

Does CEOs Performance-based Compensation Waits on Shareholders? A Cross National Analysis

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Abstract

The objective of the paper is to develop deeper insight into how the firm's incentive systems are designed and, whether the CEOs compensation pay-to-performance schemes really align the incentives of executives and shareholders. Logit and Stepwise regressions on executive compensation data of 231 listed companies' belonging to four countries from the Anglo-American and the Euro-continental corporate governance models over the period 2004-2008 show that pay-to-performance incentives serve likely shareholders as they tend to create value. Moreover, sensitivity analyses point out that their effects on the Long Term Total Shareholder Return (LTTRS) are far from unanimous. They often depend on the context in which they are planned and executed. More specifically, they are even large than the property rights are stripped, the institutional ownership is less restricted, the governance quality is better, the investor protection is high, and the legal system is common law one.

Key words: Pay-to-performance, CEOs, Shareholders Return, Cross national Analysis, Institutional Factors

1. Introduction

Since 1990s pay-to-performance awards, along with other forms of executives' pay, are becoming the increasing popular shapes of compensation everywhere in the world. They are considered to be the favorable tool adopted to encourage executives to take actions that raise stock price, thus making shareholders better off. As well, they are seen as a solution to several agency problems (Fama, 1980). In accordance with the arm's-length executive compensation's bargaining model (Bebchuk and Grinstein, 2005), incentive compensation arrangements should be established at the root of an arm's-length transaction between directors and executives to encourage the latter to seek to get the best deal for their shareholders, otherwise, defects in these arrangements can impose substantial costs on both directors, executives, and shareholders. Accordingly, under this point of view, board policy vis-à-vis pay arrangements with executives are assumed to focus, primarily on shareholders interest. The topic on the relationship between CEOs compensation and firm performance is not primeval. Though, the link is theoretically approved, there is now a heated debate about the effectiveness of the pay-to-performance setting process in listed companies in term of value creation. Question of whether pay-to-performance awards really boost shareholders return is of an utmost importance for two reasons. First, toward the beginning of 2000s, there has been a continuous escalation in executive pay. Second, various corporate governance scandals began erupting in late this date. Thus, the question looks lawful and crude.

By examining theoretically and empirically the effects of CEOs performance-based compensation arrangements on shareholders wealth, we hope contribute on the ongoing assessment of the executive-pay landscape. Based on annual compensation data of the top five executives of 231 international firms over the period 2004-2008, we confirm prior researches standing a positive relationship between shareholder return and executive pay-to-performance awards. However, our study has a dual character of originality comparing to similar current researches. Firstly, we provide evidence that the story is not incentive effects per se. we prove significant linkage between the retained measures of executive financial pay (intensity, sensitivity) and some firm characteristics and time period on one hand, and more

interestingly, we explore certain institutional factors affecting these measures on the other hand. Secondly, our empirical methodology is conducted using dual econometric approach; Logit and Stepwise regressions. Then, our results are safe of unbiased data treatment critics.

Subsequently, the paper is organized as follows: the presentation of research hypotheses in the light of empirical benchmarks (Section 02) will precede that of presentation of the empirical methodology (Section 03). Finally, the empirical results are presented (Section 04), and the conclusion (Section 05).

2. Related Empirical Literature and Key Hypothesis Development

Although CEO compensation is not an appeared research topic, large related literature remains prisoner to the U.S. context mainly for lack of electronic data availability on pay features in foreigner areas. Besides U.S. related works, below we try hard to review the relatively limited researches achieved in settings outside the U.S.

Starting with U.S. related literature, studies by Jensen and Murphy (1990), Hall and Liebman (1998), Cyert et al. (2002), Nourayi and Mintz (2008), Canarella and Gasparyan (2008), Chhaochharia and Grinstein (2009), and Jeppson et al. (2009) are the most noteworthy works dealing with CEOs compensation and firm performance. Jensen and Murphy's (1990) study is based on data from 2213 CEOs belonging to 1295 companies from 1974 to 1986. Regression and correlation analyses between changes in executives pay and changes in shareholders wealth show a small but significant positive link between the two variables. However, the authors observed that pay practices vary across firms, and that it has been a dramatic shift in the incentive effect over time and over pay category; the effect generated by stock-options is more favorable than that of cash salary and bonus. Results from Hall and Liebman (1998) quantified at \$ 3.25 the average increase of shareholder wealth for a \$ 1000 overage increase of the firm value. The third seminal study is that of Cyert et al. (2002). It proves, both theoretically and empirically, a tenuous link between CEOs incentive compensations and firm performance. In equilibrium, the stock return (accounting return) rise by \$ 0.9075 (\$ 0.2070) when Top-management equity compensation evolve by \$ 1. The trend is nearly the same (1.0318) when considering discretionary rather than equity compensation. The sample size is at 1648 firms listed in the DISCLOSURE database and traded on the NYSE, AMEX, or NASDAQ indexes. The data used are for 1992 and 1993 fiscal years.

Nourayi and Mintz (2008) published an article on "Tenure, Firm Performance, and CEOs Compensation" in which they advance that both market-based and accounting-based performance measures are positively correlated with CEO's cash and total compensation. The sample data consist of 2601 CEO-year observations from 1446 firms for the years 2001 and 2002. The results of Canarella and Gasparyan (2008) are likely similar. Based on a panel of new economy firms over the period 1996-2002, evidences hold true the positive effect of CEOs' incentives on the both firm performance retained estimates (ROA, TSR).

Chhaochharia and Grinstein (2009) show that, despite the notable decrease in CEOs in compliance with the 2003's SEC (new) board requirements (Note 1), the incentive effect is sustained; stock return and ROA rise respectively by 0.452 and 1.541 points (0.143; 1.196 points) for each 1% increase in CEO equity-based compensation (Non equity-based compensation). Jeppson et al. (2009), using three variables to measure 2007's company performance (Total Revenue, percentage change in Net Income, and percentage change in TSR), set up regression equations for the CEOs total compensation as the dependent variable and the latter performance measures as independent variables. Results show that, except company revue, the remainder variables are significant though R2s were relatively low (Note 2).

