EC consulting costs.

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## APPENDIX A

## Compensation Consultant Market Shares Based on EC Consultants Sample

Name of Compensation Consultant	2009	2010	2011	2012	2013	2014	Total
Towers Watson (incl. predecessors and spin-off)	25.1%	22.2%	19.5%	18.7%	18.1%	18.9%	20.3%
Towers Perrin	18.1%	0.5%					2.8%
Watson Wyatt Worldwide	6.7%	0.6%					1.1%
Towers Watson	0.3%	19.3%	11.4%	10.5%	9.5%	9.8%	10.3%
Pay Governance		1.7%	8.1%	8.2%	8.6%	9.1%	6.1%
Frederic W. Cook	16.1%	16.6%	16.6%	18.2%	18.8%	19.2%	17.6%
Aon Hewitt (incl. predecessors and spin-off)	10.7%	9.3%	9.8%	9.8%	10.0%	10.5%	10.0%
Hewitt Associates	10.7%	5.9%	0.1%				2.6%
Aon Hewitt		1.7%	2.6%	2.7%	2.7%	2.2%	2.0%
Meridian Compensation Partners		1.5%	7.1%	7.0%	7.3%	8.3%	5.4%
Pearl Meyer & Partners	6.7%	7.9%	10.0%	10.4%	11.5%	11.1%	9.7%
Mercer (including spin-off)	10.2%	9.5%	8.3%	7.4%	7.4%	6.5%	8.1%
Mercer	10.1%	7.9%	6.3%	5.3%	5.3%	4.3%	6.5%
Compensation Advisory Partners	0.1%	1.5%	1.9%	2.0%	2.1%	2.2%	1.7%
Compensia	3.9%	4.5%	5.1%	4.9%	5.0%	5.6%	4.9%
Semler Brossy	2.8%	2.7%	2.7%	3.2%	3.6%	4.5%	3.3%
Exequity	1.2%	2.3%	2.9%	3.4%	3.9%	4.0%	3.0%
Hay Group	2.7%	3.4%	3.0%	3.2%	2.4%	2.8%	2.9%
Radford	1.6%	2.2%	2.4%	3.0%	2.8%	2.4%	2.4%
Steven Hall & Partners	1.4%	1.5%	1.9%	2.0%	1.6%	1.1%	1.6%
Compensation Strategies, Inc.	1.3%	1.4%	1.2%	0.9%	1.1%	1.2%	1.2%
Deloitte	1.2%	1.1%	0.9%	0.9%	1.0%	0.9%	1.0%
Fariant Advisors	0.7%	0.5%	0.7%	0.9%	1.5%	1.5%	1.0%
FPL Associates	0.9%	0.9%	0.7%	0.9%	0.9%	1.0%	0.9%
McLagan	0.5%	0.8%	1.3%	0.8%	0.9%	0.9%	0.9%
Longnecker & Associates	0.8%	0.9%	0.8%	0.7%	0.9%	0.8%	0.8%
Delves Group	1.1%	1.0%	0.9%	0.8%	0.5%	0.1%	0.7%
James F. Reda & Associates	0.9%	0.8%	0.7%	0.9%	0.5%	0.2%	0.7%
PricewaterhouseCoopers	0.8%	0.7%	0.6%	0.5%	0.5%	0.6%	0.6%
Other consultants	9.4%	9.8%	10.0%	8.5%	7.1%	6.2%	8.4%
Market share of multi-service consultants	53.5%	45.0%	29.2%	27.4%	25.7%	24.2%	33.6%
Market share of specialist consultants	46.5%	55.0%	70.8%	72.6%	74.3%	75.8%	66.4%
No. of different compensation consultants	72	81	80	69	71	64	104
No. of samples	919	982	1,078	1,074	1,067	1,034	6,154

Compensation consultants are listed in descending order by market shares represented in our sample (n = 6,154). Towers Perrin and Watson Wyatt merged in January 2010 to form Towers Watson, and Pay Governance was spun off from Towers Watson in July 2010. In 2010, Hewitt Associates formed Meridian Compensation Partners to deal with part of its EC consulting business. In October 2010, Aon Corp. acquired Hewitt Associates, which became Aon Hewitt as a subsidiary of Aon Group. Six consultants from Mercer's Human Capital consulting practice formally launched a new EC consulting firm, Compensation Advisory Partners, in September 2009. Multi-service consultants include Towers Perrin, Watson Wyatt, Towers Watson, Mercer, Hewitt Associates, Aon Hewitt, Radford, McLagan, Hay Group, Deloitte, PricewaterhouseCoopers, and Ernst & Young.

