

# Incentive Compensation vs SOX: Evidence from Corporate Acquisition Decisions

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## ABSTRACT

In this paper, we use the introduction of the Sarbanes-Oxley Act in 2002 to assess the impact of executive option and stock grants on corporate acquisition decisions. Amongst its many innovations, the Sarbanes-Oxley Act (SOX) has limited the value and effect of equity-related compensation. We find strong evidence of a shift in the factors driving acquisitions post-SOX. Specifically, while bid premiums have fell irrespectively of the type of acquirer, highly incentivised managers have become more risk-averse after the passage of the Act. Investors also appear to have recognised the effect of a change in equity-related pay. Both market response to acquisition announcements and post-acquisition performance have been improved after the introduction of SOX but these cannot be attributed to firms that grant high levels of incentive compensation to their managers. Our results are robust to a number of explanatory factors and confounding events in the post-SOX period.

*Keywords:* Incentive Compensation, Acquisition Decisions, Sarbanes-Oxley Act, Corporate Governance.

*JEL classification:* G32, G34, G38

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Hillier, McColgan and Tsekeris are from the University of Strathclyde, and Presthus is from Newedge Group. The authors thank Robert Faff, Allan Hodgson, Tom Smith, Andrew Marshall, Marco Bigelli, Julio Pindado, Emanuele Bajo, and Ignacio Requejo for their valuable feedback on earlier versions of the paper. They also thank seminar participants at the 2013 European Financial Management Association (Reading, UK) and the 2013 IAFD Symposium (Bologna, Italy) for their comments. All errors are our own.

Many factors can lead a firm to undertake corporate acquisitions. Growth opportunities (Erel et al., 2012), disruptive technology (Bower, 2001), managerial hubris (Roll, 1986), target undervaluation (Edmans et al., 2012), geographical proximity (Ragozzino and Reuer, 2011; Erel et al., 2012), accounting quality (Erel et al., 2012), synergies (Wang and Xie, 2009), and managerial herding (Baker et al., 2012; Duchin and Schmidt, 2013) have fairly straightforward explanations and predicted effects. However, there are a number of other drivers with less intuitive interpretations that are, nonetheless, important in understanding takeover activity and performance. In particular, the role of executive compensation and its effectiveness in incentivising managerial decisions is not clear.

The rationale underlying incentive-based executive compensation is that it aligns the objectives of managers to that of stockholders (Shleifer and Vishny, 1988). Prior research has found strong evidence to support incentive-based compensation and shown that it can strengthen company performance (Murphy, 1999; Core et al., 2003), improve shareholder value (Billet et al., 2010), increase stock price informativeness (Guay, 1999), and enhance corporate investment opportunities (Nohel and Todd, 2005; Conyon et al., 2011). Other work has argued that it may lead to abnormally high managerial risk aversion (Chhaochharia and Grinstein, 2009) or risk seeking behavior (Guay, 1999; Coles et al., 2006; Chava and Purnanandam, 2010).

It is possible that executive compensation is endogenously determined by corporate characteristics and governance rather than itself being a driver of managerial behaviour. For example, Morse et al. (2011) find that powerful managers influence their remuneration by manipulating benchmark metrics towards those that display best performance. Furthermore, independent boards, which are the cornerstone of modern governance theory, may increase executive pay (Guthrie et al., 2012). Butler and Gurun (2012) and Engelberg et al. (2013) show that managerial networks and educational relationships between institutional investors and the board are a major factor in executive compensation. Finally, firms engage in strategic peer benchmarking to maximise the pay of their senior executives (Faulkender and Yang, 2013).

In this paper, we utilise the introduction of the 2002 Sarbanes-Oxley Act (SOX) to investigate the role of executive incentive compensation on corporate acquisition decisions. The scope of SOX is exceptionally broad and its implementation affected executive pay in a number of ways. The power of individuals is restricted through mandated independence

requirements on the board of directors and its remuneration, nomination and audit subcommittees (Section 301). In addition, executives became much more accountable to shareholders and regulators because of obligatory requirements to certify all financial statements and ensure adequate financial control structures (Section 302).

The increased accountability and disclosure requirements, combined with a powerful deterrent of financial and criminal punishment, will have had an undoubted impact on executive decision-making. Barger et al., (2010) report a significant decline in risky investments as a result of SOX, particularly for larger firms with less independent boards. Cohen et al., (2013) has shown that executive pay-performance sensitivity decreased subsequent to the introduction of SOX, which they argue is directly linked to the provisions in the regulation. It is also consistent with the view that incentive-based compensation is negatively related to corporate governance quality and leads to a predominance of lower risk investments in well-governed firms (Dicks, 2012).

While the majority of previous work on this area has focused on changes in the structure and size of managerial incentive compensation post-SOX, we contribute to the literature by investigating the change in the effectiveness of incentive compensation on acquisition decisions after the passage of the Act. Our main research question asks whether the effect of executive incentive compensation on mergers and acquisitions has changed as a consequence of SOX and we find a substantial shift in the role of these instruments (stock and option grants) in driving acquisition risk, bid premiums and post-bid performance.

In order to answer our research question we attempt to examine two different hypotheses. The first hypothesis is whether incentive compensation can offset the impact of SOX in terms of decrease in risk-taking activity. Consistent with evidence looking at other forms of capital expenditure, we present evidence that the risk of acquisitions fell after SOX. Our results are striking. Not only do highly incentivised managers make more risky acquisition decisions post-SOX than their low incentivised counterparts, but they are actually those who are more heavily affected by the passage of the Act having become significantly more risk-averse. The second hypothesis tests whether firms that grant high levels of incentive compensation to their managers continue to make acquisition decisions that create more value to shareholders than their lower incentivised counterparts in the post-SOX period. Again, the answer is an emphatic no. The rejection of the above two hypotheses shows a considerable change in

managerial incentives and the effectiveness of incentive compensation on acquisition decisions post-SOX.

The remainder of the paper is organised as follows: Section I presents our data and outlines the research methodology. Section II provides a description of the sample statistics. Section III presents and discusses the empirical results. Section IV summarises and concludes.

## **I. Sample and Methodology**

The Thomson One SDC database for Mergers and Acquisitions is used to identify all US M&A activity between January 1, 1993, and December 31, 2010. A transaction is included in our sample only after meeting the following criteria: the transaction must be completed; it must have a disclosed deal value of at least \$1 million<sup>1</sup>; both the announcement and effective date of the transaction will have occurred within the sample period; both the bidder and target are US firms; the acquirer is a publicly listed company and should own less than 50 percent of the target's shares six months prior to the acquisition announcement and must acquire at least 50 percent of the shares in the transaction so as an explicit change of control to be ensured. In order to avoid the often vague definition of transactions contained in the SDC database, we follow Aktas et al. (2013) including in our sample only transactions classified as mergers, acquisitions, acquisitions of majority interest, acquisitions of assets, acquisitions of certain assets, acquisitions of remaining interest, and exchange offers.

The sample was further constrained to include only those transactions where the bidding firm has executive compensation data in ExecuComp for the year preceding the acquisition announcement and stock price and accounting data available in CRSP and Compustat at the time of acquisition announcement. This resulted in a final sample of 7,859 corporate acquisitions made by 1,926 US firms between 1993 and 2010. Regarding the target firms, only 1,887 of them were publicly listed at the time of acquisition. There is also a slight variation in the number of observations across tables because of a lack of specific data availability in some months before or after the M&A transaction took place.<sup>2</sup>

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<sup>1</sup> All dollar values in the analysis are adjusted for inflation and expressed in 2010 USD.

<sup>2</sup> Running the analysis with a balanced sample made no difference to the results and so we opted for an unbalanced sample to maximize the statistical power of our tests.

We define incentive compensation as the proportion of total executive compensation comprised of new option and restricted stock grants, aggregated across the company's top five highest paid directors in the year preceding the acquisition announcement. We classify firm-year observations as having high levels of incentive compensation (High IC) if their percentage of incentive compensation is above the annual median of all companies in the S&P ExecuComp database for that year. Otherwise, our sample firms are characterized as low incentive compensation ones (Low IC). We also divide the sample into pre- and post-SOX eras with the breakpoint being the date of SOX enactment (30 June 2002). If the acquisition announcement has been made before 30 June 2002, the firm belongs to the pre-SOX sample; otherwise, the transaction is classified as post-SOX.

Examining the effectiveness of incentive compensation and the quality of acquisition decisions post-SOX poses a number of difficulties. This period is characterised by a number of events and distinct periods, such as the market downturn after the clash of the internet bubble, the adoption of SFAS No. 123R and the recent financial crisis that could drive the findings of our analysis. Without proper control for these effects, any empirical results couldn't be safely attributed to the impact of SOX. We follow Cohen et al. (2013) to control for these confounding events. Regarding the crash of the internet bubble and the following market downturn, we form a sub-sample of the bidders with an acquisition announcement date within the years 2000 and 2001. Cumulative stock returns for these bidders are calculated for the period August 2000 to August 2001 during which the strongest impact of the internet crash is documented (Cohen et al., 2013). Based on these returns, we form deciles where the highest decile corresponds to the most positive returns. The ranking of these deciles is represented by the variable *Internet B.Crash* which is used to control for the impact of the internet crash.

The passage of SFAS No. 123R had a major, adverse impact on the use of option-based compensation (Brown and Lee, 2007). Since option grants is one of the two major constituents of the *Incentive Compensation* variable used in this paper, it is important to control for the effect of this Statement on our analysis. While the effective date of SFAS No. 123R was originally scheduled to be the first fiscal quarter after the 15<sup>th</sup> of June 2005, this was later modified by the SEC to be the first fiscal quarter of the first fiscal year after the 15<sup>th</sup> of June 2005. Thus, the dummy variable *SFAS123R* is included in our analysis which takes the value of 1 if the acquisition announcement had been made in 2006 and 0 otherwise.

Similar to the treatment of the passage of SFAS No. 123R, we use year dummy variables for the period 2007-2009 to control for the impact of the financial crisis on our results.

When we examine the relation between incentive compensation and the change in bidder's risk after acquisition, we take into consideration the fact that these two variables may be determined simultaneously. From the one hand, the level of managers' incentive compensation will have an impact on the riskiness of investment decisions. (Datta et al, 2001; Lambert et al, 1991; Agrawal and Mandelker, 1987; Smith and Stulz; 1985). On the other hand, the structure of managerial compensation and the level of incentive pay may be determined by the firm based on the desired level of risk, especially in the stricter regulatory environment post-SOX. In line with Coles et al. (2006) and Cohen et al. (2013) we use three-stage least squares regressions (3SLS) to avoid any potential bias of OLS estimators.