CEO compensation literature for U.K. companies is relatively limited. Apart of Conyon and Murphy (2000), Gregg et al. (2005), Ozkan (2009), and Conyon and Sadler (2010) researches no other related studies have dealt with executive pay from the shareholder model point of view in the Canadian context. Findings from all these studies come to an agreement that, in comparison to the previous U.S. findings, there is a weak link between CEO pay and firm performance. Conyon and Murphy (2000) find that the 1997 year's pay-performance elasticity of the largest 510 companies of FTSE All Share Index is 0.12. One caveat of their study is that their sample is restricted to one-year data (Note 3). Gregg et al. (2005) and Ozkan (2009) include both cash and equity based components in their analysis. Findings of Gregg et al. (2005) for a sample of large public traded firms between 1994 and 2002 show a little relationship between pay arrangements and firm performance. Based on hand-collected data set of 390 non financial U.K. firms over the period 1999-2005, Ozkan (2009) indicates that the average pay-performance elasticity is 0.075 for cash compensation. That is, a ten percentage increase in shareholder return corresponds to an increase of 0.75% in CEO cash compensation. However, the pay-performance elasticity for total direct compensation (Note 4) is 0.095, so 26.67% greater. Conyon and Sadler (2010) have empirically investigated the relation between U.K. shareholders voting dissent on pay, firm performance, and executive pay. Researches' insights show that the total return to shareholders is positively correlated to different executive pay features.

Canadian CEOs compensation research area does not make exception. The most noteworthy articles are those written by Klassen and Mawani (2000), Chourou et al. (2008), Schiehl and Bellavance (2009), and Geremia et al. (2010). Using a sample of 806 firm-year observations during the period 1993-1995, Klassen and Mawani (2000) have found that CEOs' stock option grants are significantly correlated with the firm's short-run financial performance. Pooled and Tobit regressions' tests advocate that options pay-market performance elasticity is 0.144 indicating that a ten percentage increase in the proportion of CEOs' option compensation induces 1.44% in firm market value. Chourou et al. (2008) use stock-options mix, as well as stock options and stock price elasticity to characterize deferred setting pay. Tobit estimations reveal a significant positive growth of the market-to-book ratio in option mix upturns. Schiehl and Bellavance (2009) results are nearly the same. Multiple regression models show that the board's choice to integrate non-financial measures into the CEO bonus plan has a great positive impact in the firm's stock price. The sample combine data from 132 companies listed in the Toronto Stock Exchange. Geremia et al. (2010) explore the effects of changes in management compensation structure in response to the amendment to Section 3870, in various determinants of executive stock-options (ESOs) use. Data on 215 companies for the years surrounding the amendment to the Handbook Section 3870 (Note 5) (2000-2006) show that, beside (ESOs) which has been reduced by almost eight percent from the pre-amendment to Section 3870 period (2000-2002) to the post-amendment to Section 3870 period (2004-2006), coefficients on return on equity (ROE) and market return (RET) are statistically significant. However, coefficients on the interaction terms $3870*ROE$ and $3870*RET$ are also significant indicating that pay-for-performance relationship is hold supported even in post-amendment period.

The article of Cheffou (2009) is the only, for the best of our knowledge that deal with CEOs deferred compensation/firm performance link in the French setting. Using executives' compensation data of 103 listed firms on the Paris stock exchange from 2001 to 2004, the study shows a positive relationship between stock-options grants and firm subsequent economic performance assessed by the Tobin's Q and the ROA.

Given these research findings, we can formulate our first hypothesis as follows (CEOs refers to the firm's Top 5 executives for the remainder of the paper).

H1: CEOs pay-to-performance compensation creates shareholder value.

Empirical background shows also that controlling for ownership structure helps explain a significant amount of cross-national variation in CEOs remuneration. For a sample of 1788 U.S. companies, Bryan et al. (2000) assert that when CEOs hold a large fraction of their firms' equity, boards of directors decrease the intensity provided by stock-based awards. Mix remuneration also falls by about 13% when the percentage of CEO's stock holdings changes 1% upward. However, Johnson et al.'s (2009) results based on matched-pair conditional logistic regressions show that higher percentage of shares held by blockholders (Note 6) results in lower levels of executives' compensation and payoff convexity. Core et al. (1999) report also results of significant and negative coefficients for CEO stock ownership. Moreover, Ozkan (2007, 2009) find that CEO's stock ownership has a significant and negative impact on CEO compensation. Based on 2304 U.K. firm-year observations over the period 1999-2005, she asserts that "blockholders play a significant role in determining the total CEO compensation as if their ownership increases, total CEO compensation declines" (p. 15). Studies by Elloumi and Gueyié (2001), Chourou et al. (2008), and Schiehl and Bellavance (2009) in the Canadian setting end in similar results.

Gillan and Starks (2003), in a survey of institutional investor activism, suggest that growing institutional investors' share holdings can allow CEOs to exert greater impact on corporate issues. Hartzell and Starks (2003) examine whether institutional investors influence corporate governance by studying the link between institutional ownership and the compensation of the top five executives in 1500 U.S. firms over 1992-1997. Using either the share of institutional ownership due to the five largest holders or the Herfindhal index of institutional fractional holding, they find a strong positive relation between each of these measures and the pay-for-performance sensitivity of managerial compensation. Detailed results show that for an average executive, an increase of one standard deviation in the percentage of institutional holdings by the top five institutional investors is associated with (1) an estimated 20% increase in option-grant sensitivity to stock price changes, and (2) a greater than 20% increase in the sensitivity of changes in total compensation to changes in shareholders wealth (p. 2352). Results of firm-fixed effects regressions of the logarithm of total portfolio equity incentives on pension found ownership by Fahlenbrach (2009) show highly significant and negative coefficients. A one standard deviation increase in pension found ownership is associated with 14.8% lower pay-for-performance intensity. The study of Ozkan (2007) finds also that institutional ownership has a significant and negative impact on the level of CEO compensation for a sample of 414 U.K. companies for the year 2003. Nevertheless, in her recent study (Ozkan, 2009), she proves a positive impact of institutional share ownership on CEO pay-for-performance sensitivity. At last, Sapp (2008) finds that institutional shareholders have a major influence on

executive compensation for a set of Canadian firms.

Hypothesis two, under its alternative form, follows from these findings:

H2a: Higher CEOs equity ownership mitigates incentives provided by pay-to-performance awards.

H2b: CEOs pay-to-performance intensity falls when institutional ownership is high.

H2c: CEOs pay-to-performance sensitivity rises when institutional ownership is high.

3. Empirical Methodology

In this section, we provide variable definitions, describe our data, and ultimately lay out our empirical methodology.