## APPENDIX B

## Example of Compensation Consultant Disclosure

Following is an example of compensation consultant engagement and consulting fee information disclosed in the 2010 proxy statement of Motorola Solutions, Inc.

The Motorola Solutions compensation committee hired the compensation consultant Compensation Advisory Partners (CAP) for EC services in 2010. The committee also hired compensation consultant Compensia to provide EC services for Motorola Mobility, prior to its separation from Motorola Solutions. While Motorola Solutions management did not engage an EC consultant, it hired Deloitte Consulting to provide non-EC services.

Since Motorola Solutions' EC consultant (CAP) did not provide the firm with non-EC services, and hence received zero non-EC fees, Motorola Solutions was not required to disclose its EC fees. Nonetheless, it *voluntarily* disclosed these fees. We



classify Motorola Solutions' engagement of compensation consultants as Type II (multiple consultants engaged by committee) in Table 1, Panel C, where *EC Fee* equals the EC fees paid to CAP (\$290,342), since CAP is Motorola Solutions' EC consultant, and *NEC Fee* equals zero, since Motorola Solutions' EC consultant did not provide non-EC services to the company.

### Actual Disclosure

#### Independent Consultant Engagement

The Committee engages an independent consultant to advise them on the Company's compensation strategy and program design. The consultant conducts an in depth evaluation of our compensation program on a periodic basis (typically every one or two years), and annually reviews the specific compensation of our CEO and our senior leadership team, including our NEOs. During 2010, the Committee chose to continue the engagement of Compensation Advisory Partners as its independent compensation consultant. Compensation Advisory Partners does not have any other business or consulting relationships with the Company, and no additional business relationships are anticipated in the future. The Committee has occasional discussions with Compensation Advisory Partners without management present to ensure impartiality on certain decisions.

In 2010, the Committee also engaged Deloitte Consulting to consult on the amendments to Dr. Jha's employment agreement. Deloitte Consulting provides other services to the Company, but does not provide any other compensation consulting services to the Committee. The Committee does not anticipate any future Committee-related compensation consulting engagements with Deloitte Consulting. Motorola Mobility management engaged Deloitte Consulting separately on compensation matters during 2010 to support the Motorola Mobility business in preparation for the Separation.

Prior to the Separation, the Committee decided to engage another compensation consultant, Compensia, as the consultant to the Committee for Motorola Mobility compensation matters. Compensia does not have any other business relationships with either Motorola Solutions or Motorola Mobility. The fees during 2010 for the three consultants are shown in the table below:

Type of Fees	Compensation Advisory Partners	Compensia	Deloitte Consulting
Committee-Related	\$290,342	\$349,498	\$31,408
Non-Committee-Related	\$0	\$0	\$14,035,573

### APPENDIX C

#### Variable Definitions

Variable	Description
<i>NEC Fee</i>	= non-EC service fees;
<i>EC Fee</i>	= EC service fees;
<i>Total Fee</i>	= sum of EC service fees and non-EC service fees (= <i>NEC Fee</i> + <i>EC Fee</i> );
<i>Fee Ratio</i>	= ratio of non-EC service fees to EC service fees (= <i>NEC Fee</i> / <i>EC Fee</i> );
<i>Residual</i>	= actual $\ln(\text{EC Fee})$ minus expected $\ln(\text{EC Fee})$ estimated in Equation (2);
<i>Multiple Consultants</i>	= 1 if the board and management have different EC consultants, 0 otherwise;
<i>Board Engagement</i>	= 1 if the compensation consultant is solely engaged by the board, 0 otherwise;
<i>Big Consultants</i>	= 1 if the compensation consultant is one of the Big 6 compensation consulting firms that have more than 5 percent of the market share as of 2009 (Frederic W. Cook, Mercer, Pearl Meyer & Partners, Towers Perrin, Watson Wyatt, and Hewitt Associates) or consultants related to the Big 6 established through mergers and acquisitions or spin-offs (such as Towers Watson, Aon Hewitt, Pay Governance, Meridian, and Compensation Advisory Partners), 0 otherwise;
<i>#Cda Words</i>	= number of words in the Compensation Discussion & Analysis disclosure (CDA);
<i>Switch</i>	= 1 if the primary consultant is switched to another unrelated consultant (therefore excluding changes in consultant engagement through M&As, spin-offs, or temporary disengagement due to periodical engagement agreement), 0 otherwise;
<i>Herfindahl Index</i>	= the sum of the squares of the market shares of the consultants within the industry (Fama-French 12 industry classification), where market shares are expressed as fractions based on the number of clients;