The market reaction to an acquisition announcement is measured by the bidder's abnormal stock price return for a two-day event window (-1, 0), where day '0' is the acquisition announcement date. Cumulative abnormal returns (CARs) are computed using the market model method (Brown and Warner, 1985) and the expected return for bidder  $i$  is given by the ordinary least squares (OLS) regression:

$$E(R_{i,t}) = \alpha_i + \beta_i R_{M,t} + \varepsilon_t$$

where  $\alpha_i$  is the regression intercept,  $\beta_i$  is the slope coefficient,  $R_{M,t}$  is the return on the CRSP S&P 500 Value-Weighted Market Index, and  $\varepsilon_t$  the random error term. The CRSP Value-Weighted Market Index is used to proxy for the market index (Antoniou et al., 2007; Golubov et al., 2012; Alexandridis et al., 2013). Market model parameters are estimated over a 200-day period ranging from 220 to 20 days prior to the acquisition announcement date.

Buy-and-Hold Returns (BHRs) are used to estimate the two-year post-acquisition stock price performance (see Ritter, 1991; Kothari and Warner, 1997; Spiess and Affleck-Graves, 1999; Bi and Gregory, 2011). The BHR is calculated as follows:

$$BHR_{i,t} = \left[ \prod_{t=1}^T (1 + R_{i,t}) - 1 \right] \times 100$$

where  $t = 1$  is defined as the first trading day after acquisition,  $R_{i,t}$  is the return on stock  $i$  on day  $t$  and  $T_i$  is the two-year anniversary date of the effective acquisition date for company  $i$ . A Similar method is used for the calculation of one-year pre-acquisition performance. Only

abnormal BHRs (using the CRSP Value-Weighted Market Index as benchmark) are included in our analysis.

The tables presenting the empirical results consist of two panels. The first panel is based on univariate analysis and presents the size and the change of the variable under examination between the different subsamples (High IC vs Low IC, Pre-SOX vs Post-SOX). The second panel implements multivariate analysis to test the robustness of the results against a number of explanatory variables based on previous research findings.

## II. Descriptive Statistics

Table 1 presents summary statistics regarding the distribution of the mergers and acquisitions included in the analysis. Cash transactions dominated the period, with 4,034 transactions compared to 1,500 equity and 2,325 hybrid (for example, cash plus equity, equity plus debt, earnout plus cash) transactions. The average deal value was \$616.74 million, but there was considerable variability in magnitude across years. The effect of the dotcom crash in 2001 and global credit crunch that started in 2007 is evident from the substantial drop in acquisitions during these periods.<sup>3</sup> Deal values exhibit an analogous trend over the same period with the exception of 2009, where the average deal value was \$1.005 billion. This was caused by a number of very large acquisitions during the year.<sup>4</sup> The impact of SOX on M&A financing is also clear. Before 2002, 40.6 percent of acquisitions were financed entirely by cash but this increased to 64.8 percent after SOX introduction. Equity only transactions have become steadily less popular, comprising only 4.3 percent of all transactions after 2002.

Panels B and C of table 1 present the distribution of acquisitions made by firms that grant to their managers high (High IC) and low (Low IC) percentages of incentive compensation respectively. The drop in acquisition activity during the internet crash and the recent financial crisis is also evident here regardless of the level of equity-related pay. Similarly, the structure and size of incentive compensation does not seem to have affected the substitution of equity for debt as a method of payment post-SOX. High IC firms finance 40 percent (34 percent) of

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<sup>3</sup> Moeller et al. (2004) and Masulis et al. (2007) note a similar pattern.

<sup>4</sup> Examples include the purchase of Sun Microsystems by Oracle (\$7.4 billion), Affiliated Computer Systems by Xerox (\$8.5 billion), Perot Systems by Dell (\$3.7 billion), 3Com by HP (\$3.2 billion), and Tandberg by Cisco (\$3.4 billion).

their acquisitions entirely by cash (equity) but this figure has increased (dropped) to 68 percent (4 percent) after 2002. Likewise, Low IC firms use only cash (equity) to pay for 41 percent (29 percent) of their acquisitions pre-SOX while 60 percent (5 percent) of their transactions are financed entirely by cash (equity) post-SOX. These patterns indicate that in corporate governance period characterized by increased monitoring, directors chose less costly modes of financing in terms of corporate control. Harford et al. (2012) show that entrenched managers prefer cash to stock as a method of payment in acquisitions in order to avoid monitoring from potential large blockholders. Also, High IC firms appear to make more expensive (larger) acquisitions than Low IC bidders. The difference is statistically significant at the 5 percent level and comes from the post-SOX period.

As noted by Shue (2013), the SEC announced new disclosure rules in 2006 and this led to changes in the reporting of executive remuneration from the original 1992 disclosure requirements. Under the 1992 system, total remuneration is defined as the sum of salary, bonus, other annual short-term compensation, total value of granted restricted stock, total value of granted stock options (using Black-Scholes), long-term incentive payouts and all other long-term compensation. Under the new 2006 reporting format, total remuneration is the sum of salary, bonus, non-equity incentive plan compensation, deferred compensation earnings, and grant-date fair value of option and stock awards to the top five executives. After 2006, option fair values are calculated as per the guidelines in FASB Statement No.123 (Revised 2004).<sup>5</sup>

Table 2 presents executive compensation data both before and after the introduction of SOX. Panel A includes compensation characteristics for our total sample of 7,859 acquisitions and shows an important drop in option grants post-SOX. Prior to SOX, executive stock options made up 57.9 percent of executive compensation, falling to 40.6 percent subsequent to the regulation. Options were largely replaced by restricted stock grants, which grew from being a very minor part of executive pay to becoming highly significant (5.7 percent pre-SOX to 19.4 percent post-SOX). With the exception of executive stock options,

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<sup>5</sup> In contrast to the 1992 disclosure requirements, which used the Black-Scholes option pricing model to value granted stock options, FASB Statement No.123 (Revised 2004) does not specify the valuation model to be used in calculating the fair value of stock options, but the expectation is that some variant of Black-Scholes (such as Black-Scholes-Merton) or a lattice model will be used. Shue (2013) recalibrated her post-2006 data to be consistent with 1992 reporting requirements for the full sample period and in robustness checks found there to be little difference in using both formats. In our own robustness tests, we have followed Shue (2013)'s methodology and find very little change. As a result, we use the unadjusted fair value of granted options after 2006 as provided by Execucomp.



executive pay increased in all areas. Panel B presents compensation data for those S&P firms listed in the ExecuComp database that undertook no acquisition activity during our sample period<sup>6</sup>. The significant drop in the use of executive stock-options post-SOX is also evident for non-acquiring firms. Similarly to our M&A sample, restricted stock grants seem to gain ground as a component of incentive compensation after 2002 replacing executive stock-options. The figures are consistent with Heron et al. (2007), Chhaochharia and Grinstein (2009), Chung (2008), Wang (2010) and Cohen et al. (2013) in that the relative importance of executive stock options fell after SOX. Moreover, in line with Guthrie et al. (2012) and Cohen et al. (2013) we don't find a decline in total compensation post-SOX. In contrast, when we examine the aggregate compensation of the top five executives, without limiting our analysis to CEOs' contracts only, we document an increase in total compensation post-SOX. Comparing acquiring with non-acquiring firms<sup>7</sup> for the period 1992-2010 we see that acquirers compensate their directors more generously in all areas with the exception of "other forms of compensation"<sup>8</sup> post-SOX. Bidders incentivize their managers more by offering higher levels of equity-related pay and bonus payment both pre and post-SOX. The results of the difference-in-difference regressions on the right column show that bidders have significantly increased executive bonus and restricted stock grants after the passage of the Act compared to non-acquiring firms.

Panels C and D contain executive compensation data for High and Low IC acquirers respectively. In line with our discussion so far, High IC firms have considerably reduced the use of executive stock options post-SOX replacing a significant part of them with restricted stock grants. As a result, our measure of incentive compensation has experienced only a very small increase from 60.2 percent before the passage of the Act to 63.3 percent post-SOX. Although the difference is statistically significant, it can't be considered too important economically. However, the picture is different for Low IC acquirers. Both stock and option grants have increased post-SOX with the difference being statistically significant at the 1 percent level. This has taken the level of incentive compensation up to 21.8 percent but it still remains well below that of High IC firms. Panel E compares executive compensation data from Panels C and D. High IC firms compensate their managers more generously than Low IC firms in terms of salary, incentive compensation (stock and option grants) and total

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<sup>6</sup> This sample contains 664 firms and 6,668 firm-year observations.

<sup>7</sup> See Panel B columns about difference in mean and median between M&A and non-acquiring firms.

<sup>8</sup> This type of compensation includes perquisites and other personal benefits, contributions to defined contribution plans, life insurance premiums, consulting fees etc.

compensation both before and post-SOX. The coefficients of the difference-in-difference regressions show that the increase in stock grants post-SOX was significantly higher for High IC acquirers compared to Low IC bidders but the managers of High IC bidders experienced a significant drop in their stock option grants for the same period compared to the managers of Low IC acquiring firms. The latter stems from the different policy followed by Low IC acquirers regarding executive stock option grants compared to the rest of S&P firms (acquirers and non-acquirers) post-SOX.

### **III. Empirical Results**

In this section, we present the results of our main empirical tests. In Section III.A, we ask if the risk of corporate acquisitions changed as a result of SOX and whether incentive compensation (IC) accentuated the change. Section III.B considers bid premiums, looks at the effect of incentive compensation on premiums, and how SOX altered this relationship. Differences in the market reaction to acquisition announcements and stock price performance between bidders with high and low levels of IC and the determinants of these differences are discussed in Sections III.C and III.D

#### *III.A. Incentive Compensation and Investment Risk*

One of the key questions stemming from the principal-agent problem is whether a firm's managers will forgo profitable risky investments to avoid bearing personal risk that may be associated with these projects. There is contrasting evidence that higher levels of incentive-based compensation in the form of restricted stock and options can lead to risk-increasing acquisitions by managers (Agrawal and Mandelker, 1987; Conyon et al., 2011). This is placed against research which shows that increased sensitivity of managerial compensation to stock performance can make undiversified directors even more risk averse (Holmstrom, 1979; Lambert et al., 1991).