3.1 Variable definitions

3.1.1 Dependent variables

Following Bergstresser and Philippon (2006), we use two measures to test the power of CEOs pay-to-performance incentives; pay sensitivity and pay intensity. Pay-to-performance sensitivity measures the dollar change in the value of the CEOs' stocks and options holding that would come from a one percentage point increase in the company stock price.

$$\text{SENS}_{it} = 0.01 * \text{Price}_{it} * (\text{Share}_{it} + \text{Options}_{it})$$

Where Price is the firm share price, Shares is the number of shares held by the CEOs, and Options is the number of options held by the CEOs.

SENS_{it} is then used to calculate the INCENTIVE RATIO (IR_{it}) which measures the LTIPs (that is stocks and share options) CEOs awards as a percentage of their total compensation.

$$\text{IR}_{it} = \text{SENS}_{it} / (\text{SENS}_{it} + \text{SALARY}_{it} + \text{BONUS}_{it})$$

Where SALARY and BONUS are CEOs base salary and cash bonus awards.

3.1.2 Independent variables

Independents variables can be divided into three groups; Total Shareholder Return (TSR), firm's economic and financial characteristics, and country's institutional factors. Table 1 present their measures along with the predicted relations with the dependent variables.

<Table 1 about here>

3.2 Data and sample characteristics

3.2.1 Data

The starting sample covers a random group of 100 U.S. companies from S&P 500 index, all U.K. listed firms of the FTSE 100 index, all Canadian companies of TSX/S&P 60 index, and all firms of SBF 120 index. Twenty-six, forty-five, fourteen, and sixty-four firms were respectively dropped from the target sample either because of incomplete needed information for the period under analyses which covers years from 2004 to 2008, or because they belong to regulated sectors.. This left us with a final sample of seventy-four U.S. firms, fifty-five U.K. companies, forty-six Canadian firms, and fifty-six French companies. Thus, 1155 firm-year observations are retained as a full sample. Needed information is hand collected from various sources. For U.S. firms, data on executives' compensation, ownership structure, board features and CEOs ages and tenures are collected from DEF 14A proxy statement reports available on the SEC files and download from EdgarScan website (edgarscan.com). Financial and accounting firm's characteristics come from the 10K annual reports contained in the same database. For the 46 Canadian firms set, data on CEOs pay, ownership and corporate governance are provided by the firms' proxy circulars available from the System for Electronic Document Analysis and Retrieval (SEDAR) database. Data on French observations are exhausted from various sources such as the Expansion, the Financial Market Authority, and the Euronext websites. For all the above cases, if some information is missing we look into companies' official websites. Data on the U.K. firms are exclusively collected from their websites (Note 7).

3.2.2 Sample characteristics

Column 2 and column 3 of Table 2 present descriptive statistics on CEOs compensation structure for the selected settings. Total compensation for U.S. CEOs has an average (median) of \$1781.85 (\$966.465) and range from \$872.106 to \$2003.856. These data are larger than those of all other CEOs in all sub-samples. Stock and option awards represent about 30% of total compensation. Pay-to-performance components (cash bonus included) are nearly one third. Mean Canadian CEOs total compensation is \$1253.359 (median 871.775) which does not largely go beyond the U.S. framework. U.S. and Canadian incentive ratios' are also likely similar. While figures on pay-intensity are larger than

those reported by Sapp (2008), but smaller than those of Zhou (1999) (do not include options awards), comparative analyses between Canadian and U.S. settings are similar enough.

U.K. (French) CEOs receive an average of \$141.702 (\$206.360) in stock-options and \$133.413 (\$122.903) in stock awards; together correspond to 30.42% (37.98%) of total compensation. U.K. firms grant more cash bonus and stocks to their CEOs than French ones, whereas French CEOs receive more stock options. Incentive ratios for these sub-samples are similar and are about 60% smaller than those obtained for U.S. and Canadian sub-samples. It is noteworthy to observe that the minimum values of long term incentives are different from zero indicating that all selected firms offer share options and stocks to their CEOs.

The means of pay-sensitivity are respectively 0.107 and 0.096 for U.S. and Canadian settings meaning that U.S. (Canadian) CEOs' cash compensation increase by 1.07% (0.96%) for every ten percentage increase in stock price. These 'profits' are larger than those obtained by U.K. (0.081) and French (0.061) CEOs, everything else equal. U.K. figures are similar to those reported by Ozkan (2009).

The descriptive statistics of firms' characteristics, ownership variables, and institutional features are shown in Table 3. The average shareholder return, which is our measure for firm performance, ranges from 0.07 (French case) to 0.325 (U.S. case). The average CEOs equity holding is notably higher in the Euro-Continental framework than in the Anglo-American one. Indeed, French and U.K. CEOs hold on average 68% and 53% of their firms' shares, nearly the twice of U.S. and Canadian CEOs shareholdings. This observation is obvious because, compared to the Anglo-American countries where ownership is diffused Euro-Continental countries are insider economies where states, banks, and families still hold controlling interests in most companies. Nevertheless, institutional ownership is larger in countries belonging to the Anglo-American setting than their European counterpart. This finding is consistent with Gillan and Starks (2003) anecdotal evidence that institutional investor activism is high in firms where ownership structure is dispersed. Comparative analysis show also notable differences in firm's size. U.S. firms are the largest with an average (median) natural logarithm of total assets equal to 19.06 (17.61) followed by Canadian and U.K. firms. French firms are the smallest ones. The mean total risk is respectively, 0.018, 0.021, 0.023, and 0.034 for U.S., U.K., Canadian, French corporations.

As for the executive compensation data, one can observe that for the most of control variables, the mean is higher than the median meaning that data distribution is skewed to the right. For firm size, for example, this seems to suggest that larger firms tend to use more LTIPs payments.

<Tables 2 about here>

<Tables 3 about here>

Table 4 displays Pearson correlation matrix. Correlation coefficients for U.S.-Canadian sub-sample (U.K.-French) sub-sample are presented above (below) the principal diagonal. We can observe that shareholder return and Gov-index have the significantly high correlation (i.e. 88.8%) which is not surprising, given that high qualified governance mechanisms generally lead to higher firm value. Institutional ownership is also highly correlated to firm performance and to all institutional features in both settings showing that institutions as large shareholders are more active in their monitoring role when governance quality is high, expropriation of shareholders is reduced, and legal system is common law one. More interesting is the highly significant negative correlation between the investor protection index and the civil-law legal origin confirming La Porta *et al.* (2006) findings that French-civil law countries have the weakest legal investors' protection level.

