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Abstract

We empirically examine earnout contracts, which provide for contingent payments in acquisition agreements. Our analysis reveals considerable heterogeneity in the terms of earnout contracts, i.e. the potential size of the earnout, the performance measure on which the contingent payment is based, the period over which performance is measured, the frequency with which performance is measured, and the form of payment for the earnout. Consistent with the costly contracting hypothesis, we find that the terms of earnout contracts are associated with measures of target valuation uncertainty, target growth opportunities, and the degree of post-acquisition integration between target and acquirer. We conclude that earnouts are structured to minimize the costs of adverse selection and moral hazard in acquisition negotiations.

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Earnouts: A Study of Financial Contracting in Acquisition Agreements

1. Introduction

The successful completion and implementation of a corporate acquisition poses several challenges to the acquiring and target firms. First, private information on both sides of the transaction creates a gap between the target's and the acquirer's estimate of the intrinsic value of the deal. Second, although target managers can be critically important for the successful integration of the target and acquiring firms, it can be difficult to retain them following the acquisition. Third, having received a premium based on expected synergies from the acquisition, target manager-shareholders may have little incentive to generate those synergies even if they do remain with the combined post-acquisition firm. If these issues cannot be resolved, it can be difficult to complete the acquisition even if it has positive expected synergies.

Earnouts represent a contractual means by which several of these challenges can be addressed. Specifically, payments to shareholders in acquisitions can consist of two components: an upfront fixed payment and additional future payments that are contingent upon some observable measure of performance. These latter payments, commonly referred to as earnouts, are the focus of our study. By tying the target's consideration in the acquisition to future performance, the earnout can bridge a valuation gap between the target and the acquirer that is caused by disagreements about the target's expected future performance. Moreover, because the consideration received by the target is contingent on future performance, target manager-shareholders have an increased incentive to remain with the firm in order to maximize this performance.¹

¹ We recognize that there are other means by which the acquiring firm can provide incentives for the target manager to remain with the post-acquisition firm (e.g. stock options or side payments). Our study is not intended to analyze

These benefits are not costless however. With an earnout, the target bears greater uncertainty about the magnitude of the acquisition premium, particularly if a portion of the contingent payment depends on the competence of the acquirer's management. In addition, although the earnout addresses one type of agency problem, it potentially creates new agency problems. For example, the acquirer's management will now have the incentive (and ability) to manage the performance measures in a way such that the contingent payment to the target is reduced. One way to do this is through the allocation of joint costs. Alternatively, depending on the nature of the earnout, the target may have the incentive to maximize short-term performance at the expense of long-run value. As an example, if the earnout is tied to short-term earnings, target managers might reduce research and development expenditures that would otherwise increase the target's value. The choice of whether to use an earnout and how that earnout should be structured, therefore, entails the tradeoff of several costs and benefits.

We empirically analyze acquisition agreements that include an earnout clause. Previous studies [e.g. Kohers and Ang (2000); Datar et al. (2001)] of earnout contracts have been limited to analyzing the determinants of whether firms choose to include an earnout in their acquisition agreement and whether the presence of an earnout is associated with the likelihood that a top executive remains with the target firm. These studies find evidence consistent with the view that earnouts are more likely to be used in acquisitions in which there is large information asymmetry about the value of the target and in which target managers possess valuable human capital that will be important to retain following the acquisition. Our analysis reveals, however, that in addition to the choice of whether or not to include an earnout clause in the acquisition agreement, there is substantial heterogeneity in the terms of earnout contracts. We therefore

the relative merits of earnouts versus these other contractual solutions. Rather, we take the existence of earnout contracts as given and develop testable hypotheses for the determinants of the terms of these contracts.

extend the prior studies by conducting a detailed analysis of the size of the potential earnout payment, the performance measure on which the earnout is based, the interval over which performance is measured, and the form of the earnout payment. We also develop and test hypotheses for the cross-sectional variation in these earnout characteristics.

Our tests are guided by a costly contracting view of earnouts in which the terms of the contract are determined by a tradeoff of the relative costs and benefits. Under this view, a unique set of contractual terms optimizes the value of the acquisition. Two alternative, though not mutually exclusive, views are that (i) earnouts represent opportunities for acquiring firms to extract rents by transferring valuation risk to the target, and (ii) earnouts are efficiently structured in a “one-size-fits-all” fashion.²

Our base sample consists of 990 acquisitions completed between 1994 and 2003 that include an earnout clause. Like Kohers and Ang (2000) and Datar et al. (2001), we find that the sample targets are almost exclusively private firms or subsidiaries of public firms. This is consistent with the view that the benefits of earnouts exceed the costs primarily when there is larger uncertainty about the value of the target. In addition, we find that, relative to the population of mergers over the sample time period, acquisitions involving earnouts are slightly more likely to involve targets and acquirers from different industries.

The typical earnout payment in our sample is a linear or a stepwise function of the target’s performance (subject to a maximum) over the subsequent one to three years. The earnout payments are economically large; on average, they amount to 33% of the total transaction value if the maximum earnout is paid. As noted previously, however, and contrary to

² As an example of a ‘one-size-fits-all’ contract, Hansen (2001) analyzes the preponderance of 7% underwriting spreads in initial public offerings (IPOs) and provides arguments for how a uniform 7% spread can be efficient given the multiple dimensions of IPO contracts.

the “one-size-fits-all” view, there is considerable heterogeneity in the terms of the sample contracts.

We report several findings consistent with the view that earnouts are designed to mitigate the costs of asymmetric information and moral hazard in acquisition agreements. Specifically, measures of the uncertainty of target value, the target’s growth opportunities, and the likely degree of integration of the target and acquirer are systematically associated with earnout contract design. Greater uncertainty is associated with larger earnouts, shorter earnout periods, the use of common stock for the earnout payment, and the use of sales as the performance measure. Earnouts of targets with greater growth opportunities tend to be larger, they tend to be paid in acquirer stock, and they tend to measure performance over longer intervals of time. Collectively, these findings support the costly contracting view of earnout contracts in which there is a unique set of contract features that optimizes the acquisition value.