After the passage of SOX, a significant decrease in risky investments has been documented (Bargeron et al, 2009). We attempt to show whether the incentives for risky decisions provided by equity-linked compensation can offset the impact of stricter regulation on risk-taking activity. To investigate the effectiveness of incentive compensation on acquisition decisions, we examine the change in standard deviation of bidders' returns after

an acquisition and ask whether SOX affected the risk-taking behaviour of managers by driving down the risk of these decisions. Following Agrawal and Mandelker (1987), Datta et al. (2001) and Barger et al (2009) we measure the change in bidder's risk as the difference in standard deviation of stock returns between the post-acquisition period and the period before the acquisition. The estimation period is 6 months (126 trading days) preceding and 6 months following the acquisition effective date. We truncate the distribution of standard deviation of stock returns at its 1st and 99th percentiles in order to avoid the impact of any extreme outliers on our results.

Panel A of Table 3 presents univariate results regarding the effect of SOX on the riskiness of acquisition decisions. It can be seen that the post-acquisition bidder's risk fell significantly after the introduction of the Act in 2002. This is consistent with research that investigates the effect of SOX on other investment decisions and found more risk-averse behaviour subsequent to its introduction (Barger et al., 2010; Cohen et al., 2012; Dicks, 2012). Given the importance of corporate acquisitions to a firm's management and the level of regulatory scrutiny surrounding these types of transactions, it is perhaps not surprising that firms became more risk averse after SOX.

However, a more striking result is evident. Whereas SOX had no effect on Low IC firms, for firms with high levels of executive incentive compensation there is a significant decrease in post-acquisition risk. Prior to SOX, our results are very similar to Datta et al., (2001) in that there is a positive relationship between post-acquisition risk and equity-related compensation for all firms. Specifically, the standard deviation of High IC firms increased by an average of 14 percent after an acquisition compared to only 7 percent for Low IC firms. In contrast, subsequent to the SOX reforms, the managers of firms whose compensation is more sensitive to performance seem to have become more risk averse than their Low IC counterparts.

The first model of 3SLS regressions in panel B confirms the univariate results. *Incentive Compensation* is a dummy variable taking the value of 1 when the firm is characterised as High IC and 0 otherwise. SOX is a dummy variable that takes the value of 1 if the acquisition announcement was made on or after the 30th of July 2002. The interaction term *ICxSOX* shows the significant drop in post-acquisition risk of High IC firms after the passage of the Act. Furthermore, the decrease in post-acquisition risk after the introduction of SOX more than offsets the increase in acquisition risk due to incentive compensation in the pre-SOX

period. The results cannot be attributed to SOX though unless we properly control for a number of factors that could also affect firms' risk. Model 2 controls for two such confounding effects: the market downturn that followed the crash of the internet bubble and the passage of SFAS No. 123R (Cohen et al., 2013). Both events are expected to lead to a reduction in risk-taking activity, especially the passage of the Statement in 2006 which considerably limited the use of executive stock options. The signs of the coefficients for the above two events are according to expectations and statistically significant for the internet crash period. However the impact of SOX on High IC firms remains both statistically and economically strong<sup>9</sup>.

A number of firm-specific factors can also have an impact on a company's risk. Model 3 of panel B controls for the most important of these factors. Barger et al. (2009) find that the decline in risky investments post-SOX is greater for larger firms. Under the new regulation, larger and more complex firms may be facing higher risk for financial misstatements which could lead to a decrease in risky investments. Following Coles et al. (2006) and Cohen et al. (2013) we use the logarithm of sales (*Log\_Sales*) as a proxy for firm size. Since we examine the change in managerial incentives, ownership can always play a key role as it changes the behaviour of executives. We define *Ownership* as the sum of stocks owned by the top five executives at the year-end prior to the acquisition announcement divided by the total shares outstanding<sup>10</sup>. The positive relation between incentive compensation and risk pre-SOX could be due to increase in leverage of High IC firms (Datta et al., 2001). To control for the latter, we also include *Leverage* as an explanatory variable, computed as the ratio of total debt to total assets. Similarly, the decrease in risk post-SOX could also be due to the decrease in leverage during the same period. In order to confirm that our results are not driven by such a change in leverage, we construct a dummy variable (*Decrease in Leverage*) that takes the value of 1 if the firm has reduced its leverage from the year end preceding the acquisition announcement to the announcement year end.

Even after controlling for all the above factors, the impact of SOX on High IC firms remains both statistically and economically strong. The downturn of the market after the

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<sup>9</sup> We also control for the period of financial crisis using dummy variables for the years 2007-2009 as we expect this period to have the same impact on risk-taking activity as that of the internet crash. The regression coefficient confirms our expectations but the impact of financial crisis on acquisition risk is not statistically significant. Since there is a considerable overlapping between the financial crisis and the post-SOX period, we opted not to report these results.

<sup>10</sup> Following McConnell and Servaes (1990), we truncate the distribution of executive ownership at their 1st and 99th percentiles in order to avoid the impact of any extreme outliers on our results.

internet crash and the passage of SFAS No. 123R lead to a reduction in risk-taking activity but they do not affect the impact of SOX. The regression output also shows that higher levels of ownership make executives less risk averse, aligning their interests with those of shareholders. This relation does not seem to have changed post-SOX. Including ownership as an explanatory variable does not affect the significant positive relation between incentive compensation and risk-taking activity pre-SOX, confirming previous research findings (Datta et al., 2001; Agrawal and Mandelker, 1987). We don't find any important relation between the acquirer's size and the standard deviation of stock returns after controlling for the impact of SOX and other confounding effects<sup>11</sup>.

The results suggest that while SOX has been beneficial in increasing managerial accountability, it has had some unintended consequences particularly relating to the incentive effect of equity-related pay. Not only has incentive compensation not managed to offset the impact of SOX, but it has also significantly altered the incentives of managers regarding risk-taking activity compared to the pre-SOX period. Post-SOX, the heightened regulatory scrutiny and punishments imposed by the Act have led to significantly more risk-averse behaviour, especially in those firms where incentives are expected to be strongest.

### *III.B. Acquisition Premium*

Extant evidence has shown that managers often pursue value-destroying acquisitions and pay a premium above what the firm is actually worth to shareholders (Shleifer and Vishny, 1988). Harford et al. (2012) documents that bid premiums are too high and managers' top priority is the reinforcement of control rather than value creation for shareholders. Roll (1986) argues that, because of managerial hubris, decision-makers overestimate the value of target firms and overpay in corporate acquisitions.

Table 4 examines whether there is a significant difference between acquisition premiums paid by firms that award high and low levels of incentive compensation to their directors and whether the enactment of the Sarbanes-Oxley Act led to more conservative behaviour among managers. Panel A presents information on the actual premium based on univariate analysis. The acquisition premium is measured as the difference between the price offered by the bidder and the target stock price four weeks prior to the acquisition announcement, expressed

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<sup>11</sup> We also control for CEO tenure but the results do not change. However, due to lack of data (we use ExecuComp to identify the date each director became CEO) the number of observation are reduced to 3,658 which has a small impact on the statistical significance of the results. Thus, we choose not to report these results here.

as a percentage of the same target stock price<sup>12</sup>. We expect that the increased accountability of managers and the stricter regulations post-SOX will have set a limit to the money managers offer for bid premiums, leading to a decrease in the overpayment for targets. Indeed, the Sarbanes-Oxley Act appears to have had a major impact on bid premiums, with falls across the full sample after SOX was introduced. Before SOX, High IC firms made an average (median) bid premium of 48.80 percent (42.21 percent) which is significantly greater than the average (median) premium of 39.37 percent (31.82 percent) paid by the same type of firms post-SOX. Similarly, the average (median) premium paid by Low IC firms is considerably reduced from 46.79 percent (39.00 percent) pre-SOX to 37.39 percent (29.72 percent) post-SOX. The results show that the passage of the Act has reduced the premiums managers pay for targets irrespectively of the level of executive incentive compensation.

The multivariate regressions in Panel B test the results against factors that could also have an important effect on the size of acquisition premiums. The first model simply confirms the findings of the univariate tests showing a statistically and economically significant decrease of acquisition premiums post SOX. The explanatory variables are defined as in section III.A. The second model controls for the downturn of the market following the internet crash (2000-2001) and the financial crisis (2007-2009) which could also affect the premiums acquirers pay for targets<sup>13</sup>. While the relation between market downturn and acquisition premiums cannot really be predicted, we see that in both periods an increase in premiums is documented. This could be considered as an increased “risk premium” in periods of higher market instability and uncertainty. The impact of SOX on bid premiums remains strong.

Model 3 introduces a number of firm-specific explanatory variables. Jensen (1988) argues that managers of good performers and excess cash may overpay for targets. We measure past performance (*Runup*) as the acquirer’s abnormal buy-and-hold stock return for one year preceding the acquisition. The regression results confirm Jensen’s (1998) theory of free cash flows. Good past performers tend to overpay for targets pre-SOX but the passage of

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<sup>12</sup> Similar to our methodology in the previous section, we exclude outliers at the 1 percent and 99 percent percentiles of the acquisition premium distribution.

<sup>13</sup> While we controlled for the passage of SFAS No. 123R in the previous section where we were examining the change in acquirer’s risk, it doesn’t seem to be any economically meaningful relation between this Statement and acquisition premiums.

SOX seems to have corrected this sign of managerial hubris<sup>14</sup>. Travlos (1987), Eckbo and Longohr (1989), Linn and Switzer (2001), Rhodes-Kropf et al. (2005), Alexandridis et al. (2013), and Giuli, (2013) show that the method of payment in corporate acquisitions can reveal important information regarding a target's value. We control for the method of payment using the dummy variable *Cash* which takes the value of 1 if the transaction has been financed entirely by cash and the dummy variable *Equity* which takes the value of 1 if the transaction has been financed 100 percent with equity. There is an indication of lower premiums if the transaction is financed only by equity before SOX but our results remain robust to the mode of payment used in the acquisition. In addition, we examine the hypothesis whether firms with higher growth opportunities induce their managers to spend more when acquiring a target. In support of this, Rau and Vermaelen (1998) have found that "Glamour" firms (firms with high Market-to-Book ratio) destroy value in acquisitions. We use the Market-to-Book ratio (*M/B*) as a proxy for growth opportunities based at the month-end prior to the acquisition announcement date as book value of total assets minus book value of equity plus market value of equity divided by book value of total assets. The regression output confirms our prediction as high M/B firms seem to pay higher premiums. The results are significant only at the 10 percent level though. Similar to the previous section, we also test whether *Ownership* can affect managerial incentives in terms of acquisition premiums but we find no statistically significant relation.