<Table 4 about here>

3.3 Model specification

As shown above, most dependent and independent variable are highly right-skewed. Thus, we rely on a Logit model to analyze CEOs compensation attributes/value creation link. Moreover, we run a Stepwise regression to resolve multi-collinearity problems. Both regressions are running based on the models below;

Model (1a):

$$IR_{it-1} = a_0 + a_1TSR_{it} + a_2CEOW_{it-1} + a_3INOW_{it-1} + a_4LnTA_{it-1} + a_5LEV_{it-1} + a_6TAXL_{it-1} + a_7CASH_{it-1} + a_8TORISK_{it-1} + a_9GOV-Ind_{it-1} + a_{10}IPI_{it} + a_{11}LEGAL_{it} + \epsilon_{it}$$

Model (1b):

$$\text{SENS}_{it-1} = b_0 + b_1 \text{TSR}_{it} + b_2 \text{CEOW}_{it-1} + b_3 \text{INOW}_{it-1} + b_4 \text{LnTA}_{it-1} + b_5 \text{LEV}_{it-1} + b_6 \text{TAXL}_{it-1} + b_7 \text{CASH}_{it} + b_8 \text{TORISK}_{it-1} + b_9 \text{GOV-Ind}_{it-1} + b_{10} \text{IPI}_{it} + b_{11} \text{LEGAL}_{it} + \xi_{it}$$

The right hand side variables (except IPI and LEGAL) are lagged by one period to further mitigate endogeneity problems. ε_{it} and ξ_{it} are error terms.

4. Estimation Results and Robustness Checks

4.1 Logit and Stepwise estimations

Tables 03 to 05 display Logit and Stepwise regressions' results. Estimation results for the full sample (N=1155 firm-year observations) are shown in Table 5 and per sub-sample regression results appear in Table 4 and 05. Several striking findings emerge from the third column of Table 5 presenting regression results where pay-to-performance intensity is the dependent variable. On one hand, the pay to shareholder return is strong and significant at the 5 percent level. This result support our first hypothesis and is close to those found in the literature (Canarella and Gasparyan, 2008; Ozkan, 2009). On the other hand, CEOs equity holdings have significant opposite impact on executives' mix-pay. Moreover, high institutional ownership is associated with a decrease in executive pay-to-performance intensity. This finding is consistent with agency theory predictions that institutional activism can help ensure that management does not expropriate wealth from shareholders in the form of excess pay. These results validate hypothesis H2a and corroborate findings reported by, among others, Conyon and Murphy (2000), Hartzell and Starks (2003), Ozkan (2007, 2009), and Fahlenbrach (2009). Hypothesis H2b is also validated as coefficient on top five institutional holder ownership turn to be positive when pay-sensitivity is used as the dependent variable.

Larger firms in term of total assets offer more differed pay to their CEOs including share options and restricted stocks. The coefficient on firm size is positive and significant with a large t-statistic, no matter even if the pay-sensitivity is used suggesting that CEOs of large firms have a substantially higher dollar expose to the stock price of their companies than do their peers in smaller firms. However, we fail to find any reliable evidence for possible association between neither firm leverage, nor tax loss and the incentive ratio. Evidences are the same when pay-sensitivity is considered as a dependent variable. With respect to the effect of liquidity constraints, the coefficients on this variable are positive and significant for both regression specifications. This finding displays the relative impact of differed incentives for firms that suffer liquidity lack because stock and share option awards conserve cash on the great date. Then, such firms can hedged their bets by compensating their CEOs more with stock-based compensation than with cash compensation.

Nevertheless, Logit estimation coefficients on total risk and governance index are both positive as expected and highly positive, no matter which pay-to-performance measure is used. This result contrast Chourou *et al.*'s (2008) one who find no association between firm total risk and level of stock-options mix. Whereas, a curvilinear relation is reported when firm specific is used instead of total risk. Following their approach, our findings are hold unchanged even when we use specific risk measure rather than total risk measure. We do not report the alternative specification result for the sake of brevity. Firms with high qualified governance mechanisms pay greater CEOs deferred compensation which is consistent with Fahlenbrach (2009)'s complementarity hypothesis that a strong governance environment is needed to impose a compensation contract on the executive that is performance sensitive. Also at odds with agency theory predictions (Jensen and Meckling, 1976), there is a significantly negative association between the pay-to-performance features and the investor protection index (models 1a-1 and 1b-2) offering modest support for the increasing monitoring of management entrenchment that may be provided when possibilities to expropriate shareholders' rights are high. This result corroborates Fahlenbrach (2009) findings who documents that the shareholder right index is negatively correlated with the pay-to-performance sensitivity.

Results for legal system origin and pay-to-performance measures links are mixed. While the estimated coefficient on the associated variable is positive when pay-intensity is used, it turns to be negative when pay-sensitivity is the dependent variable. This result is conform to our expectation and corroborates Brenner and Schwabach's (2009) suggestion that CEO pay is always less generous under stricter rules of law. Specifically, stronger common law rules are associated with less generous pay-to-performance schemes.

<Table 5 about here>

Table 6 displays regression results based exclusively on firms from countries belonging to the Anglo-American context. We notice that while the significance of some explanatory variables is hold unchanged at high conventional levels, significance and signs of other variables turn to be different from those previously mentioned. First, coefficients on the natural logarithm of total assets become significant at the 1% level which supports prior research with regard to the significance of the firm size as an obvious explanatory variable for both pay-to-performance intensity and sensitivity. Equally, these results lend some support to the univariate cross-countries comparative analyses showing that U.S. and

Canadian companies are the largest ones when compared to their remainder peers. Second, firm total risk becomes significant at 5% level in the first model (pay-intensity) as well as in the second model (pay-sensitivity). One possible explanation is that, because of stock market dynamism, the pay setting process in U.S. and Canadian public firms rely more on deferred pay (specifically share options) in shaping executive compensation. These findings support the anecdotal Black and Scholes (1973) theoretical evidence that the stock option value increases when the underlying share volatility rises. Third, GOV-index significance grows to 1% level in all model specifications displaying that in firms with powerful boards, CEOs are paid higher levels of pay-to-performance compensation. These findings consist with Elloumi and Gyié's (2001) results that strong boards with less powerful CEOs have the opportunity to shape CEO pay easily by negotiating better long term clauses for their compensation contracts. Fourth, more interestingly, institutional features become significant at top level, no matter the pay measures or the regression type is. The coefficient on the (IPI) is negative and significant at the 1% level meanings that high protected shareholders can serve as a curb on CEOs opportunities to cash excessive pays. Coefficient on the (LEGAL) is also negative and significant at the same level. These results support Brenner and Schwabach's (2009) argument that shareholders-directors agency conflicts' emerging when negotiating the pay contract with the CEO can be alleviated by restricted law enforcement rules such as those provided by common law systems.