Our study is related to two other strands of literature. One set of studies addresses the role that asymmetric information plays in various aspects of the merger market. Studies such as Shleifer and Vishny (2003), Rhodes-Kropf and Viswanathan (2004), and Officer (2004) consider the impact of asymmetry of information about *acquiring* firm value on the number of bids made, whether the consideration offered is cash or acquirer stock, and whether the merger bid contains a “collar.” The prior earnouts literature [Kohers and Ang (2000); Datar et al. (2001)] considers the impact of asymmetric information about *target* firm value on whether bids include contingent payments. We extend this literature by examining in more detail how contingent payment contracts are structured to solve the problem of valuing a target with limited information.

A second set of studies analyzes venture capital (VC) financing agreements. Like the acquisition of smaller, private targets, venture capital financings pose challenges related to

information asymmetry and moral hazard. Unlike venture capitalists, however, the acquiring firm in an acquisition benefits from the successful integration of the target's operations. This poses some unique challenges for structuring the acquisition agreement. Nonetheless, there are many similarities between the features of venture capital finance agreements and those of earnout contracts. In this sense, our study is in the spirit of Kaplan and Stromberg's (2003) detailed analysis of contracts between entrepreneurs and venture capitalists.

The remainder of the paper is organized as follows. In Section 2, we describe our sample selection process. Section 3 presents our main findings on the determinants of the terms of earnout contracts. Section 4 provides a brief discussion of our findings in relation to prior work in the financial contracting literature and offers concluding remarks.

2. Sample Selection and Data Description

2.1. Sample acquisitions

Our sample begins with the 25,213 acquisitions listed on the Securities Data Corporation's (SDC) Mergers and Acquisitions database that were completed by publicly traded U.S. corporations between 1994 and 2003. Of this set, SDC identifies 990, or 3.9%, that include an earnout as part of the acquisition agreement. This rate of earnout use is slightly below the 4.1% observed in Datar et al. (2001) and the 5.6% observed in Kohers and Ang (2000). As shown in Panel A of Table 1, the rate of earnout use has increased over the sample period from 3.1% in 1994 to 6.8% in 2003. A possible reason for this is the adoption of FASB 141 in July, 2001. The contingent payments in earnout contracts prohibit an acquisition from being treated as a pooling of interests (Craig and Smith (2003)). For this reason, some firms avoided earnouts in order to fully utilize the tax advantages of the pooling-of-interest method. Because FASB 141

eliminated the pooling-of-interest method for accounting for acquisitions, it is plausible that this increased the use of earnouts.

Although the target companies come from a wide variety of industries, they exhibit some clustering relative to the SDC population in industries with large amounts of intangible assets. For example, 33% of the sample targets come from the following five industries: computer programming and data processing (19%), management and public relations services (4%), drugs (4%), electronic components and accessories (3%), and surgical, medical, and dental instruments (3%). These same five industries account for 23% of the SDC population.

Panel B of Table 1 reports descriptive statistics for the sample target companies and compares them to the SDC population. All data are obtained from the SDC Mergers and Acquisitions database. It is striking that fewer than 2% of the target companies are publicly traded. The sample companies are predominantly private companies (74%) and subsidiaries of public companies (23%). By way of comparison, 19% of the SDC acquisition population involve publicly-traded targets. Panel B also shows that acquisitions with earnout payments are slightly more likely to involve target firms from another industry than are targets in the SDC population. To the extent that private targets and targets from industries that are different from those of the acquirer present more difficult valuation challenges, the evidence in Panel B supports the view that earnouts are more likely to be used in acquisitions of targets that are more difficult to value.³

Finally, Panel C of Table 1 reports some descriptive statistics for the acquisitions. Relative to the SDC population, acquisitions in the earnout sample tend to be smaller and to

³ Another potential disadvantage of earnouts in public targets is that the earnout rights may be deemed securities under the Securities Act. To avoid the costs of securities registration, acquisition agreements typically prohibit the transfer of the right to the earnout payment and explicitly state that the right is not an investment contract or any other type of security [Walton, Metcalf, and Hamilton (2004)].

involve smaller acquiring firms. At the median, the value of the sample transactions amounts to 11% of the value of the acquiring firm. This compares with a relative transaction size of 6% for the SDC population. In terms of method of payment for the non-earnout portion of the transaction, 44% of the sample acquisitions use cash, 18% use stock, and 29% contain a mix of cash and stock. By comparison, 52% of the SDC population use cash, 26% use stock, and 15% use a mix of cash and stock.

2.2. Description of earnout contracts

In order to analyze the earnout contracts in greater detail, we search the companies' required SEC disclosures. We find detailed descriptions of the earnout contracts primarily in 8-K (67%), 10-K (8%), and 10-Q (12%) reports. A small number are also found in S-1, S-3, 13-D and other filings. Among other things, these reports provide detailed information on the size of the earnout payment, the period over which performance is measured, the performance measures on which the earnout payment is based, the party whose performance is being measured, and the consideration used in the earnout payment. Depending on the particular data item, these data are available for between 447 and 535 of the 990 sample acquisitions. Representative examples of the sample contracts are provided in the Appendix.

The data in Panel A of Table 2 indicate that the potential earnout payments are economically large and are a sizable fraction of the total consideration paid in the acquisition. On average, the maximum earnout that could be paid per acquisition is \$21 million, with a median of \$5 million. Conditional on the maximum being paid, the earnout constitutes 33% of the total transaction value, on average, with a median of 28%. We also record the earnout payments that are reported in the SDC database. The advantage of the SDC-recorded earnout

payments is that they are available for all 990 observations. The disadvantage, however, is that SDC obtains its information from press releases. Our examination of these press releases indicates that they sometimes report the maximum earnout payment that could be paid under the contract and other times report the acquirer's estimate of what the payment will be, based on either current or future performance. Because we have no way of knowing how often the press releases are reporting maximum versus expected earnout payments, the SDC numbers should be interpreted with caution. Nonetheless, as shown in Panel A of Table 2, the SDC-reported payments are very similar to what we observe in the SEC filings. Earnout payments average \$22 million, which is, on average, 33% of the total transaction value.⁴

Earnout payments are made contingent upon some measure of post-acquisition performance. It is noteworthy that the contingent payment is almost always based on the post-acquisition performance of the target. In 90% of the cases, the earnout is contingent on the performance of the target firm only, while in another 9% of the cases, it is contingent on the combined performance of the target and acquiring firms. In four cases (0.8% of the sample) the payment is not contingent on the performance of either the target or the acquiring firm. In three of these cases the earnout is based on the future price of oil (see the appendix entry for the Giant-BP PLC acquisition), while in the fourth it is based on industry railcar production. In most cases, the earnout payment is either a linear function of the target's performance subject to a maximum (42% of the sample) or a stepwise function of the target's performance subject to a maximum (40% of the sample). A smaller proportion of the earnout payments are concave functions (9%), convex functions (6%) or linear functions with no maximum (3%). (See the appendix entry for the Cyberguard-NetOctave acquisition for an example of linear payoff structure with a maximum

⁴ Note that because SDC sometimes records total transaction value based on the acquirer's estimate of future earnout payments, it is possible that the maximum possible earnout payment will be greater than 100% of the total transaction value listed in SDC.

and the entry for the Polycom-Voyant Technologies acquisition for an example of a concave payout structure.)