The last regression model in Panel B examines whether the payment of higher premium is linked to higher synergies stemming from the acquisition. Should that be the case, a reduction of premiums post-SOX may not be desirable. Insightful managers may be able to foresee the future value created by successful acquisitions being thus willing to pre-pay a part of this value in order to complete the transaction. We use the acquirer's two-year abnormal buy-and-hold stock return following the acquisition (*2-year\_ABHRs*) to identify the possible value created by the acquisition. The results show no statistical significant relation between the size of the premium and bidder's post acquisition performance. Our findings, which remain strong throughout all robustness tests, indicate a significant decrease in acquisition premiums post-SOX in all types of acquiring firms which is beneficial to the bidder's shareholders.

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<sup>14</sup> Using the sum of net operating, investing and financing cash flows standardized by total assets as proxy for past performance didn't change the results.

### *III.C. Market Reaction on Acquisition Announcements*

We examine the market reaction on corporate acquisition announcements by estimating the bidder's cumulative abnormal return over a two-day event window (-1,0). For those firms with more than one acquisition announcement on the same date we include only the transaction with the highest deal value to avoid biasing our results. Moreover, since we use an estimation period of 220 to 20 days before the acquisition announcement for the market model, we include only those acquisitions with an announcement date at least 320 calendar days (220 trading dates) later than the previous acquisition announcement for the same firm. Thus, we ensure that there are no overlapping periods in our CAR analysis that may induce spurious correlation that could affect our results.<sup>15</sup>

Panel A of table 5 presents average and median CARs for our sample firms pre and post-SOX. The "Total Sample" column shows a relative increase in CARs post-SOX (not statistically significant though), but the next two columns indicate that this increase is due a better market reaction regarding acquisitions made by Low IC firms (the increase is significant at the 10 percent level). Past research has shown a positive relation between equity-based-compensation and bidder's CARs around acquisition announcement (Datta et al., 2001). We find a similar relation for the pre-SOX period but not statistically significant. In contrast, acquisitions made by low incentivised managers seem to experience a better market reaction after the passage of the Act. The combined effect of decrease in High IC firms' CARs and increase in Low IC firms' CARs has led to a higher average (median) CAR for Low IC bidders of 0.36 percent (0.22 percent) compared to that of High IC acquirers post-SOX.

Panel B identifies the determinants of acquisition CARs by regressing them against managerial incentives and other variables that have been found to be important in prior research. Our dependent variable is the bidder's two-day (-1,0) cumulative abnormal return around the acquisition announcement. All explanatory variables are defined as in the previous sections. The first model confirms the results of univariate analysis according to which there is an improvement in the CARs of bidders around acquisition announcement post-SOX. However, this is not the case for all types of acquirers. When bidder's managers are highly incentivised (in terms of compensation) post-SOX, the market reaction on their acquisition announcements is inferior to that in the pre-SOX period. Model 2 controls for the

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<sup>15</sup> In robustness tests, we omitted the overlapping period criterion with little change in our results.



confounding event periods identified earlier in the paper. For at least two of these periods we expect a negative relation with the bidder's cumulative abnormal return given the market downturn that followed the internet crash (2000-2001) and the financial crisis (2007-2009). Thus, it is necessary to test whether the lower CARs of High IC firms post-SOX are really due to higher levels of incentive compensation and not due to the adverse market conditions during these periods. The results confirm that incentive compensation post-SOX is not as effective as it used to be pre-SOX. The signs of the confounding periods' coefficients are indeed negative and the passage of SFAS No. 123R seems to have negatively affected bidder's CARs. Nevertheless, the impact of incentive compensation on CARs post-SOX remains negative and significant at the 10 percent level<sup>16</sup>.

Model 3 controls for firm-specific factors that according to previous research can change the size and direction of bidder's CAR around acquisition announcements. Loughran and Vijh (1997), Datta et al. (2001) and Alexandridis et al. (2013) have shown that acquisitions financed with cash are perceived more positively by the market. Thus, using dummy variables (*Cash*, *Equity*), we control for acquisitions financed entirely by cash as well as for acquisitions financed only with equity in order to test the way the method of payment can affect market reaction. We also examine whether there is any connection between the market reaction around the acquisition announcement date and the stock-price performance preceding the acquisition announcement (*Runup*) as investors could react more positively to announcements made by better-performing firms. Our next explanatory variable is *Ownership* as it has been documented that high levels of executive ownership can negatively affect M&A activity (Caprio et al., 2011) or cause an adverse market reaction around the acquisition announcement date (Bauguess and Stegemoller, 2008). In addition, we include acquirer's Market-to-Book ratio in our analysis in order to make sure that our results are not driven by any possible endogeneity between bidder's growth prospects and high proportions of incentive compensation.

According to our expectations, the results show a statistically and economically positive impact of cash acquisitions on market reaction confirming previous research<sup>17</sup>. The positive impact of SOX is now statistically insignificant indicating that it is the replacement of equity

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<sup>16</sup> The results in the first two models are significant at the 10 percent level using robust, heteroscedasticity consistent standard errors.

<sup>17</sup> It should be noted that when *Cash* is included as an explanatory variable, the explanatory power of our model increases considerably.

for cash<sup>18</sup> post-SOX that has driven the increase in CARs for Low IC acquirers. However, while High IC firms have also substantially replaced equity for cash as a method of payment in the post-SOX period, the negative impact of compensation incentives on market reaction remains strong. No other explanatory variable is statistically important apart from the bidder's Market-to-Book ratio which is negative and important at the 5 percent level. This is in line with the findings of Rau and Vermaelen (1998) that it is actually the "Glamour", high Market-to-Book ratio, firms that are responsible for the destruction of value in corporate acquisitions.

Model 4 combines those variables from models 2 and 3 that were found to have a statistically important explanatory power<sup>19</sup>. Even when examining all these important factors together, none of them loses its level of statistical significance. The negative impact of incentive compensation on bidders' CARs after controlling for confounding events and firm-specific factors could probably be a good justification of the reduction of this type of compensation post-SOX as documented in previous studies (Cohen et al., 2013; Dicks, 2012). This is in line with our results about the change in acquirer's risk in the post-acquisition period. While pre-SOX higher incentive compensation was leading managers to better quality and more risky acquisitions, after the passage of the Act, highly incentivised managers seem to prefer acquisitions of lower quality and risk. This indicates that SOX has considerably altered managerial incentives stemming from equity-related compensation. Moreover, the positive relation between cash acquisitions and market reaction around the announcement date may be another reason, apart from that of securing corporate control, for the substitution of equity for cash as a payment method after 2002.

#### *III.D. Incentive Compensation and Long-term Post-acquisition Performance.*

Although SOX clearly impacted upon acquisition decisions and the incentive effect of executive compensation, the long-term performance of bidders may have been unaffected. Datta et al. (2001) finds that stronger managerial incentives were linked to higher post-acquisition performance prior to SOX. However, with the impact of the Act on managerial risk-seeking behaviour, it is possible that the factors that drive acquisition performance may have changed in the years after SOX was introduced. We first examine whether there has been a change in long-term acquisition performance and then investigate the factors

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<sup>18</sup> See Table 1.

<sup>19</sup> Creating a model that includes all variables from models 2 and 3 gives us identical results but a lower number of observations.

underlying the change. We measure long-term post-acquisition performance using the acquirer's Abnormal Buy-and-Hold Return (ABHR) which is defined as the difference in bidder's 2-year BHR subsequent to the acquisition effective date and the CRSP S&P 500 Value-Weighted Market Index 2-year BHR for the same time period. In order to avoid the impact of large outliers on our results, the distribution of the 2-year ABHRs has been truncated at the 1st and 99th percentiles. We opt for a two year event window to maximise the number of observations while ensuring a long-enough period to make appropriate assertions about performance longevity. To maintain independence of observations and avoid any bias in the analysis, we include only the acquisition with the highest deal value made by each firm (when there are more than one acquisitions made by one firm on the same date) and omit all further acquisition events taking place within two years.

Panel A of Table 6 shows the 2-year ABHRs for both pre- and post-SOX periods. The results are quite similar to those of bidders' CARs around acquisition announcements discussed in the previous section. There is evidence that the long-term post-acquisition performance of acquiring firm has been improved post-SOX but this is mainly due to a better post-acquisition stock price performance of Low IC firms. Firms that grant relatively low levels of incentive compensation to their managers, have significantly increased their average (median) ABHR from -2.38 percent (-9.94 percent) to 4.37 percent (-3.57 percent) and it is these types of firms that mainly drive the results of the whole sample. Prior to 2002, highly incentivised bidders seem to perform better than their low incentivised counterparts but this relation has been reversed post-SOX. However, the differences in ABHR between High and Low IC firms are not statistically significant for any of the two sub-periods<sup>20</sup>.

To investigate the determinants of long-term acquisition performance, we carry out a multivariate analysis of the 2-year ABHR on a number of control and explanatory variables that have been identified as important either by the literature or by our analysis so far. Panel B presents the results. The dependent variable is the acquirer's ABHR defined as the difference between the natural logarithm of 1 + the acquirer's 2-year post-acquisition BHR and the natural logarithm of 1 + the CRSP S&P 500 Value Weighted Index BHR for the same period. All independent variables are defined as in the previous sections. The simplified first model confirms the univariate findings of a significant improvement in bidder's long-term

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<sup>20</sup> When we restrict our analysis to the period 1993-1998 we find a statistical significant (at the 1 percent level) outperformance of High IC firms which is totally in line with the findings of Datta et al., (2001).

post-acquisition stock price performance after the introduction of the Act. It is obvious though that a number of explanatory variables are missing from the analysis at this stage.

The second model controls for the confounding events of internet crash, passage of SFAS No. 123R and financial crisis. It is important to control for these events as their expected negative impact on stock price performance can offset a possible positive effect of incentive compensation. Indeed, the coefficients of these variables are negative but only that of SFAS No. 123R is statistically significant (at the 1 percent level). Having found that cash acquisitions are those that drive the increase in bidders' CARs around acquisition announcement post-SOX, it is important to test whether this factor can have an impact on long-term post-acquisition performance too. The coefficient of the *Cash* variable is positive but not statistically significant indicating that while the method of payment can affect the market reaction around the announcement date, it has no impact on the long term performance of the bidder. Based on Jensen's (1988) free cash flow theory, we also examine whether past performance (*Runup*) can be related to post-acquisition long-term performance but no such relation is found. However, the results show that the documented increase in ABHRs post-SOX is due to a considerable improvement in the stock-price performance of high market-to-book value firms. While these types of firms perform poorly pre-SOX confirming the findings of Rau and Vermaelen (1998), they experience a significant increase in their long-term post-acquisition performance after the passage of the Act. What is more, the change in the coefficient of *M/B* between the pre- and post-SOX period (from -5 percent to +5 percent) is equal in size and statistical significance with the coefficient of SOX in the first model (10 percent). This indicates that firms with high growth opportunities are those that have managed to improve their long-term performance post-SOX. Growth can be correlated to firm size though as small firms may have more growth opportunities than large, established firms. Thus, we also control for size (*Log\_Sales*) in our analysis. The results show a superior performance of large firms pre-SOX but firm size has no impact on our post-SOX findings.