<Table 6 about here>

Table 7 contains the multivariate regression results for the U.K.-French sub-sample observations. Findings in the first row further illustrate that shareholder returns are high when CEOs pay-for-performance compensation is high supporting our incentive pay-shareholder value creation assumed effect. However, contrary to previous findings, the presumed impacts of ownership structure and institutional characteristics measures on CEOs pay attribute change, although signs on firm characteristics remain likely as predicted. On one hand, the significance of the coefficient on CEOs shareholdings is at the top level, whereas no association is revealed between institutional ownership neither with pay mix, nor with pay sensitivity. Hence, hypotheses H2b and H2c are rejected but not H2a. On the other hand, coefficients of (GOV-index) are significant only for Logit regressions, though they have the expected sign. However, the effects of (IPI) turn to be insignificant in all regression specifications and change to be positive. Finally, while estimations on the legal variable show the predicted sign they are not significant.

Overall, these results are striking because no prior research have revealed advances similar to us though several studies have succeeded to outcome some relations between some variables among those we have used but in separated settings. The studies of La Porta *et al.* (2002, 2006) deserve to be cited. The authors have found the "true" channel thought which legal origin matters for example in stock market development; Anglo-American economies are highly developed because capital markets rely more on disclosure and private litigation and because their institutions are more democratically responsive to the interests of small investors. They support the view that the benefits of common law come from its emphasis on investor protection enforcement and private litigation.

<Table 7 about here>

4.2 Robustness checks

In this section, we address three issues of sensibility analysis using some additional data. The first is the divergence of our results on the determinants of CEOs compensation due to inadequate measure of pay-performance sensitivity. The second is the 'weakness' of our regressions' quality due to unsuitable specification of value creation measure. The third is about the omitted variables which may explain the weakness of our results on institutional factor effects on CEOs pay.

The first criticism which can be addressed to our regressions' quality faintness concerns the retained value creation measure. Ameel *et al.* (2002) suggest that the ratio "Total Shareholder Return" is a measure of the short term shareholders value appreciation. To address this adequacy, we have rerun our regressions using a long term shareholder value measure (Note 8). We find that coefficients on shareholder return went up on average by about 7% suggesting that the pay-to-performance incentive effect can't occur in the time being, but in the long term. Moreover, R²s run up to 17% on average displaying the growing adjustment quality of the robustness check models relatively to the base models.

Annual effective change in the CEOs wealth value comes from pay-for-performance sensitivity of the stock-options hold and granted during a year rather than stock sensitivity. To illustrate this finding, we run regression based on option grant sensitivity. Following Yermack (1995)'s approach, we first calculate the delta of every option grant (Note 9) using the Black-Sholes model. Then, we multiply the delta of the options by the number of the options granted, and divide by the number of shares outstanding at the beginning of the year. The results (Note 10) in Table 8 display that shareholder return is positively related to option-grant sensitivity, and that compared to the previous tests, shareholder value is more assessed.

Makri *et al.* (2006) and Canarella and Gasparyan (2008) advocate that new-economy firms adopt more form of CEOs compensation incentives. To check whether there is a link between CEOs compensation and firm industry, we include a dichotomous variable to the base models to indicate the high-tech industry. Defond *et al.* (2007) document that to assess the effectiveness of CEOs compensation programs, one should attach importance to the firm disclosure quality (including those fall on pay-to-performance policies and performance measures related to these policies). To address this concern, we reply Defond *et al.* (2007)'s disclosures index and add them to our exogenous variables list. We find that high-tech industry effect is an obvious determinant of CEOs pay confirming the Canarella and Gasparyan (2008)'s argument that the compensation practices in "new economy" firms relay more heavily on equity-based forms of remuneration than their "old economy" peers. Coefficients on disclosure index are also highly significant suggesting that disclosure transparency may help improve the pay-to-performance incentive effects by providing to shareholders relevant information about CEOs pay-setting process.

<Table 8 about here>

5. Conclusion

The aim of pay-to-performance compensation is to provide managers with incentives to maximize shareholder value. The ultimate purpose of this article is to clarify this finding. We address the question whether CEOs performance-based compensation wait on shareholders. Empirical background show that related research is prisoner to the U.S. framework. We succeed to fill this gap by considering areas outside this setting. Cross-countries analyses have provided out-of institutional determinants of CEOs compensation. Based on the conventional distinction made between the Anglo-American corporate governance model and the Euro-Continental one, our comparative results reveal different factors endowments which influence executives pay policies. The empirical results indicate new insights on the relationship between executives' compensation and shareholders wealth controlling for a set of corporate governance mechanisms and institutional factors for a full sample of 231 listed companies belonging to four countries for the period 2004-2008.

The findings suggest that CEOs pay-to-performance incentives serve likely shareholders; the presumed positive link between executives' compensation features and shareholders' return is supported. Moreover, pay-performance intensity, as well as pay-performance sensitivity is lower for U.K. and French CEOs than those reported U.S. and Canadian ones. The findings also suggest that the effect of ownership structure on CEOs pay-performance attributes is not unanimous. Indeed, firms in countries belonging to the Euro-Continental model show executives' pay determinants matched with a high CEOs ownership. Results display, furthermore, striking effects of the retained institutional features on pay-performance link. On one hand, governance quality seems to be effective in CEOs pay shape in both cases. On the other hand, investors' right protection and legal system origin are significant determinants of CEOs pay-setting process in the Anglo-American framework, but not in the Euro-Continental setting.

Although we believe that our results to be of interest to scholars, investors, and standard setters, no attempt has been made to control the impact of differential social, cultural, or psychological specific features of both environments on CEOs compensation practices. Further studies and analyses are needed to enrich researchers' understanding of executives' pay policies determinants in these settings.