Panel B of Table 2 reports the distribution of the different performance measures that are used. Not surprisingly, since most targets are either private companies or subsidiaries of public companies, stock price is used as a performance measure in only six (1.2%) cases. Some measure of profitability (e.g. cash flow, pre-tax income, gross profit, net income, earnings per share) is used to measure performance in 261 of the 498 (52%) cases for which we can identify this information in the SEC filings. In another 157 cases (32%), a measure of sales is used as the performance measure. Interestingly, non-financial measures are used in 61 (12.2%) cases. These non-financial measures include various product development milestones (e.g. clinical trials, FDA approval) or the securing of specific customer contracts (e.g. U.S. government contracts).⁵ (See the appendix entry for the ILEX Oncology-Convergence Pharmaceuticals acquisition.)

In Panel C, we report statistics on the distribution of the period of time over which performance is measured and how frequently that performance is measured. The data indicate that performance is typically measured over a period of two years (average = 2.57). While the interquartile range for the earnout period is from one to three years, the earnout period is as long as twenty years. Among those for which the earnout period is specified, performance is measured annually in 77% of the cases, semi-annually in 5% of the cases, and quarterly in 4% of the cases. The measurement interval is greater than one year in only 12% of the cases. Thus, it appears that the most typical earnout contract measures performance annually over a total period

⁵ Similarly, Kaplan and Stromberg (2003) report that nearly 9% of venture capital financing agreements are contingent upon non-financial performance measures such as FDA or patent approval.

of two years. Nonetheless, there is wide variation in both the earnout period and the measurement frequency.

Finally, in Panel D, we report the form of payment for the contingent payment. As is the case with acquisition payments in general, the contingent payment takes three primary forms: cash only (39% of the cases), common stock only (29% of the cases), and a combination of cash and stock (26% of the cases). In a small number of cases (less than 7%) the payment includes debt or preferred stock.

3. Determinants of the Terms of Earnout Contracts

In this section, we empirically examine the determinants of the primary terms of earnout contracts: the potential size of the earnout payment, the type of performance measure on which contingent payments are made, the length of the earnout period, the frequency with which performance is measured, and the form of payment. We link these terms to acquisition size and to measures of (i) the uncertainty of target value, (ii) the target's investment opportunity set, and (iii) the degree to which the target and acquirer are likely to be integrated following the acquisition. As a proxy for target valuation uncertainty, we use the standard deviation of daily returns over the prior year for the median firm operating in the same industry as the target.⁶ We measure the investment opportunity set with the target industry median ratio of R&D to sales and with the target industry median Tobin's q ratio. The likely degree of integration is measured by defining a cross-industry dummy variable equal to one if the target and acquirer operate in

⁶ Recall that most of the sample targets are either private firms or are subsidiaries of public firms. In these cases, it is not possible to directly measure the standard deviation of returns for the target.

different three-digit primary SIC code industries and zero otherwise.⁷ We assume that the target and acquirer will be more fully integrated following the acquisition if they operate in the same industry. Finally, we control for other attributes of the acquisition such as the size of the transaction relative to the pre-acquisition market value of the firm. For each different attribute of the earnout contract we first generate empirical predictions based on the costly contracting hypothesis, then test those predictions.

3.1. Determinants of earnout size

Theoretical discussion. In structuring an acquisition agreement with an earnout, the target and the acquirer must agree on what portion of the purchase price will be paid at closing and what portion will be contingent upon future target performance. The data in Table 2 reveal a wide variation in the size of the potential earnout payment relative to the total transaction value in the acquisition, where transaction value refers to the sum of the fixed portion of the acquisition price and the SDC-reported earnout size. While on average the earnout is equal to 33% of the transaction value, maximum possible earnout payments range between 1.4% and 161% of the initial transaction value. Moving from the 25th to the 75th percentile changes the earnout size from 16% to 47% of the transaction value.

We hypothesize two possible explanations for this variation in earnout size. First, if the target and acquirer differ in their estimates of the target's value, the fixed portion of the acquisition price will pertain to that portion of the target's value on which both the acquirer and the target can agree, while the contingent portion reflects the difference between the target's and the acquirer's estimate of value. In this sense, the earnout bridges the valuation gap between the

⁷ Our findings are not sensitive to the definition of industry. We find similar results if industry is defined at the four-digit level and if we compare both primary and secondary SIC codes.

acquirer and the target.⁸ Consequently, we expect that the larger is the target valuation uncertainty, the larger will be the size of the earnout.

Second, as argued in Myers (2000), it is likely that managerial effort is more important in firms that derive a greater portion of their value from future growth opportunities (e.g., new technologies). Thus, in these situations, it is more important to give manager-shareholders the incentive to take those actions that will maximize the value from these growth options (see also Smith and Watts (1992)). Thus, we hypothesize that earnouts will be larger in firms with greater growth opportunities.

Evidence. To investigate the determinants of earnout size, we first divide the sample transactions into quartiles on the basis of the maximum earnout payment divided by the transaction size. As reported in Panel A of Table 3, this produces an average relative earnout size ranging from 10% in Quartile 1 to 62% in Quartile 4. We then compare firm, earnout, and acquisition characteristics across the quartiles.