While model 2 reveals that the improvement in bidders' post-acquisition performance after the passage of the Act can be attributed to a significant positive change in the stock price performance of growth firms, it doesn't say anything about the role of incentive compensation. However, the univariate analysis (panel A) identifies the Low IC firms as those with a significant increase in their long-term acquisition performance post-SOX. Therefore, models 3 and 4 partition our sample to High and Low IC firms respectively to

investigate whether different levels of incentive compensation can affect the impact of the above factors on post-acquisition performance. While all high market-to-book ratio acquirers perform poorly before SOX, there is no improvement in the performance of these type of firms if their managers are granted high percentage of stock options and restricted stocks post-SOX. In addition, highly incentivised bidders have been more adversely affected by events such as the passage of SFAS No. 123R and the downturn of the market following the crash of the internet bubble. In contrast, only growth firms that award to their directors low levels of incentive compensation post-SOX experience a significant improvement in their acquisition performance. The results also show that the superior performance of large firms before 2002 is linked to high incentive compensation adding to the better performance of High IC firms, compared to Low IC firms, in the pre-SOX era. In line with our findings in previous tables, the analysis of long-term acquisition performance indicates that after the passage of SOX, managerial incentives have changed and high incentive compensation is no longer such an effective mechanism in aligning the interests of managers with those of shareholders as it used to be in the past. The results could be also supportive of the findings of Bystrom (2012) who proposes that executive compensation should be asset-based rather than equity based so as a stronger link with actual long-term performance can be achieved.

#### **IV. Summary and Conclusions**

The Sarbanes-Oxley Act had a major impact on the relationship between executive equity-related compensation and acquisition decisions. Our analysis of 7,859 mergers and acquisitions made by U.S. firms from January 1993 until December 2010 provides further evidence that companies reduced risk and risk-taking activities after the act was introduced (Cohen et al., 2012; Barger et al., 2010). Acquisitions made by firms with high levels of incentive compensation (IC) were significantly lower risky after SOX than they were beforehand. Furthermore, whereas prior to SOX highly IC bidders made significantly more risky acquisitions than low IC firms, post-SOX, the relationship flipped completely. These results show that incentive compensation cannot offset the adverse impact of SOX in risk-taking activity after 2002. What is more, the managers of acquiring firms whose compensation is more closely related to performance have become more risk averse post-SOX.

While the effectiveness of incentive compensation has been reduced in the post-SOX period, the passage of the Act appears to have improved the quality of acquisition decisions reducing the agency costs between managers and shareholders. Bid premiums have considerably decreased irrespectively of the level of incentive compensation paid to directors. Since we find that higher bid premiums are not related to better post-acquisition performance, the decrease in acquisition premiums can be considered as a value creation (or less value destruction) for bidder's shareholders. Moreover, both the short-term and long-term stock price performance of acquirers have been improved post-SOX. After 2002, the market reacts more positively to acquisition announcements and more value is created for shareholders in the long-run. The results are robust for a number of confounding effects that could affect stock price performance in the same period. However, in contrast to the reduction in bid premiums, the improvement in acquisition performance is only evident for Low IC firms. More specifically, acquirers have largely substituted equity for cash as a method of payment post-SOX and the market perceives more positively cash acquisitions made by low incentivised managers. In addition, Low IC firms with high growth opportunities have managed to significantly improve their post-acquisition long-term performance. High IC firms on the other hand, have failed to capitalise any of these, beneficiary to shareholders, changes and their stock price performance is not considerably different than that of the pre-SOX era.

The argument in favour of a positive relation between incentive compensation and firm value (see, for example, Datta et al., 2001) cannot explain the relationships subsequent to the Sarbanes-Oxley Act. What can explain this striking change in behaviours? A likely explanation is that the heightened accountability and more punitive legal response to poor decisions led highly incentivised managers to become more risk-averse. Even superior long-term stock price performance which has been the strongest argument in support of equity-related compensation now seems vulnerable. The introduction of the Sarbanes-Oxley Act has also reduced the strength of evidence supporting managerial hubris and entrenchment through the decrease of bid premiums and value destruction in corporate acquisitions.

The key insight provided by the paper is that the Sarbanes-Oxley Act massively changed managerial incentives and this impacted upon their approach to major acquisition decisions and the effectiveness of incentive compensation. Not only were the real effects of these decisions affected but investors also recognised a difference in decision-making. The results are supportive of the decrease in incentive compensation post-SOX (Cohen et al., 2013) as

well as of acquirers' choice to replace equity for cash as a payment method after 2002. They also confirm Dicks' findings (2012) that in a corporate governance environment characterised by stricter regulation, less incentive compensation would be required to reduce agency costs. Future research should look into the change further and determine which firms were most sensitive to the effects of SOX and whether it can be exploited for value gain.

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**Table 1 - Distribution of Corporate Acquisitions 1993-2010**

The sample consists of 7,859 acquisitions completed during the period January 1, 1993, to December 31, 2010. The firms are listed in the Thomson One SDC database for Mergers and Acquisitions and have executive compensation data available in the Standard and Poor's ExecuComp database. Deal value is taken from the Thomson One SDC database and refers to deal value at announcement date. Cash refers to corporate acquisitions financed with cash only. Equity refers to corporate acquisitions paid 100 percent with stock. Mixed refers to a combination of cash, equity, debt, earnout and other method of financing. High IC refers to firms whose percentage of incentive compensation, which is defined as the sum of option and stock grants to the top-5 executives as percentage of their total compensation, is higher than the annual median of all S&P ExecuComp firms for that year; otherwise the firms are classified as Low IC. Acquisitions with an announcement date before 30 June 2002 are characterised as pre-SOX; otherwise they are classified as post-SOX.

**Panel A: Distribution of Corporate Acquisitions by Year & Method of Payment 1993-2010**

Year	Number of Acquisitions	% of Sample	Avg. Deal Value (\$ Millions)	Cash	% of Year	Equity	% of Year	Mixed	% of Year
1993	319	4.1%	148.53	119	(37.3%)	117	(36.7%)	83	(26.0%)
1994	354	4.5%	253.93	151	(42.7%)	116	(32.8%)	87	(24.6%)
1995	351	4.5%	434.85	135	(38.5%)	126	(35.9%)	90	(25.6%)
1996	466	5.9%	405.62	180	(38.6%)	158	(33.9%)	128	(27.5%)
1997	542	6.9%	443.47	192	(35.4%)	198	(36.5%)	152	(28.0%)
1998	583	7.4%	644.07	220	(37.7%)	207	(35.5%)	156	(26.8%)
1999	593	7.5%	907.25	260	(43.8%)	184	(31.0%)	149	(25.1%)
2000	534	6.8%	959.38	217	(40.6%)	155	(29.0%)	162	(30.3%)
2001	429	5.5%	660.39	218	(50.8%)	66	(15.4%)	145	(33.8%)
2002	448	5.7%	387.15	244	(54.5%)	35	(7.8%)	169	(37.7%)
2003	461	5.9%	422.81	284	(61.6%)	30	(6.5%)	147	(31.9%)
2004	482	6.1%	677.77	290	(60.2%)	30	(6.2%)	162	(33.6%)
2005	476	6.1%	949.13	286	(60.1%)	17	(3.6%)	173	(36.3%)
2006	446	5.7%	873.22	308	(69.1%)	19	(4.3%)	119	(26.7%)
2007	471	6.0%	555.16	307	(65.2%)	12	(2.5%)	152	(32.3%)
2008	358	4.6%	638.24	242	(67.6%)	13	(3.6%)	103	(28.8%)
2009	261	3.3%	1,004.89	164	(62.8%)	12	(4.6%)	85	(32.6%)
2010	285	3.6%	456.37	217	(76.1%)	5	(1.8%)	63	(22.1%)
Total	7859	100.0%	616.74	4034	(51.3%)	1500	(19.1%)	2325	(29.6%)

**Table 1 (Continued)**

**Panel B: Distribution of Corporate Acquisitions by High IC firms by Year & Method of Payment**

Year	Number of Acquisitions	% of Sub-Sample	Avg. Deal Value (\$ Millions)	Cash	% of Year	Equity	% of Year	Equity Mixed	% of Year
1993	178	3.8%	177.52	66	(37.1%)	68	(38.2%)	44	(24.7%)
1994	204	4.3%	329.66	84	(41.2%)	69	(33.8%)	51	(25.0%)
1995	194	4.1%	466.27	77	(39.7%)	72	(37.1%)	45	(23.2%)
1996	253	5.4%	445.22	101	(39.9%)	85	(33.6%)	67	(26.5%)
1997	299	6.3%	471.48	112	(37.5%)	106	(35.5%)	81	(27.1%)
1998	373	7.9%	729.32	137	(36.7%)	143	(38.3%)	93	(24.9%)
1999	362	7.7%	862.32	142	(39.2%)	130	(35.9%)	90	(24.9%)
2000	334	7.1%	1,110.58	122	(36.5%)	113	(33.8%)	99	(29.6%)
2001	271	5.8%	726.57	145	(53.5%)	45	(16.6%)	81	(29.9%)
2002	258	5.5%	220.48	153	(59.3%)	19	(7.4%)	86	(33.3%)
2003	274	5.8%	547.88	171	(62.4%)	19	(6.9%)	84	(30.7%)
2004	297	6.3%	958.17	182	(61.3%)	19	(6.4%)	96	(32.3%)
2005	304	6.5%	773.38	197	(64.8%)	4	(1.3%)	103	(33.9%)
2006	253	5.4%	796.62	191	(75.5%)	8	(3.2%)	54	(21.3%)
2007	294	6.2%	655.70	193	(65.6%)	8	(2.7%)	93	(31.6%)
2008	206	4.4%	898.22	157	(76.2%)	8	(3.9%)	41	(19.9%)
2009	167	3.5%	1,302.90	112	(67.1%)	6	(3.6%)	49	(29.3%)
2010	190	4.0%	507.36	144	(75.8%)	3	(1.6%)	43	(22.6%)
Total	4711	100.0%	682.44	2486	(52.8%)	925	(19.6%)	1300	(27.6%)