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Notes

- Note 1. The average equity-based portion of compensation decreased from an average of \$ 5.264 million in 2000 to \$ 3.058 million in 2005, a drop of \$ 2.206 million. Much of the drop is attributed to the decline in option compensation which decreased from \$ 4.732 million to \$ 1.893 million over the same period.
- Note 2. Detailed R²s are respectively 0.039, 0.113, 0.023, and 0.074 when Base salary, Cash bonus, Percks, and Stock awards are used as exogenous variables.
- Note 3. Another remarked caveat is that the study is limited exclusively to the cash component of CEO compensation.
- Note 4. Total direct compensation includes salary and bonus cash compensation, and LTIPs (that is annual value of share options and stock awards).
- Note 5. Amendment to CICA Handbook Section 3870 is issued by the Canadian Institute of Chartered Accountants in January 1st 2004. This amendment required publicly listed firms to expense the value of executive stock-options in the income statement for the first time.
- Note 6. Including the CEOs.
- Note 7. Since 2003, listed U.K. companies are required to establish a transparent disclosure for developing policies on executives' compensation and corporate issues allowing to more detailed analyses. See Ozkan (2009) for an U.K. institutional framework survey.
- Note 8. $LTTSR_i = \sum_{t=1}^n \frac{TSE}{(1+K)^t}$ where k is the cost of equity from the Capital Assets Pricing Model; $K=R_f + \beta (R_m - R_f)$, and $n= 1, 2, \dots 5$.
- Note 9. $\Delta_c = \partial C / \partial P$, where C is the call option value and P is the price of the stock.
- Note 10. Results based on the full sample are the only reported. Per sub-sample estimations are not reported for the sake of brevity and can be requested from authors.

Table 1. Independent variable definitions and hypothesized relations with the dependent variables

Variable	Measure	Predicted sign
TSR	-Closing stock price at fiscal year-end plus dividend/the closing price in the prior fiscal year-end	+
CEOs' stock ownership	-Percentage of shares owned by the top five CEOs	-
5 largest institutional shareholders' ownership	-Percentage of five largest institutional share ownership	+/- (*)
Firm size	-Natural logarithm of total assets	+
Leverage	-Market value of total debt/market value of equity	-
Tax losses	-Tax losses carry-forward	-
Cash constraints	-[cash flow from operations-(common and preferred dividends + cash flow using in investing)/total assets]	+
Total risk	-Standard deviations of annualized stock returns over the prior calendar year	+
Gov-index	-Corporate governance quality index (**)	+
Investor protection index	-Investor protection index from world bank doing business 2008 report	-
Legal system origin	-1 if common law, 0 otherwise	?
Notes: (*) The predicted sign is; + if the incentive ratio is used as the dependent variable; - if total pay sensitivity is used as the dependent variable. (**) we use eight individual attributes to create our Gov index for each company. The eight attributes we select cover five and three CEO board characteristics. Board characteristics are; chairman and CEO positions are separated, nominating and compensation committees are composed solely of independent outsiders, board meet at least twice time annually, at least two CEOs serve on the board of other public firms, and board is controlled by more than 50% grey directors. CEO characteristics are; CEO is nominated since at least three years, he serves a member neither in the nominating committee, nor in the compensation committee, and he is aged less than 55 years. The index assigns a value of 1 to each attribute if the company meets the threshold level for that standard, and 0 otherwise.		

Table 2. Descriptive statistics of CEOs compensation and pay-to-performance measures

Variable	Mean				Sd				Median			
	U.S.	U.K.	FR	CA	U.S.	U.K.	FR	CA	U.S.	U.K.	FR	CA
Base salary	609.407	373.221	315.105	441.065	251.04	207.613	194.245	130.851	511.974	343.71	295.355	415.97
Cash bonus	376.519	243.676	180.405	271.402	197.612	327.931	133.66	186.811	224.981	146.274	135.505	172.728
Stock options	305.270	141.702	206.360	236.17	173.05	324.813	203.068	155.084	219.56	84.063	187.195	185.956
Stock awards	240.581	133.314	122.903	186.583	101.411	313.266	56.758	76.595	121.258	97.928	102.165	94.855
Total compensation	1781.85	903.87	866.74	1253.95	571.447	860.207	645.702	537.213	966.465	661.658	715.974	731.775
IR	0.761	0.631	0.614	0.667	0.6126	0.668	0.741	0.834	0.6316	0.6532	0.672	0.4841
SENS	0.107	0.081	0.061	0.096	0.202	0.106	0.097	0.133	0.08	0.073	0.049	0.078
Notes: Compensation components are on USD 000's values based on CAD/USD and EUR/USD exchange rates observed at 31-12-2008 (respectively 0.8159 and 1.3917). Minimums and maximums figures are not reported for the sake of brevity.												

Table 3. Descriptive statistics of firm characteristics, ownership and institutional features

Variable	Mean				Sd				Median			
	U.S.	U.K.	FR	CA	U.S.	U.K.	FR	CA	U.S.	U.K.	FR	CA
TSR	0.3259	0.1162	0.076	0.2069	0.7755	0.674	0.2103	0.6684	0.2714	0.0421	0.0106	0.6011
CEOs' stock ownership	0.347	0.535	0.682	0.418	0.413	0.591	0.884	0.736	0.294	0.4513	0.5383	0.4267
Institutional ownership	0.531	0.412	0.278	0.511	0.868	0.88	0.539	0.913	0.4041	0.3637	0.2121	0.3742
Firm size	19.06	13.26	11.7	17.73	25.03	19.75	16.44	23.34	17.61	11.94	9.08	11.01
Leverage	0.326	0.639	0.775	0.41	0.471	0.81	0.896	0.913	0.2429	0.4109	0.0721	0.3633
Tax losses	0.101	0.146	0.173	0.114	0.166	0.164	0.194	0.138	0.086	0.1052	0.1531	0.1278
Cash constraints	0.041	0.049	0.054	0.043	0.066	0.052	0.067	0.071	0.0231	0.039	0.0417	0.0313
Total risk	0.018	0.021	0.034	0.023	0.029	0.041	0.055	0.031	0.011	0.0307	0.4017	0.0201
Gov-index	6	6	5	6	8.3	8.8	7	8.03	5.01	5.63	4.81	5.21

All variables are as defined in Table 1 above.