Consistent with our hypotheses, the data in Panel A indicate that earnout size is positively correlated with the target industry standard deviation of returns and with the target industry Tobin's q . These findings support the view that larger earnouts are required when there is potentially a greater valuation gap between bidder and target and when more of the target's value is derived from future growth opportunities. We also find that the duration of the earnout period increases across quartiles of earnout size, while the proportion of earnouts that are paid in cash decreases. Finally, we observe that the earnout tends to be larger when the transaction value is a smaller fraction of the acquirer's market value. We conjecture that this finding is related to our

⁸ This is also likely to produce a selection effect of the type analyzed in Lazear (1986). That is, only higher valued targets would be willing to accept a contract in which a large portion of their payoff is contingent on future performance.

findings on target uncertainty. That is, there is more uncertainty about the value of the target when the target is small. Thus, the earnout tends to be larger.

In Panel B of Table 3, we estimate ordinary least squares (OLS) and Tobit regressions in which the dependent variable is equal to the ratio of the earnout payment to the transaction value. As independent variables, we include the size of the transaction relative to the market value of the acquirer's equity, the duration of the earnout period, a dummy equal to one if the earnout is paid in cash only, a dummy equal to one if the target and acquirer are from different industries, the target industry's ratio of R&D to sales, and the target industry's Tobin's Q.

Consistent with our univariate findings, the results indicate that earnout size is negatively related to the relative size of the transaction and to whether the earnout payment is made in cash only. Earnout size is positively related to the length of the earnout period, industry standard deviation of returns and industry Tobin's q. Again, these findings support the view that earnouts are structured to mitigate valuation problems associated with asymmetric information between the acquirer and the target and to provide incentives to target manager-shareholders to take actions to realize the full value of growth opportunities.

3.2. Determinants of performance measure

Theoretical discussion. As shown in Table 2, firms employing earnout contracts base the earnout payment on a wide variety of performance measures. Because the target will generally not be publicly traded, it does not have an observable market price. Hence, other measures must typically be used, including sales, cash flows, measures of income, and other non-financial performance measures.

In order to resolve valuation problems stemming from information asymmetry, the performance measure should be a measure that is informative about the intrinsic value of the target. Similarly, to the extent that the target manager's effort is a concern, standard principal-agent models [e.g., Holmstrom (1979)] predict that the optimal incentive contract will tie the manager's payoff to observable signals of firm performance and value.

In general, we would expect net income to be the most informative measure of value.⁹ However, there are circumstances in which net income will not be as informative as other performance measures. For example, if the target and acquirer are integrated following the acquisition, the acquirer will have some discretion in allocating expenses to the target. Moreover, the greater the degree of integration, the more the target's measured income will be a function of realized synergies (e.g. cost savings) from the acquisition. Thus the target's post-acquisition income will be less informative regarding the target's specific contribution to the performance of the combined firm.

The above discussion implies that the performance measure used in earnout contracts is less likely to be a measure of income the greater is the degree of post-acquisition integration of the target and acquirer. In these situations, we expect to observe sales or non-financial measures of performance being used.

It is also likely that the choice of performance measure is related to the target's growth opportunities. For example, for firms whose value is derived primarily from future growth opportunities, short-term income is likely to be a less informative signal of value. Moreover, in such firms, tying the earnout payment to income may create the perverse incentive for target managers to reduce value-increasing investments that would decrease short-term income. This

⁹ See Dechow (1994) for evidence on the usefulness of current earnings in summarizing information about both future cash flows and future earnings.

implies that the performance measure used in the earnout contract is more likely to be sales or a non-financial measure in higher-growth targets.

Finally, we expect that riskier targets will be less likely to use income as the performance measure. As predicted by Prendergast (1999), performance sensitive payoffs are more costly the noisier is the performance signal. Thus, in risky targets, risk-averse target shareholders will demand greater compensation to offset the risk of the earnout payment. Because bottom-line income measures are more volatile and, therefore, more likely to impose higher risk on target shareholders than are sales or non-financial measures, we expect that earnout contracts for high risk targets will be more likely to base the earnout payment on sales or some non-financial performance measure.

Evidence. Panel A of Table 4 reports univariate evidence on the choice of performance measure. Consistent with our predictions, the proportion of acquisitions in which the target and acquirer are from different industries is higher when the performance measure is income or cash flow. In addition, firms using cash flow or income as the performance measure are characterized by lower risk (as measured by the industry's standard deviation of returns) and fewer growth opportunities (as measured by R&D expenditures and Tobin's q).

In Panel B, we estimate logit models in which the dependent variable is equal to one for a given performance measure and zero otherwise. The independent variables include the target characteristics of interest (cross industry dummy, target industry standard deviation of returns, target industry R&D/Sales, and target industry Tobin's q), other characteristics of the earnout (length of earnout period, and form of payment), and the size of acquisition relative to the acquirer's market value. The three columns differ only in the definition of the dependent variable. In the first column, the dependent variable is a dummy variable equal to one if the

performance measure is sales. In columns two and three, the dependent variable is equal to one if the performance measure is a non-financial measure and income, respectively.

The logit results confirm the univariate findings. That is, the likelihood of the performance measure being sales (income) is greater (smaller) when the target is from an industry with high standard deviation of returns and high Tobin's q . We also observe that the sales measure is more likely to be used as the performance measure when the earnout period is shorter and income is more likely to be used when the earnout payment is made in stock. Non-financial performance measures are more likely when the target comes from a high R&D industry and when the earnout period is longer. Finally, income is more likely to be used as the performance measure when the target and acquirer are from different industries.

3.3. Determinants of length of earnout period and measurement frequency

Theoretical discussion. An earnout contract addresses information asymmetries or provides management with incentives only over the period during which it is in effect. The descriptive statistics in Table 2 indicate that all but six of the sample earnouts specify an expiration date. The mean (median) earnout contract is in effect for a total of 2.57 (2) years, ranging from 0.08 years to 20 years. The typical earnout contract also provides for periodic measurement and payment at specified intervals. In our sample this interval ranges from monthly to every five years or more, though over 77% of the earnouts we study specify that measurement be made annually. In this subsection we address the factors that influence the total length of earnout contracts and, within that total period, the frequency of performance measurement.

The period over which an earnout contract extends should be the period over which information asymmetries are expected to be the most problematic or the period over which target management efforts are expected to have the most impact on firm value. We hypothesize that this period will be longer for target firms whose current value is more dependent upon future growth opportunities than on assets in place. Thus, we expect that the total length of earnout period will be positively related to the q ratio and to the ratio of R&D to sales in the target firm's industry.