**Panel C: Distribution of Corporate Acquisitions by Low IC firms by Year & Method of Payment**

Year	Number of Acquisitions	% of Sub-Sample	Avg. Deal Value (\$ Millions)	Cash	% of Year	Equity	% of Year	Equity Mixed	% of Year
1993	141	4.5%	111.94	53	(37.6%)	49	(34.8%)	39	(27.7%)
1994	150	4.8%	150.93	67	(44.7%)	47	(31.3%)	36	(24.0%)
1995	157	5.0%	396.03	58	(36.9%)	54	(34.4%)	45	(28.7%)
1996	213	6.8%	358.59	79	(37.1%)	73	(34.3%)	61	(28.6%)
1997	243	7.7%	409.01	80	(32.9%)	92	(37.9%)	71	(29.2%)
1998	210	6.7%	492.64	83	(39.5%)	64	(30.5%)	63	(30.0%)
1999	231	7.3%	977.68	118	(51.1%)	54	(23.4%)	59	(25.5%)
2000	200	6.4%	706.87	95	(47.5%)	42	(21.0%)	63	(31.5%)
2001	158	5.0%	546.87	73	(46.2%)	21	(13.3%)	64	(40.5%)
2002	190	6.0%	613.47	91	(47.9%)	16	(8.4%)	83	(43.7%)
2003	187	5.9%	239.53	113	(60.4%)	11	(5.9%)	63	(33.7%)
2004	185	5.9%	227.63	108	(58.4%)	11	(5.9%)	66	(35.7%)
2005	172	5.5%	1,259.74	89	(51.7%)	13	(7.6%)	70	(40.7%)
2006	193	6.1%	973.64	117	(60.6%)	11	(5.7%)	65	(33.7%)
2007	177	5.6%	388.16	114	(64.4%)	4	(2.3%)	59	(33.3%)
2008	152	4.8%	285.89	85	(55.9%)	5	(3.3%)	62	(40.8%)
2009	94	3.0%	475.44	52	(55.3%)	6	(6.4%)	36	(38.3%)
2010	95	3.0%	354.37	73	(76.8%)	2	(2.1%)	20	(21.1%)
Total	3148	100.0%	518.43	1548	(49.2%)	575	(18.3%)	1025	(32.6%)

**Table 2 - Compensation Characteristics of Acquirers' Top Five Executives**

The sample consists of 7,859 acquisitions completed during the period January 1, 1993, to December 31, 2010. The firms are listed in the Thomson One database for Mergers and Acquisitions and have executive compensation data available in the Standard and Poor's ExecuComp database. All compensation data has been sampled at the year-end preceding the corporate acquisition announcement. Total compensation is defined as the sum of salary, bonus, grant-date fair value of stock awards, total value of stock options granted and other forms of annual compensation. Under the 1992 reporting format, other forms of compensation include other (short-term) annual compensation, long-term incentives payouts and all other long-term compensation while under the 2006 reporting format, other forms of compensation include non-equity incentive plan compensation, deferred compensation earnings reported as compensation and other compensation awarded to the top five executives. Out of 7,859 acquisitions in the sample, bidders awarded new option and/or stock grants in 7,104 acquisitions. Acquisitions with an announcement date before 30 June 2002 are characterised as pre-SOX; otherwise they are classified as post-SOX. High IC refers to firms whose percentage of incentive compensation is higher than the annual median of all S&P ExecuComp firms for that year; otherwise the firms are classified as low IC. \*\*\*, \*\*, \* indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively.

**Panel A: Change in Compensation Characteristics for the Total Sample of M&As**

Compensation (\$ 000s)	Pre-SOX					Post-SOX					Difference in Mean	Difference in Median
	Mean	Median	Standard Deviation	Observations	Percentage of Total Compensation	Mean	Median	Standard Deviation	Observations	Percentage of Total Compensation		
Salary	2,277.74	2,063.11	1,142.34	4,431	14.46%	2,503.09	2,259.56	1,183.60	3,412	13.46%	-225.35***	-196.45***
Bonus	2,332.74	1,269.54	5,445.29	4,193	14.81%	2,575.19	1,058.30	7,140.44	2,674	13.85%	-242.45*	211.24***
Stock Grants	900.51	0.00	3,844.28	1,052	5.72%	3,614.05	341.16	7,875.01	1,856	19.44%	-2713.54***	-341.16***
Option Grants	9,120.88	2,382.61	25,552.77	3,792	57.90%	7,546.71	2,634.18	18,531.89	2,719	40.59%	1574.17***	-251.56
Other Forms of Compensation	1,121.21	199.97	3,613.23	4,199	7.12%	2,353.90	567.93	5,062.35	3,314	12.66%	-1232.69***	-367.96***
Total Compensation	15,753.09	7,345.43	28,761.89	4,435	100.00%	18,592.95	10,371.46	25,923.55	3,424	100.00%	-2839.86***	-3026.03***
Incentive Compensation (%)	41.77	40.91	27.98	3,917		47.16	49.75	24.51	3,187		-5.39***	-8.84***

**Panel B: Compensation Characteristics for Non-Acquiring Firms and comparison with M&As Sample**

Compensation (\$ 000s)	Pre-SOX					Post-SOX					Difference in Difference	
	Non-Acquirers Mean	Non-Acquirers Median	Percentage of Total Compensation	Difference in Mean	Difference in Median	Non-Acquirers Mean	Non-Acquirers Median	Percentage of Total Compensation	Difference in Mean	Difference in Median	coefficient	t-stat
Salary	2,099.25	1,859.05	20.54%	178.49***	204.06***	2,343.65	2,153.95	19.88%	159.44***	105.61***	-19.06	-0.49
Bonus	1,746.44	750.48	17.08%	586.30***	519.06***	1,325.06	228.69	11.24%	1250.14***	829.61***	663.83	3.66***
Stock Grants	663.01	0.00	6.49%	237.50***	0.00	2,959.76	459.24	25.11%	654.29***	-118.07	416.79	2.21**
Option Grants	4,764.89	1,132.11	46.61%	4355.99***	1250.50***	2,729.48	722.07	23.15%	4817.24***	1912.11***	461.25	0.74
Other Forms of Compensation	948.63	166.75	9.28%	172.58**	33.22***	2,430.99	951.74	20.62%	-77.09	-383.80***	-249.66	-1.71*
Total Compensation	10,222.23	5,098.02	100.00%	5530.86***	2247.41***	11,788.94	7,795.55	100.00%	6804.01***	2575.91***	1273.15	1.62
Incentive Compensation (%)	33.09	29.84		8.68***	11.07***	36.03	38.96		11.13***	10.79***	2.45	2.76***

**Table 2 (Continued)**

**Panel C: Change in Compensation Characteristics for High IC Firms**

Compensation (\$ 000s)	Pre-SOX					Post-SOX					Difference in Mean	Difference in Median
	Mean	Median	Standard Deviation	Observations	Percentage of Total Compensation	Mean	Median	Standard Deviation	Observations	Percentage of Total Compensation		
Salary	2,367.05	2,146.87	1,154.33	2,615	11.02%	2,604.64	2,401.66	1,127.53	2,080	10.90%	-237.59***	-254.80***
Bonus	2,361.45	1,330.94	3,599.08	2,469	10.99%	2,606.19	1,078.46	6,038.59	1,579	10.91%	-244.74	252.48***
Stock Grants	1,380.65	0.00	4,749.56	757	6.43%	5,255.25	1,525.45	9,415.13	1,303	22.00%	-3874.60***	-1525.45***
Option Grants	14,511.06	5,609.82	32,014.85	2,577	67.54%	11,261.36	5,385.72	22,754.80	1,840	47.14%	3249.70***	224.10***
Other Forms of Compensation	863.73	185.76	2,368.18	2,477	4.02%	2,160.06	557.57	3,949.36	2,021	9.04%	-1296.33***	-371.41***
Total Compensation	21,483.95	11,482.14	34,483.54	2,619	100.00%	23,887.50	14,999.57	29,105.74	2,092	100.00%	-2403.56***	-3517.43***
Incentive Compensation (%)	60.20	60.02	19.26	2,619		63.29	61.22	13.55	2,092		-3.08***	-1.20***

**Panel D: Change in Compensation Characteristics for Low IC Firms**

Compensation (\$ 000s)	Pre-SOX					Post-SOX					Difference in Mean	Difference in Median
	Mean	Median	Standard Deviation	Observations	Percentage of Total Compensation	Mean	Median	Standard Deviation	Observations	Percentage of Total Compensation		
Salary	2,148.94	1,931.16	1,112.59	1,816	28.70%	2,343.60	2,088.83	1,250.54	1,332	22.80%	-194.65***	-157.66***
Bonus	2,291.34	1,196.08	7,331.44	1,724	30.60%	2,526.51	1,007.86	8,592.63	1,095	24.58%	-235.17	188.22***
Stock Grants	208.07	0.00	1,659.04	295	2.78%	1,036.43	0.00	3,057.11	553	10.08%	-828.36***	0.00***
Option Grants	1,347.26	436.24	3,784.91	1,215	17.99%	1,712.60	644.93	3,746.27	879	16.66%	-365.33***	-208.68***
Other Forms of Compensation	1,492.54	221.99	4,855.00	1,722	19.93%	2,658.34	577.91	6,422.76	1,293	25.87%	-1165.80***	-355.93***
Total Compensation	7,488.16	4,383.39	13,783.94	1,816	100.00%	10,277.47	5,616.88	16,857.43	1,332	100.00%	-2789.31***	-1233.49***
Incentive Compensation (%)	15.19	13.93	13.39	1,298		21.83	24.44	14.34	1,095		-6.65***	-10.51***

**Panel E: Difference in Compensation Characteristics between High and Low IC Firms (Panel C - Panel D)**

Compensation (\$ 000s)	Pre-SOX				Post-SOX				Difference in Difference	
	Mean	Median	t-statistic	z-statistic	Mean	Median	t-statistic	z-statistic	coefficient	t-stat
Salary	218.11	215.70	6.32***	6.63***	261.05	312.84	6.18***	8.40***	42.94	0.80
Bonus	70.11	134.86	0.38	3.94***	79.68	70.60	0.30	0.02	9.57	0.03
Stock Grants	1172.57	0.00	11.65***	11.52***	4218.82	1525.45	18.98***	18.21***	3046.25	11.35***
Option Grants	13163.80	5173.57	20.83***	45.00***	9548.76	4740.80	18.80***	30.68***	-3615.03	-3.53***
Other Forms of Compensation	-628.81	-36.23	-5.11***	-3.20***	-498.28	-20.34	-2.54**	-0.13	130.53	0.65
Total Compensation	13995.79	7098.75	18.73***	31.62***	13610.03	9382.69	17.31***	27.93***	-385.76	-0.31
Incentive Compensation (%)	45.02	46.09	91.81***	53.52***	41.46	36.78	84.26***	49.30***	-3.56	-4.86***