Table 4. Pearson correlation matrix

Variable	1	2	3	4	5	6	7	8	9	10	11
1. TSR	1	-0.166 (0.117)	0.098 (0.006)	0.138 (0.71)	-0.068 (0.333)	-0.082 (0.289)	0.175 (0.301)	-0.283 (0.02)	0.888 (0.000)	0.177 (0.011)	0.181 (0.083)
2. CEOs' stock ownership	-0.133 (0.021)	1	-0.031 (0.061)	0.146 (0.105)	-0.19 (0.016)	0.026 (0.717)	0.047 (0.133)	0.063 (0.671)	-0.152 (0.021)	-0.142 (0.022)	0.185 (0.081)
3. Institutional ownership	0.131 (0.046)	-0.088 (0.018)	1	0.203 (0.428)	-0.028 (0.117)	-0.024 (0.037)	0.016 (0.108)	-0.023 (0.061)	0.141 (0.001)	0.099 (0.046)	0.011 (0.036)
4. Firm size	0.055 (0.051)	0.103 (0.091)	0.185 (0.325)	1	-0.095 (0.071)	-0.113 (0.07)	0.045 (0.041)	0.173 (0.06)	0.103 (0.021)	0.211 (0.017)	0.02 (0.061)
5. Leverage	-0.098 (0.046)	-0.056 (0.07)	-0.033 (0.048)	-0.02 (0.114)	1	0.113 (0.104)	-0.007 (0.017)	0.132 (0.059)	-0.413 (0.126)	-0.098 (0.071)	0.138 (0.301)
6. Tax losses	-0.017 (0.134)	0.09 (0.201)	-0.052 (0.155)	-0.022 (0.159)	0.054 (0.017)	1	-0.248 (0.129)	0.105 (0.211)	-0.068 (0.044)	-0.291 (0.06)	-0.045 (0.306)
7. Cash constraints	0.149 (0.044)	0.223 (0.071)	0.041 (0.056)	0.031 (0.065)	-0.028 (0.069)	-0.071 (0.309)	1	-0.171 (0.054)	0.19 (0.201)	0.132 (0.033)	0.035 (0.084)
8. Total risk	-0.323 (0.011)	-0.105 (0.133)	0.041 (0.561)	-0.146 (0.064)	0.152 (0.029)	0.135 (0.053)	-0.052 (0.155)	1	-0.102 (0.016)	0.045 (0.213)	-0.028 (0.056)
9. Gov-index	0.166 (0.000)	-0.142 (0.042)	0.173 (0.03)	0.203 (0.061)	-0.19 (0.021)	-0.081 (0.051)	0.007 (0.124)	-0.132 (0.16)	1	0.185 (0.001)	0.207 (0.003)
10. Investor protection index	0.055 (0.081)	-0.131 (0.071)	0.14 (0.044)	0.014 (0.036)	-0.071 (0.021)	-0.011 (0.06)	0.033 (0.026)	-0.019 (0.046)	0.131 (0.017)	1	0.109 (0.000)
11. Legal system origin	0.018 (0.059)	-0.029 (0.000)	0.129 (0.123)	0.177 (0.096)	-0.017 (0.808)	0.045 (0.088)	-0.025 (0.021)	-0.101 (0.081)	0.04 (0.386)	-0.159 (0.011)	1

Note: Correlation coefficients for U.S.-Canadian (U.K.-French) sub-sample are represented above (below) the principal diagonal. Bold numbers indicate significance at the 1% one-tailed level. *P-values* are provided in parenthesis. All variables are as defined in Table 1 above.

Table 5. Logit and Stepwise estimations on the full sample observations

Variable	Predicted sign	Model (1a)		Model (1b)	
		(1)	(2)	(1)	(2)
TSR _t	+	0.048** (2.188)	0.054*** (4.832)	0.055*** (5.78)	0.049*** (5.47)
CEOs stock ownership _{t-1}	-	-0.11* (-1.81)	-	-0.141** (-2.114)	-
5largest institutional ownership _{t-1}	+/-	-0.238** (-2.26)	0.307*** (-3.85)	-0.174** (-2.55)	0.203*** (-3.98)
Firm size _{t-1}	+	0.121* (1.85)	-	0.136* (1.96)	-
Leverage _{t-1}	-	-0.163 (-0.76)	-	-0.091 (-0.94)	-
Tax losses _{t-1}	-	-0.059 (-0.832)	-0.042*** (-3.02)	-0.045 (-0.825)	-0.023*** (-3.601)
Cash constraints _{t-1}	+	0.22*** (3.921)	-	0.14*** (2.825)	-
Total risk _{t-1}	+	0.023* (1.64)	0.029 (0.3)	0.011** (2.188)	-
Gov-index _{t-1}	+	0.131* (1.61)	0.146* (1.73)	0.277* (1.68)	0.331* (1.71)
Investor protection index _t	-	-0.234** (-2.16)	-0.391 (-0.75)	-0.301 (-0.78)	-0.421*** (-4.31)
Legal system origin _t	+/-	-0.07* 1.94	-	0.051* 1.94	-
Year Fixed effects		Yes	Yes	Yes	Yes
Constant		0.131*** (3.363)	0.410** (2.51)	0.163*** (2.951)	0.236*** (3.382)
R ²		0.11	0.173	0.132	0.191
F-Statistic		8.58*** (5.39)	13.71*** (6.24)	7.86*** (7.93)	10.78*** (6.27)
Notes:					
Model (1a) and Model (1b) are defined in Eq. 1 and Eq. 2, respectively. The dependent variable is 1 if IR or SENS is above the median and 0 otherwise in the Logit regression. All variable are as defined in Table 1. T-Statistics are provided in parenthesis. ***, **, and * indicate significance at the 1, 5, and 10% level, respectively.					
(1) Logit Regression (N=1155);					
(2) Stepwise Regression (N=1155).					

Table 6. Logit and Stepwise estimations on the U.S-Canadian sub-sample

Variable	Predicted sign	Model (1a)		Model (1b)	
		(1)	(2)	(1)	(2)
TSR _t	+	0.161*** (3.85)	0.173*** (3.37)	0.093** (2.38)	0.117*** (4.55)
CEOs stock ownership _{t-1}	-	-0.15** (-2.26)	-	-0.176** (-2.21)	-
5largest institutional ownership _{t-1}	+/-	-0.166*** (-3.42)	0.158*** (5.84)	-0.205*** (-3.98)	0.116*** (4.19)
Firm size _{t-1}	+	0.176*** (3.34)	0.191** (2.89)	0.143*** (3.01)	0.151** (2.08)
Leverage _{t-1}	-	-0.106 (-0.56)	-	-0.096 (-1.28)	-
Tax losses _{t-1}	-	-0.031 (-2.67)	-	-0.026* (-1.94)	-
Cash constraints _{t-1}	+	0.375*** (4.01)	0.313** (2.45)	0.296** (2.41)	0.369** (2.13)
Total risk _{t-1}	+	0.019** (2.188)	0.023** (2.113)	0.011** (2.096)	0.019** (2.871)
Gov-index _{t-1}	+	0.216*** (3.613)	0.304*** (7.844)	0.22** (2.091)	0.246*** (3.735)
Investor protection index _t	-	-0.346*** (-3.639)	-0.401*** (-8.271)	-0.373*** (-5.61)	-0.431*** (-3.951)
Legal system origin _t	+/-	0.113*** (4.179)	0.126*** (5.248)	0.105*** (4.209)	0.138*** (5.809)
Year Fixed effects		Yes	Yes	Yes	Yes
Constant		0.23** (2.41)	0.161* (1.09)	0.265** (2.56)	0.215* (1.534)