In addition, because target managers cannot credibly commit to staying with the post-merger firm [Hart and Moore (1994)], earnouts can be used as a contractual means of retaining target managers.¹⁰ We expect acquirers to have to rely on target firm management for longer periods of time when the acquiring firm does not operate in, and therefore has no expertise in, the target firm's industry. This implies that the length of the earnout period will be greater when the cross-industry dummy variable is equal to one.

One problem with extending earnout contracts over longer periods of time is that it provides more opportunity for factors outside of the control of target managers to affect the value of the future contingent payments. This will be more true the greater the variability of conditions in the target firm's industry. Thus, we expect that the length of the earnout period will be shorter the greater is the standard deviation of daily returns in the target firm's industry. In addition, earnout payments made in stock of the acquiring firm expose target firm shareholders to risks that affect any aspect of the acquiring firm's returns, whereas earnout payments made in cash expose them only to risks that affect the particular performance measure on which the contingent

¹⁰ See Kohers and Ang (2000) for evidence on the association between earnout payments and the retention of target managers in the post-acquisition period.

payments are based. *Ceteris paribus*, therefore, we expect the length of the earnout period to be longer when earnout payments are made in cash than when they are made in stock.

It is less clear what factors should influence the measurement interval employed in earnout contracts. As we indicate above, a significant majority (77%) of the sample earnouts measure performance annually and we consider it likely that those firms that choose a shorter or longer period do so for reasons idiosyncratic to the firm or its industry. However, because it is reasonable to assume that the performance of assets in place can be measured more frequently than that of growth options, we expect the measurement interval to be positively associated with measures of growth opportunities.

Evidence. Table 5 presents results related to the total length of the earnout period. Panel A presents means and medians by earnout period quartiles. Both mean and median standard deviations of daily returns in the target firm industries decline monotonically across earnout period quartiles, consistent with the hypothesis that firms in higher volatility industries are less likely to engage in longer earnout contracts. Median target industry R&D% statistics run counter to the hypothesis that firms with more growth opportunities have longer earnouts: the R&D% declines monotonically across earnout period quartiles. The only other pattern suggested by the univariate statistics in panel A is that the median ratio of transaction to acquirer size increases monotonically across earnout period quartiles.

In panel B we present the results of OLS and Tobit regressions in which the total length of the earnout period is the dependent variable. The coefficient on the target industry standard deviation of daily returns is negative and significant, consistent with the univariate statistics and with the hypothesis that firms in higher volatility industries are less likely to engage in longer earnout contracts. The results with respect to the growth opportunity hypothesis are mixed. The

coefficient on the target industry R&D% is positive and significant. This is consistent with the hypothesis that firms whose value comes more from future growth opportunities have longer earnout periods. However, industry q is also a common proxy for growth opportunities and its coefficient is negative and significant, which runs counter to the hypothesis.

Consistent with the hypothesis that stock is less likely to be used to make longer-term earnout payments, we document a positive and significant coefficient on a dummy variable indicating that earnout payments will be made in cash. We find no evidence that earnout periods are longer when the acquirer and target do not operate in the same industry. Finally, we find that earnout periods are significantly longer the larger the earnout value is relative to the total value of the transaction.

We present measurement interval results in Table 6. Univariate statistics are presented in Panel A. Given that 77% of the sample firms have a measurement interval equal to one year, we group the statistics according to whether the interval is less than one year, one year exactly, or greater than one year. The means and medians presented in Panel A provide only limited evidence of meaningful patterns. Mean and median total earnout time increase monotonically as the measurement interval length increases, as does the mean ratio of transaction to acquirer value. The mean target industry standard deviation of daily returns decreases as the measurement interval increases, while the median target industry q increases.

The panel B regressions indicate that both target industry R&D% and target industry q ratio are significantly positively related to the measurement interval, albeit at the 5% and 10% levels, respectively. This is consistent with the hypothesis that performance is measured less frequently for firms with greater growth opportunities than for those with greater assets in place.

The regressions also confirm that total earnout time is significantly positively related to the length of the measurement interval.

3.4. Determinants of the form of earnout payment

Theoretical discussion. The descriptive statistics in Table 2 indicate that 93% of earnout payments are contracted to be made in either cash, common stock of the acquiring firm, or a combination of the two. This overall distribution of methods of earnout payment is similar to that of non-contingent payment in mergers and acquisitions, as documented in prior studies and in Table 1 of this study.

Previous studies propose a number of factors that potentially influence the choice between cash and stock in non-contingent merger payments. These include acquiring and target firm information asymmetries, risk-sharing considerations, target firm size, and the availability of cash or debt capacity.¹¹ We conjecture that the factors that influence the form of non-contingent payments are also likely to influence the form of contingent payments for some of the same reasons. Therefore, in our subsequent analysis, we directly test the association between the forms of payment for the contingent and non-contingent components of the acquisition payment.

In addition, however, we hypothesize that some factors have a unique influence on the earnout portion of the payment. As discussed earlier, one use of earnouts is to bridge valuation gaps stemming from information asymmetry about the target's intrinsic value. Note that because target firm shareholders can typically choose to sell their acquiring firm stock when they receive it, the use of stock as the non-contingent payment in an acquisition addresses uncertainty only through the time that the acquisition is consummated. The portion of the acquisition payment that is contingent on future target performance, i.e. the earnout portion, allows information that is

¹¹ See, for example, Hansen (1987) Martin (1996), and Faccio and Masulis (2005).

revealed after completion of the acquisition to be reflected in the total consideration paid for the target firm. If the performance measure used in the earnout contract fully reveals the target's value, a cash payment should be sufficient. However, if the performance measure is less than fully revealing, payment of the earnout in acquirer stock forces the target shareholders to share more of the risk of this valuation uncertainty. The reason for this is that the acquirer's stock price reflects the broader effects of any information revealed about the value of the combined firm between the time of the acquisition and the end of the earnout period.

The above discussion implies that earnouts are more likely to be paid in acquirer stock when there is more uncertainty about the value of the target, when that value is less likely to be fully revealed in a near-term performance measure, and when changes in the target's value have a greater impact on the acquirer's stock price. As before, we measure the uncertainty of target valuation using the standard deviation of target industry daily returns. In addition, we expect that near-term performance measures are less likely to fully reveal the target's value when more of that value is derived from future growth opportunities. We again measure these growth opportunities using the industry ratio of research and development expense to sales, and the median Q ratio in the target firm's industry. Finally, we expect that changes in the target's value will have a greater impact on the acquirer's value when the target is large relative to the acquirer.