(continued on next page)



## APPENDIX C (continued)

Variable	Description
<i>Consultant Tenure</i>	= number of years employed as the firm's compensation consultant (with 2006 identified as the first year of engagement if the exact initial year is not specified);
<i>CEO Total Pay</i>	= CEO's annual total compensation (TDC1 in Execucomp);
<i>CEO Cash Pay</i>	= CEO's annual cash compensation (salary + bonus + non-equity incentive + long-term incentive program);
<i>CEO Equity Pay</i>	= CEO's annual equity compensation (grant-date fair value of stock + grant-date fair value of options);
<i>CEO Pay Mix</i>	= ratio of long-term variable pay to total compensation;
<i>Chairman CEO</i>	= 1 if the CEO also holds the board's Chairman position, 0 otherwise;
<i>CEO Old</i>	= 1 if the CEO's age is over 68, 0 otherwise;
<i>CEO Tenure</i>	= years since becoming the CEO;
<i>CEO Ownership</i>	= percentage of total shares owned by the CEO;
<i>New CEO</i>	= 1 if the CEO is newly appointed for the fiscal year, 0 otherwise;
<i>Mve</i>	= market value of equity;
<i>Leverage</i>	= total debt divided by total assets;
<i>Btm</i>	= book-to-market ratio at the fiscal year-end;
<i>SP500</i>	= 1 if the firm is listed in the S&P 500 at the end of year $t$ , 0 otherwise;
<i>Adjusted Roa</i>	= industry-adjusted (based on the two-digit SIC code) return on assets (net income minus income from discontinued operations divided by assets at the beginning of the year);
<i>Loss</i>	= 1 if the return on assets ( <i>Roa</i> ) has a negative value, 0 otherwise;
<i>Return</i>	= monthly compounded annual stock return;
<i>Return Volatility</i>	= standard deviation of monthly compounded annual stock returns ( <i>Return</i> ) over five years ( $t-5$ to $t-1$ );
<i>Sales Growth</i>	= sales growth (percent sales change from the prior year);
<i>Foreign Operation</i>	= 1 if the firm pays any foreign income tax, 0 otherwise;
<i>#Biz Segment</i>	= number of business segments;
<i>#Employees</i>	= number of employees;
<i>Institutional Ownership</i>	= percent of shares held by institutional owners;
<i>Independent IO</i>	= shares held by mutual fund managers and investment advisers;
<i>Blockholder Ownership</i>	= shares held by block holders who own at least 5 percent of the voting shares of the firm;
<i>IO Concentration</i>	= firm's Herfindahl Index of institutional ownership of each firm (sum of the squares of the institutional ownership of each institutional investors within the firm);
<i>#Analyst Following</i>	= average number of analysts covering the firm during the year;
<i>Voting Dissent</i>	= fraction of reject votes on CEO compensation packages by shareholders;
<i>Board Size</i>	= number of board members;
<i>Board Independence</i>	= fraction of outside directors in the board;
<i>Board Busy</i>	= percent of board members holding three or more directorships;
<i>Board Old</i>	= fraction of board members who are older than 68;
<i>Committee Size</i>	= number of compensation committee members;
<i>Committee Independence</i>	= 1 if all the compensation committee members are outside directors, 0 otherwise;
<i>Committee Busy</i>	= percent of compensation committee directors holding three or more directorships;
<i>Committee Old</i>	= fraction of compensation committee members who are older than 68;
<i>Committee Meet</i>	= number of meetings held by compensation committee; and
<i>Committee Tenure</i>	= average tenure of compensation committee members.