R ²		0.093	0.101	0.078	0.096
F-Statistic		6.72*** (5.71)	8.14*** (5.56)	11.21*** (7.86)	8.72*** (7.47)
Notes: Model (1a) and Model (1b) are defined in Eq. 1 and Eq. 2, respectively. The dependent variable is 1 if IR or SENS is above the median and 0 otherwise in the Logit regression. All variable are as defined in Table 1. T-Statistics are provided in parenthesis. ***, **, and * indicate significance at the 1, 5, and 10% level, respectively. (1) Logit Regression (N=600) ; (2) Stepwise Regression (N=600).					

Table 7. Logit and Stepwise estimations on U.K-French sub-sample observations

Variable	Predicted sign	Model (1a)		Model (1b)	
		(1)	(2)	(1)	(2)
TSR _t	+	0.103** (2.77)	0.136*** (4.14)	0.141* (1.77)	0.153*** (2.88)
CEOs stock ownership _{t-1}	-	-0.09*** (-2.24)	-0.071*** (-2.57)	-0.071*** (-2.49)	-0.063*** (-6.48)
5largest institutional ownership _{t-1}	+/-	-0.29 (-0.84)	-	-0.317 (-0.76)	-
Firm size _{t-1}	+	-0.043* (-1.56)	-	-0.055* (-1.84)	-
Leverage _{t-1}	-	-0.181*** (-6.48)	-0.17*** (-5.38)	-0.152*** (-4.73)	-0.146*** (-5.73)
Tax losses _{t-1}	-	-0.091** (-2.63)	-0.021** (-3.76)	-0.011** (-2.06)	-0.02* (-1.91)
Cash constraints _{t-1}	+	-0.145 (-0.91)	-	-0.109* (-1.51)	-
Total risk _{t-1}	+	0.017* (1.65)	-	0.013** (3.77)	-
Gov-index _{t-1}	+	0.165* (1.88)	0.231 (0.07)	0.171* (1.66)	0.201 (0.712)
Investor protection index _t	-	0.275 (0.26)	0.306 (0.678)	0.233 (0.178)	0.236 (0.815)
Legal system origin _t	+/-	-0.041 (-0.921)	-	-0.033 (-0.56)	-
Year Fixed effects		Yes	Yes	Yes	Yes
Constant		0.09* (1.95)	0.113** (2.01)	0.093** (2.26)	0.174** (2.761)
R ²		0.084	0.096	0.071	0.107
F-Statistic		11.264*** (6.16)	10.63*** (7.83)	13.46*** (7.06)	8.809*** (7.44)
Notes: Model (1a) and Model (1b) are defined in Eq. 1 and Eq. 2, respectively. The dependent variable is 1 if IR or SENS is above the median and 0 otherwise in the Logit regression. All variable are as defined in Table 1. T-Statistics are provided in parenthesis. ***, **, and * indicate significance at the 1, 5, and 10% level, respectively. (1) Logit Regression (N=555) ; (2) Stepwise Regression (N=555).					

Table 8. Robustness check results (Total sample)

Variable	Predicted sign	Model (1a)		Model (1b)	
		(1)	(2)	(1)	(2)
LTTSR _t	+	0.051*** 0.01	0.057** 0.001	0.058*** 0.000	0.052** 0.04
CEOs stock ownership _{t-1}	-	-0.11* 0.06	-0.112** 0.02	-0.166 0.218	-0.061** 0.02
5largest institutional ownership _{t-1}	+/-	-0.191** 0.02	0.193* 0.06	-0.194** 0.03	0.306 0.562
Firm size _{t-1}	+	0.156** 0.031	-0.039 0.204	0.147* 0.07	-0.05 0.117
Leverage _{t-1}	-	-0.092 0.041	-0.141** 0.03	-0.081 0.111	-0.411** 0.021
Tax losses _{t-1}	-	-0.014 0.113	0.089 0.372	-0.033 0.291	0.021 0.231
Cash constraints _{t-1}	+	0.304* 0.09	0.131* 0.06	0.211 0.389	0.096** 0.016
Total risk _{t-1}	+	0.011 0.511	0.091 0.133	0.261** 0.005	-0.011 0.206
High-tech _{t-1}	+	0.113*** 0.005	0.126* 0.1	0.117*** 0.000	0.101* 0.1
Discindex _{t-1}	+	0.157*** 0.000	0.161* 0.1	0.141*** 0.000	0.215* 0.09
Gov-index _{t-1}	+	0.204*** 0.000	0.197** 0.03	0.197*** 0.001	0.161** 0.025
Investor protection index _t	-	-0.107** 0.04	-0.09* 0.07	-0.117*** 0.004	-0.11** 0.03
Legal system origin _t	?	0.118* 0.07	0.055 0.409	0.103* 0.05	0.021 0.117
Year Fixed effects		Yes	Yes	Yes	Yes
Constant		0.112 0.002***	0.073 0.001***	0.206 0.001***	0.161 0.000***
R ²		0.173	0.187	0.116	0.101
F-Statistic		8.113 0.000***	7.514 0.000***	10.63 0.000***	9.216 0.000***
Notes: Model (1a) is defined in Eq. 1. Model (1b) is as defined in Eq. 2. In both models, the dependent variable is 1 if the incentive ratio or the stock option sensitivity is above the median and 0 otherwise in the Logit regression. All variable are as defined in Table 1. The stockholders' return measure is LTTSR but not TSR. ***, **, and * indicate significance at the 1, 5, and 10% level, respectively. <i>P-values</i> are indicated in the second level. (1) Logit Regression (N=1155); (2) Stepwise Regression (N=1155).					