**Table 3 – Change in Acquirer Risk**

The sample consists of 7,859 acquisitions completed during the period January 1, 1993, to December 31, 2010. The firms are listed in the Thomson One database for Mergers and Acquisitions and have executive compensation data available in the Standard and Poor's ExecuComp database. All compensation data has been sampled at the year-end prior to the corporate acquisition announcement. Acquisitions with an announcement date before 30 June 2002 are characterised as pre-SOX; otherwise they are classified as post-SOX. High IC refers to firms whose percentage of incentive compensation is higher than the annual median of all S&P ExecuComp firms for that year; otherwise the firms are classified as low IC. The standard deviation of stock returns is computed during two time periods: the post-acquisition period (126 trading days following the effective date) and the pre-acquisition period (126 trading days preceding the effective date). Panel B presents the 3SLS results regarding the change in standard deviation of stock returns around acquisitions. *Incentive Compensation* is a dummy variable taking the value of 1 when the firm is characterised as High IC. *SOX* is a dummy variable that takes the value of 1 if the acquisition announcement was made on or after the 30<sup>th</sup> of July 2002. *Internet B.Crash* refers to acquisition announcements made in 2000 and 2001 and it is the decile ranking of cumulative returns between August 2000 and August 2001 where the highest decile corresponds to the most positive returns. *SFAS123R* is a dummy variable that takes the value of 1 if the acquisition announcement has been made in 2006. *Log\_Sales* is the logarithm of sales. *Ownership* is the sum of stocks owned by the top five executives at the year-end prior to the announcement as a ratio of total shares outstanding. *Leverage* is the ratio of total debt to total assets. *Decrease in Leverage* is a dummy variable taking the value of 1 if the firm has reduced its leverage from the year end preceding the announcement to the acquisition announcement year end. \*\*\*, \*\*, \* indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively. Test-statistics for the 3SLS regressions are in parentheses.

**Panel A: Post-acquisition Minus Pre-acquisition Stock Return Standard Deviation**

	Total Sample		High IC		Low IC		High vs Low IC	
	Pre SOX	Post SOX	Pre SOX	Post SOX	Pre SOX	Post SOX	Pre SOX	Post SOX
Mean	0.11%	0.02%	0.14%	0.00%	0.07%	0.05%	0.07%	-0.05%
Median	0.03%	-0.03%	0.04%	-0.04%	0.03%	-0.01%	0.02%	-0.04%
Observations	4,245	3,346	2,521	2,047	1,724	1,299		
<i>t</i> statistic	4.27***		5.09***		0.34		2.72***	-1.76*
<i>z</i> statistic	5.03***		5.22***		1.45		1.58	-1.86*

**Panel B: 3SLS estimation of change in Standard Deviation of Stock Returns around Acquisitions**

	Post Minus Pre Acquisition ST.DEV.	Post Minus Pre Acquisition ST.DEV.	Post Minus Pre Acquisition ST.DEV.
	Model 1	Model 2	Model 3
<i>Intercept</i>	0.0654*** (3.11)	0.0816*** (3.80)	-0.0019 (-0.02)
<i>Incentive Compensation</i>	0.0714*** (2.62)	0.0813*** (2.97)	0.1089*** (3.69)
<i>SOX</i>	-0.0104 (-0.33)	-0.0170 (-0.52)	-0.0563 (-0.53)
<i>IC x SOX</i>	-0.1260*** (-3.06)	-0.1376*** (-3.33)	-0.1832*** (-4.21)
<i>Internet B.Crash</i>		-0.0186*** (-3.62)	-0.0242*** (-4.43)
<i>SFAS 123R</i>		-0.0659 (-1.47)	-0.0873* (-1.92)
<i>Log_Sales</i>			0.0088 (0.39)
<i>SOX x Log_Sales</i>			0.0414 (1.33)
<i>Ownership</i>			0.4867** (2.13)
<i>SOX x Ownership</i>			-0.3540 (-0.89)
<i>Leverage</i>			0.1190* (1.95)
<i>SOX x Decrease in Leverage</i>			-0.1129*** (-3.66)
Observations	7,591	7,591	6,983
p-value	0.000	0.000	0.000
$\chi^2$	28.26	43.61	78.78

**Table 4 – Size of Acquisition Premium pre and post-SOX.**

The sample consists of 7,859 acquisitions completed during the period January 1, 1993, to December 31, 2010. The firms are listed in the Thomson One database for Mergers and Acquisitions and have executive compensation data available in the Standard and Poor's ExecuComp database. All compensation data has been sampled at the year-end prior to the corporate acquisition announcement. Acquisitions with an announcement date before 30 June 2002 are characterised as pre-SOX; otherwise they are classified as post-SOX. High IC refers to firms whose percentage of incentive compensation is higher than the annual median of all S&P ExecuComp firms for that year; otherwise the firms are classified as low IC. *Incentive Compensation* is a dummy variable taking the value of 1 when the firm is characterised as High IC. *SOX* is a dummy variable that takes the value of 1 if the acquisition announcement was made on or after the 30<sup>th</sup> of July 2002. *Internet B.Cash* refers to acquisition announcements made in 2000 and 2001 and it is the decile ranking of cumulative returns between August 2000 and August 2001 where the highest decile corresponds to the most positive returns. *Fin.Crisis* is a dummy variable that takes the value of 1 if the acquisition announcement has been made in years 2007, 2008 and 2009. *M/B* is the market-to-book ratio and is based at the month-end prior to the acquisition announcement date as book value of total assets minus book value of equity plus market value of equity divided by book value of total assets. *Ownership* is the sum of stocks owned by the top five executives at the year-end prior to the announcement as a ratio of total shares outstanding. *Cash* is a dummy variable taking the value of 1 if the transaction has been financed entirely by cash. *Equity* is a dummy variable taking the value of 1 if the transaction has been financed 100 percent with equity. *Runup* is the abnormal buy-and-hold stock return for one year preceding the acquisition. *2-year\_ABHRs* is the two-year abnormal buy-and-hold stock return following the acquisition. In panel A, t-statistics are from the t-test of difference between means and z-statistics are from the Wilcoxon rank sum test for difference between the respective distributions. In panel B, t-statistics based on robust, heteroscedasticity consistent standard errors are in parentheses. \*\*\*, \*\*, \* indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively.

**Panel A: Change in Acquisition Premium (%) between pre and post-SOX**

	Total Sample		High IC		Low IC		High vs Low IC	
	Pre SOX	Post SOX	Pre SOX	Post SOX	Pre SOX	Post SOX	Pre SOX	Post SOX
Mean	48.04	38.71	48.80	39.37	46.79	37.39	2.00	1.98
Median	40.53	31.27	42.21	31.82	39.00	29.72	3.21	2.10
Observations	1,030	594	642	396	388	198		
<i>t statistic</i>	5.88***		4.80***		3.47***		0.92	0.78
<i>z statistic</i>	6.08***		4.78***		3.84***		1.03	1.26

**Table 4 (Continued)**

**Panel B: Multivariate Regressions on the size of Acquisition Premium**

	Acq. Premium Model 1	Acq. Premium Model 2	Acq. Premium Model 3	Acq. Premium Model 4
<i>Intercept</i>	46.7990*** (27.57)	45.8231*** (26.78)	47.2181*** (17.26)	47.1809*** (25.90)
<i>Incentive Compensation</i>	1.9845 (0.92)	1.3049 (0.60)	-0.3088 (-0.13)	2.2628 (0.99)
<i>SOX</i>	-9.4050*** (-3.46)	-9.9684*** (-3.53)	-12.6437*** (-3.17)	-8.4327*** (-2.78)
<i>IC x SOX</i>	0.0130 (0.00)	0.6692 (0.20)	-0.0482 (-0.01)	-0.8789 (-0.24)
<i>Internet B. Crash</i>		1.1982** (2.55)		
<i>Fin. Crisis</i>		4.6176* (1.80)		
<i>M/B</i>			0.9009* (1.80)	
<i>SOX x M/B</i>			0.4883 (0.39)	
<i>Ownership</i>			7.8015 (0.35)	
<i>SOX x Ownership</i>			-3.4501 (-0.09)	
<i>Cash</i>			1.6017 (0.49)	
<i>SOX x Cash</i>			5.3777 (1.26)	
<i>Equity</i>			-4.9391* (-1.90)	
<i>SOX x Equity</i>			-4.7494 (-1.22)	
<i>Runup</i>			5.4994* (1.72)	
<i>SOX x Runup</i>			-8.1678* (-1.91)	
<i>2-year_ABHRs</i>				0.4282 (0.23)
<i>SOX x 2-year_ABHRs</i>				4.8187 (1.06)
Observations	1,624	1,624	1,440	1,447
p-value	0.000	0.000	0.000	0.000
F-statistic	11.88	8.90	7.39	7.59

**Table 5 - Two-Day (-1,0) Acquirer's Cumulative Abnormal Returns at Acquisition Announcement**

The sample consists of 7,859 acquisitions completed during the period January 1, 1993, to December 31, 2010. The two-day (-1,0) cumulative abnormal returns (CARs) have been computed using the market model estimated by OLS regression:

$$R_{i,t}^* = a + \beta_1 R_{M,t} + \varepsilon_t$$

The estimation period is measured from 220 days to 20 days prior to the acquisition announcement date. To maintain independence of the results, we include only the transaction with the highest deal value when a firm has more than one acquisition announcements on the same date as well as those acquisitions with an announcement date at least 320 calendar days later than the previous acquisition announcement for the same firm. This results to a sample of 4,962 observations. The firms are listed in the Thomson One SDC database for Mergers and Acquisitions and have executive compensation data available in the ExecuComp database. All compensation data has been sampled at the year-end prior to the corporate acquisition announcement. Acquisitions with an announcement date before 30 June 2002 are characterised as pre-SOX; otherwise they are classified as post-SOX. High IC refers to firms whose percentage of incentive compensation is higher than the annual median of all S&P ExecuComp firms for that year; otherwise the firms are classified as low IC. *Incentive Compensation* is a dummy variable taking the value of 1 when the firm is characterised as High IC. *SOX* is a dummy variable that takes the value of 1 if the acquisition announcement is made on or after the 30<sup>th</sup> of July 2002. *Internet B.Cash* refers to acquisition announcements made in 2000 and 2001 and it is the decile ranking of cumulative returns between August 2000 and August 2001 where the highest decile corresponds to the most positive returns. *Fin.Crisis* is a dummy variable that takes the value of 1 if the acquisition announcement has been made in years 2007, 2008 and 2009. *SFAS123R* is a dummy variable that takes the value of 1 if the acquisition announcement has been made in 2006. *M/B* is the market-to-book ratio and is based at the month-end prior to the acquisition announcement date as book value of total assets minus book value of equity plus market value of equity divided by book value of total assets. *Ownership* is the sum of stocks owned by the top five executives at the year-end prior to the announcement as a ratio of total shares outstanding. *Cash* is a dummy variable taking the value of 1 if the transaction has been financed entirely by cash. *Equity* is a dummy variable taking the value of 1 if the transaction has been financed 100 percent with equity. *Runup* is the abnormal buy-and-hold stock return for one year preceding the acquisition. In panel A, t-statistics are from the t-test of difference between means and z-statistics are from the Wilcoxon rank sum test for difference between the respective distributions. In panel B, t-statistics based on robust, heteroscedasticity consistent standard errors are in parentheses. \*\*\*, \*\*, \* indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively.