In addition to addressing issues related to target valuation uncertainty, the form of payment also potentially addresses issues related to the incentive of target managers to remain with the combined firm and to work towards maximizing the value of the combined enterprise. Because the value of earnout payments made in stock depends not only on target management's efforts but also on the efforts of acquiring firm managers, we expect that stock payments are less likely to be used for purposes of retaining target managers. Thus, we hypothesize that stock is

more likely to be used as the form of payment when the acquiring firm already operates, and therefore has expertise, in the target firm's industry. In these situations, it is less vital to offer incentives to retain target managers. Stock payments may also be more effective than cash payments in providing target management with the incentive to effectively integrate their operations with those of the acquiring firm. Once again, this is more likely to be true when the acquiring firm already operates in the target firm industry.

Finally, it is possible that the form of earnout payment is influenced by the more practical issue of the acquiring firm's ability to make payment in cash, which requires either cash on hand or excess debt capacity. To address this possibility we examine the acquiring firms' industry-adjusted ratio of cash and marketable securities to total assets and their industry-adjusted ratio of long-term debt to total assets. In addition, if the need for cash is an issue, the form of earnout payment should be more likely to be in stock when the transaction is relatively larger and when the earnout represents a larger portion of the total transaction value.

Evidence. Our findings are presented in Table 7. Panel A provides univariate statistics related to the choice of earnout payment method. We present mean and median values of each variable for transactions in which the earnout payment is in cash only, in stock only, and in cash and stock only. We begin by indicating the proportion of deals in each category for which the non-contingent payment offered in the transaction falls into each of these three categories. (These results are not reported in a table.) The results suggest a high degree of correlation between non-contingent and earnout payments. For 61% of transactions in which the earnout payment is in cash only the non-contingent payment in the transaction is also in cash only. Fifty percent of stock-only earnout contracts are transactions in which the non-contingent payment

was also made in stock only. Finally, 62% of cash-and-stock-only earnout transactions are also cash-and-stock-only non-contingent transactions.

The evidence presented in Panel A of Table 7 is mixed on the hypothesis that acquirers are more likely to make earnout payments in stock when they lack cash or debt capacity. We examine two potentially relevant size measures: the size of the transaction relative to the size of the acquirer and the size of the earnout relative to the size of the transaction. Consistent with our hypothesis, we find that mean values of the ratio of transaction to acquirer value across payment categories are consistent with the hypothesis that payment is more likely to be in cash the smaller the relative size of the transaction. Median values, however, do not support the hypothesis. In addition, we find that acquirers that make stock earnout payments have lower debt ratios than do acquirers that make earnout payments in cash.

Our hypotheses regarding target information asymmetry and target business risk both suggest that target firms with more variable returns will be more likely to receive stock in their earnout payments. The univariate statistics support this. Stock is more likely to be used for targets whose industries have more variable daily stock returns, greater relative amounts of R&D, and higher Qs.

Incentive hypotheses suggest that stock is more likely to be used in earnout payments when the target and acquiring firms are in the same industry. The univariate statistics are consistent with this hypothesis: the cross-industry dummy equals 1 for 52% of stock-only earnouts, 57% of cash-and-stock earnouts, and 60% of cash-only earnouts.

Panel B of Table 7 presents the results of logit regressions in which the dependent variables indicate whether earnout payments are to be made in stock only or in any stock. The strongest impact on the form of earnout payment appears to come from the form of the non-

contingent payments made in the sample mergers. Even after controlling for factors that are potentially related to the reasons for employing an earnout contract, the likelihood of using any stock or only stock for the earnout payment is strongly positively related to whether the non-contingent payment included any stock.

We find that total transaction size relative to acquirer size is significantly related to earnout payments being made in stock only. This is consistent with the hypothesis that earnout payments are made in stock when the acquiring firm lacks sufficient cash or debt capacity to make them in cash. The same can be said for the significantly positive influence of the ratio of earnout/transaction size on the likelihood of using some stock in the earnout payment. However, measures of industry-adjusted acquirer cash holdings and debt ratios do not significantly impact the cash-stock choice.¹²

The significant impact of relative transaction size on the likelihood of a stock-only earnout payment is also consistent with the incentive hypothesis. Payment in acquirer stock should provide target management with greater incentive to perform when their performance has a larger impact on combined stock price. However, the incentive hypothesis also suggests that stock earnout payments should be more likely when the target and acquiring firms are in the same industry and the results in panel B indicate that there is no relation between the cross-industry variable and the form of earnout payment.¹³

We find that stock payment is less likely to be made in earnout contracts that are of longer total length. One explanation for this is that stock payment is less likely to be used the

¹² As a robustness check we re-estimate the regressions using unadjusted acquirer cash and debt ratios. The results are qualitatively equivalent.

¹³ As a robustness check we re-estimate the regressions defining the cross-industry variable to equal zero if there is overlap in any of the acquirer and target SIC codes, rather than requiring that the overlap be in the two firms' primary SIC codes. The results are qualitatively equivalent.

less is known about the value that stock will have once given. The longer it is until an earnout payment will be made, the greater the opportunity for changes in acquirer stock value that are unrelated to the acquisition of the target firm.

Panel B provides some support for the hypothesis that stock earnout payments are more likely in industries that have greater information asymmetry or higher business risk. The coefficient on target industry q is significantly positive, indicating that target firms in higher- q industries are more likely to receive some or all of their earnout payments in acquiring firm stock. However, the coefficients on target industry standard deviation of daily returns and target industry R&D expense do not differ significantly from zero.

3.5. Summary

Collectively, our findings indicate that measures of the uncertainty of target value, the target's growth opportunities, and the degree of post-acquisition integration of target and acquirer are important determinants of the earnout contract design. Greater uncertainty is associated with larger earnouts, shorter earnout periods, the use of common stock for the earnout payment, and the use of sales as the performance measure. Earnouts of targets with greater growth opportunities tend to be larger, they tend to be paid in acquirer stock, and they tend to measure performance over longer intervals of time. Earnouts of targets that operate in a different industry than the acquirer are more likely to use income as the performance measure than either sales or non-financial measures.

In addition, we find evidence of systematic interactions among the different contract terms. For example, earnouts that use sales as the performance measure tend to have shorter earnout periods and tend to make the earnout payment in cash. Earnout size is positively

associated with the length of the earnout period, the length of the measurement interval, and the use of stock as the means of payment for the earnout. These interactions appear to imply that different contract attributes serve complementary roles in addressing asymmetric information and moral hazard problems in acquisitions.

4. Discussion and Conclusions

Our evidence highlights the importance of contracting costs and the role of earnouts in mitigating the magnitude of these costs, particularly those associated with asymmetric information and moral hazard. Earnouts are not a “one-size-fits-all” contract, nor do they appear to be primarily rent extraction mechanisms. Rather, they appear to be structured in a manner that minimizes costs and, therefore, maximizes the payoff from the acquisition. Nonetheless, the fact that earnouts are observed almost exclusively in acquisitions of private firms or in subsidiaries of public firms implies that either these costs are not that large in most acquisitions of public targets, or that there are alternative ways of mitigating these costs.

In the absence of an earnout, severe asymmetric information problems can produce a valuation gap between the target and acquirer that can preclude completion of the acquisition. Our evidence indicates that earnouts address this issue by tying a greater proportion of the acquisition payment to observable measures of target firm performance when uncertainty about target value is high. Moreover, the earnout contracts tie the contingent payment to that performance measure which appears to be the most highly correlated with the target’s unobservable intrinsic value.

Similarly, in some acquisitions, it is important for the acquirer to give target managers the incentive to remain with the combined firm and to take actions that maximize the value of the

combined entity. With respect to incentives, our findings are consistent with predictions from standard principal-agent models. For example, Holmstrom's (1979) analysis predicts that the target manager's compensation should be tied to observable signals of managerial performance. We find systematic variation in the choice of performance measure and the period over which this performance is measured that supports this prediction. Specifically, earnout payments are more likely to be tied to target sales when near-term income is a noisier indicator of target performance. Similarly, non-financial measures such as product development milestones tend to be used in high R&D firms, where these non-financial measures are likely to be better measures of performance than are near-term financial measures. We also find that earnout measurement intervals tend to be longer in high-growth firms – i.e. those firms in which more of the firm's value is derived from longer-term projects.

In addition, the analyses of Holmstrom and Milgrom (1991) and Baker (1992) imply that single performance measures will provide relatively poor incentives in situations in which there are several activities for which the agent needs to exert effort. Our finding that earnout payments are more likely to be made in common stock when target uncertainty is large is consistent with this analysis. When target uncertainty is particularly large, it is less likely that the target's value can be captured in a single performance measure. The value of the acquirer's common stock captures the net value of the target manager's efforts.

Finally, our evidence of systematic interactions among various contract terms implies that many are complementary means of mitigating asymmetric information and moral hazard problems. For example, when uncertainty and growth opportunities are large, earnout contracts are characterized by larger size relative to total transaction value, a longer earnout period, and wider performance measurement intervals. Presumably, this combination of contract features

optimizes the tradeoff between the benefits of information production and the costs imposed on the target manager-shareholders. We anticipate that future theoretical work will model these interactions.

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Appendix

In this appendix, we provide four examples of earnout contracts that are representative of the variety of earnout provisions and structures found in the sample.

1. Cyberguard Corporation acquisition of NetOctave Inc., Form 8-K, 3.13.2003

This example illustrates an earnout payment contingent upon future sales of the target firm. The cash payment is calculated as a linear function (37.5%) of target sales, with a maximum payout of \$450,000. Performance is measured quarterly for a total earnout length of one year.

PURCHASE PRICE. Subject to the terms and conditions hereof, in reliance upon the representations and warranties of Seller contained herein, and in consideration of the sale, assignment, transfer and delivery of the Assets as herein contemplated, Buyer agrees to tender to Seller as the purchase price (the "Purchase Price") the following:

(a) at Closing, the sum of Three Hundred Thousand Dollars (\$300,000) cash paid by wire transfer of immediately available funds to an account designated by Seller (the "Cash Payment");

(b) a contingent payment of Thirty-Seven and One-Half Cents (\$0.375) for every One Dollar (\$1) of Seller's products listed on Schedule 1.4(b) ("Seller's Product") invoiced to any third party (which shall specifically exclude Buyer) in the first twelve (12) months following the date of this Agreement up to a maximum amount of Four Hundred Fifty Thousand Dollars (\$450,000), payable in four (4) quarterly increments as earned (the "Contingent Payment"); provided, however, no Seller's Product integrated into Buyer's firewall and/or VPN products shall be used to calculate the Contingent Payment. By way of example and for demonstration purposes only, if Buyer invoices One Million Two Hundred Thousand Dollars (\$1,200,000) of Seller's Product, excluding all Seller's Product integrated into Buyer's firewall and/or VPN products, in the aggregate over the twelve (12) months following the Closing Date, Buyer will make four payments to Seller, each payment being made within thirty (30) days after the end of each respective quarter and which in the aggregate shall total Four Hundred Fifty Thousand Dollars (\$450,000); and

(c) the number of shares of common stock of Buyer equivalent to Seven Hundred Fifty Thousand Dollars (\$750,000) divided by the average closing price per share of common stock of Buyer for the ten (10) trading days ending two (2) business days prior to the date of this Agreement (the "Stock Consideration", and such price per share shall be referred to herein as the "Stock Price").

2. Polycom Inc. acquisition of Voyant Technologies, Form 8-K, 1.16.2004

This example illustrates the potential complexity of calculating earnout payments. The contract provides for earnout payments of either cash or common stock based on gross profit of the target firm (the "Company"). Performance is measured annually for a total earnout length of two years, and the maximum earnout payment is capped at \$35 million. The payment structure is concave since the first year payment equals 203.69% of gross profit in excess of \$39.0 million and the second year payment equals 117.51% of gross profit in excess of \$51.5 million.

THIS AGREEMENT AND PLAN OF MERGER (the "Agreement") is made and entered into as of November 21, 2003 by and among Polycom, Inc., a Delaware corporation ("Parent"), Voyager Acquisition Corporation, a Delaware corporation and a wholly-owned subsidiary of Parent ("Merger Sub"), Voyant Technologies, Inc., a Delaware corporation (the "Company"), and with respect to Section 1.9, Article VII

and Article IX, Mark Soane as Stockholder Representative (the "Stockholder Representative") and U.S. Bank National Association as Escrow Agent (the "Escrow Agent").