**Panel A: Bidders' CARs (-1,0) around Acquisition Announcement categorised by level of Incentive Compensation & Announcement Period**

	Total Sample		High IC		Low IC		High vs Low IC	
	Pre SOX	Post SOX	Pre SOX	Post SOX	Pre SOX	Post SOX	Pre SOX	Post SOX
Mean	0.15%	0.23%	0.18%	0.08%	0.13%	0.44%	0.05%	-0.36%
Median	-0.06%	0.02%	0.00%	-0.08%	-0.10%	0.14%	0.10%	-0.22%
Observations	2,673	2,289	1,507	1,346	1,166	943		
<i>t statistic</i>		-0.65		0.62		-1.76*	0.29	-2.31**
<i>z statistic</i>		-1.28		-0.11		-1.88*	0.30	-1.69*

**Table 5 (Continued)**

<b>Panel B: Multivariate Regressions on Bidder's CARs around Acquisition Announcement</b>				
	CARs (-1,0) Model 1	CARs (-1,0) Model 2	CARs (-1,0) Model 3	CARs (-1,0) Model 4
<i>Intercept</i>	0.1258 (0.97)	0.1467 (1.11)	-0.1398 (-0.60)	-0.0157 (-0.09)
<i>Incentive Compensation</i>	0.0514 (0.29)	0.0617 (0.35)	0.2611 (1.36)	0.1631 (0.91)
<i>SOX</i>	0.3136* (1.76)	0.3513* (1.83)	0.3308 (1.04)	0.1918 (0.69)
<i>IC x SOX</i>	-0.4073* (-1.74)	-0.4266* (-1.82)	-0.6168** (-2.45)	-0.5629** (-2.34)
<i>Internet B.Crash</i>		-0.0254 (-0.55)		
<i>Fin.Crisis</i>		-0.0229 (-0.13)		
<i>SFAS123R</i>		-0.3594* (-1.86)		-0.3979** (-2.16)
<i>M/B</i>			-0.1377** (-2.19)	-0.0962** (-2.17)
<i>SOX x M/B</i>			0.0828 (0.81)	0.0916527 1.02
<i>Ownership</i>			1.82134 (1.16)	
<i>SOX x Ownership</i>			1.0461 (0.41)	
<i>Cash</i>			0.7447*** (3.33)	0.6764*** (3.83)
<i>SOX x Cash</i>			-0.3125 (-1.11)	-0.1461 (-0.60)
<i>Equity</i>			0.0049 (0.02)	
<i>SOX x Equity</i>			-0.8527 (-1.43)	
<i>Runup</i>			0.0357 (0.13)	
<i>SOX x Runup</i>			0.2438 (0.62)	
Observations	4,962	4,962	4,366	4,776
p-value	0.127	0.172	0.000	0.000
F-statistic	1.90	1.50	3.10	4.86

**Table 6 - Two-year Abnormal Buy-and-Hold Post-Acquisition Performance for Acquiring Firms**

The sample consists of 7,859 acquisitions completed during the period January 1, 1993, to December 31, 2010. To avoid biasness in the results, when a firm has made more than one acquisitions on the same date, we include the acquisition with the highest deal value and only those acquisitions with an effective date at least two years later than the previous acquisition for the same firm. Furthermore, the distribution of acquirers' post-acquisition stock price performance has been truncated at its 1<sup>st</sup> and 99<sup>th</sup> percentiles to exclude the impact of outliers, restricting the sample to 3,429 observations. The buy-and-hold return on stock  $i$ ,  $BHR_i$ , is calculated as

$$BHR_{i,t,T} = \left[ \prod_{t=1}^T (1 + R_{i,t}) - 1 \right] \times 100$$

where  $t = 1$  represents the first day of trading following the effective date of the acquisition,  $R_{i,t}$  indicates the stock price return of firm  $i$  on day  $t$  and  $T_i$  is the two-year anniversary date of the effective acquisition date. The Abnormal BHR <sub>$i$</sub>  is calculated as the difference between the acquirer's 2-year post-acquisition BHR and the CRSP S&P 500 Value Weighted Index BHR for the same period. The firms are listed in the Thomson One SDC database for Mergers and Acquisitions and have executive compensation data available in the ExecuComp database. All compensation data has been sampled at the year-end prior to the corporate acquisition announcement. Acquisitions with an announcement date before 30 June 2002 are characterised as pre-SOX; otherwise they are classified as post-SOX. High IC refers to firms whose percentage of incentive compensation is higher than the annual median of all S&P ExecuComp firms for that year; otherwise the firms are classified as low IC. In Panel B, the dependent variable is the acquirer's  $ABHR$  defined as the difference between the natural logarithm of 1 + the acquirer's 2-year post-acquisition BHR and the natural logarithm of 1 + the CRSP S&P 500 Value Weighted Index BHR for the same period. *Incentive Compensation* is a dummy variable taking the value of 1 when the firm is characterised as High IC. *SOX* is a dummy variable that takes the value of 1 if the acquisition announcement is made on or after the 30<sup>th</sup> of July 2002. *Internet B.Cash* refers to acquisition announcements made in 2000 and 2001 and it is the decile ranking of cumulative returns between August 2000 and August 2001 where the highest decile corresponds to the most positive returns. *Fin.Crisis* is a dummy variable that takes the value of 1 if the acquisition announcement has been made in years 2007, 2008 and 2009. *SFAS123R* is a dummy variable that takes the value of 1 if the acquisition announcement has been made in 2006. *M/B* is the market-to-book ratio and is based at the month-end prior to the acquisition announcement date as book value of total assets minus book value of equity plus market value of equity divided by book value of total assets. *Log\_Sales* is the logarithm of sales. *Cash* is a dummy variable taking the value of 1 if the transaction has been financed entirely by cash. *Runup* is the abnormal buy-and-hold stock return for one year preceding the acquisition. In panel A, t-statistics are from the t-test of difference between means and z-statistics are from the Wilcoxon rank sum test for difference between the respective distributions. In panel B, t-statistics based on robust, heteroscedasticity consistent standard errors are in parentheses. \*\*\*, \*\*, \* indicate significance at the 1 percent, 5 percent and 10 percent levels, respectively.

**Panel A: Two-year Post-acquisition Abnormal BHRs for Acquiring Firms**

	Total Sample		High IC		Low IC		High vs Low IC	
	Pre SOX	Post SOX	Pre SOX	Post SOX	Pre SOX	Post SOX	Pre SOX	Post SOX
Mean	-1.05%	2.72%	0.11%	1.52%	-2.38%	4.37%	2.49%	-2.86%
Median	-7.90%	-4.49%	-6.26%	-5.03%	-9.94%	-3.57%	3.68%	-1.45%
Observations	1,806	1,623	966	936	840	687		
<i>t statistic</i>		-1.85*		-0.51		-2.22**	0.77	-1.13
<i>z statistic</i>		-3.67***		-1.83*		-3.45***	0.85	-1.04

**Table 6 (Continue)**

<b>Panel B: Multivariate Regressions Explaining Two-year Abnormal BHRs for Acquiring Firms</b>				
	ABHRs Model 1	ABHRs Model 2	ABHRs High IC	ABHRs Low IC
<i>Intercept</i>	-1.1974*** (-55.85)	-1.2321*** (-15.93)	-1.3052*** (-12.16)	-1.1470*** (-9.79)
<i>Incentive Compensation</i>	-0.0325 (-1.05)	0.0011 (0.04)		
<i>SOX</i>	0.1015*** (3.67)	0.09456 (0.98)	0.0786 (0.59)	0.0606 (0.41)
<i>IC x SOX</i>	0.0043 (0.11)	-0.0443 (-1.16)		
<i>Internet B. Crash</i>		-0.0029 (-0.33)	-0.0234** (-2.28)	0.0277* (1.73)
<i>Fin. Crisis</i>		-0.0367 (-1.45)	-0.0343 (-1.04)	-0.0584 (-1.44)
<i>SFAS123R</i>		-0.1518*** (-3.75)	-0.1971*** (-3.20)	-0.0907* (-1.82)
<i>M/B</i>		-0.0491*** (-4.36)	-0.0329** (-2.34)	-0.0723*** (-3.95)
<i>SOX x M/B</i>		0.0497*** (2.98)	0.0195 (0.97)	0.1128*** (3.95)
<i>Log_Sales</i>		0.0476** (2.13)	0.0719** (2.36)	0.0203 (0.61)
<i>SOX x Log_Sales</i>		-0.0341 (-1.24)	-0.0375 (-1.02)	-0.0417 (-1.00)
<i>Cash</i>		0.0237 (0.80)	0.0040 (0.09)	0.0397 (0.98)
<i>SOX x Cash</i>		0.0480 (1.24)	0.0827 (1.51)	0.0138 (0.25)
<i>Runup</i>		-0.0454 (-1.22)	-0.1015* (-1.75)	0.0070 (0.16)
<i>SOX x Runup</i>		0.0306 (0.57)	0.0815 (1.02)	-0.0115 (-0.17)
Observations	3,429	3,266	1,801	1,465
p-value	0.000	0.000	0.000	0.000
F-statistic	10.09	5.07	3.87	3.88