1.9 Earn-Out Payment.

(a) Amount of Earn-Out Payment. As additional consideration for the Merger, Parent shall pay to the Payment Agent, on behalf of and for distribution to the former Company Stockholders in accordance with their respective Allocable Portions, an aggregate amount of up to \$35 million when, as and if any such amount becomes payable as set forth in this Section 1.9(a). The Earnout Payments payable pursuant to this Section 1.9 do not constitute compensation for services, but rather constitute part of the consideration for the Company Capital Stock purchased by Parent in the Merger and shall be treated as such for all tax purposes.

(i) First Tranche. If Gross Profit during the First Tranche Period is less than the First Tranche Floor, no Earn-Out Payments shall be made in respect of the First Tranche Period. If Gross Profit during the First Tranche Period is equal to or greater than the First Tranche Ceiling, an Earn-Out Payment in respect of the First Tranche Period equal to the First Tranche Maximum Payout shall be paid in full. If the Gross Profit during the First Tranche Period is greater than or equal to the First Tranche Floor, but less than the First Tranche Ceiling, an Earn-Out Payment in respect of the First Tranche Period equal to the product obtained by multiplying (i) the First Tranche Maximum Payout, by (ii) the quotient obtained by dividing (A) the excess of Gross Profit during the First Tranche Period over the First Tranche Floor, by (B) the First Tranche Difference, shall be made.

(ii) Second Tranche. If Gross Profit during the Second Tranche Period is less than the Second Tranche Floor, no Earn-Out Payments shall be made in respect of the Second Tranche Period. If Gross Profit during the Second Tranche Period is equal to or greater than the Second Tranche Ceiling, an Earn-Out Payment in respect of the Second Tranche Period equal to the Second Tranche Maximum Payout shall be paid in full. If the Gross Profit during the Second Tranche Period is greater than or equal to the Second Tranche Floor, but less than the Second Tranche Ceiling, an Earn-Out Payment in respect of the Second Tranche Period equal to the product obtained by multiplying (i) the Second Tranche Maximum Payout, by (ii) the quotient obtained by dividing (A) the excess of Gross Profit during the Second Tranche Period over the Second Tranche Floor, by (B) the Second Tranche Difference, shall be made.

(iii) Gross Profit shall be calculated separately with respect to each of the First Tranche Period and the Second Tranche Period, respectively. In no event shall the Gross Profit applicable to either the First Tranche Period or the Second Tranche Period have any effect on either (A) the Gross Profit applicable to the other period, or (B) the Earn-Out Payment (if any) payable with respect to the other period, nor shall the results of the Earn-Out Operating Unit in any subsequent period have any effect on either (X) the Gross Profit applicable to either the First Tranche Period or the Second Tranche Period, or (Y) any Earn-Out Payment payable hereunder.

(iv) Method of Payment. Subject to Sections 1.9(a)(i) and 1.9(a)(ii), each Earn-Out Payment shall be made by Parent to the Payment Agent, on behalf of and for the account of the former Company Stockholders, by no later than the twelfth (12th) business day following the public announcement by Parent of its earnings for the quarter ended March 31, 2005, in the case of the First Tranche Period, or March 31, 2006, in the case of the Second Tranche Period, and subject to Section 1.9(b) the Payment Agent shall promptly pay such Earn-Out Payment by check delivered to the addresses of the former Company Stockholders provided to the Payment Agent by the Stockholder Representative not later than five (5) business days prior to the date of such payment after taking such action as is necessary to assure that all applicable federal or state income withholding and any other taxes required by law to be withheld are withheld and deducted from such funds otherwise to be paid.

(b) Election of Cash or Stock; Registration.

(i) Parent shall be entitled to elect for each of the First Tranche and Second Tranche whether it will pay to the former Company Stockholders set forth on Schedule 1.9(b), each of whom has entered into a

Stockholder Support Agreement contemporaneously with the execution hereof containing, among other things, representations that such stockholder is an “accredited investor” within the meaning of the Securities Act of 1933, as amended (the “Securities Act”), their respective portions of the applicable Earn-Out Payment in cash or Parent Common Stock by providing notice of such election to the Payment Agent and Stockholder Representative prior to March 31, 2005, in the case of the First Tranche, and March 31, 2006, in the case of the Second Tranche. If Parent shall elect to pay any such Earn-Out Payment in Parent Common Stock, the Parent Common Stock shall be valued at the average of the closing prices of one share of Parent Common Stock, as reported on The Nasdaq National Market (or other applicable national securities exchange), for each of the ten (10) consecutive trading days ending two (2) business days preceding the date of which such shares of Parent Common Stock are actually issued to the Payment Agent for delivery to the applicable former Company Stockholder.

“Cost of Goods Sold” shall mean the cost to the Company (prior to the Closing) or to Parent or the Surviving Corporation or any affiliate of Parent or the Surviving Corporation (after the Closing) during the relevant period of manufacturing Earn-Out Products (including related inventory valuation adjustments), purchasing Earn-Out Products from third parties, providing services included in, supporting or related to Earn-Out Products (including providing web hosted services related to Earn-Out Products, unless Parent shall have notified the Stockholder Representative of its election to exclude such services from the Earn-Out Products), and royalties payable to third parties in connection with any of the foregoing, determined in accordance with GAAP consistently applied and in a manner consistent with Parent’s normal accounting policies. Notwithstanding any of the foregoing, Cost of Goods Sold shall include only allocations and provisions related to the Earn-Out Operating Unit (as defined in Section 1.9(g)), and shall not include any allocations or provisions for Parent corporate level overhead and depreciation.

“Earn-Out Payment” shall mean any payment pursuant to Section 1.9, whether pursuant to the First Tranche or Second Tranche.

“Earn-Out Products” shall mean (i) the products and services provided by the Company as of or prior to the date hereof, (ii) all products and services that are derivative from or successors to or replacements for or that have substantially similar form, fit and function to any products or services referred to in clause (i), and (iii) all revisions and enhancements to any products or services referred to in clause (i) or clause (ii).

“First Tranche Ceiling” shall mean \$48,851,000.

“First Tranche Difference” shall equal \$9,819,000.

“First Tranche Floor” shall mean \$39,032,000.

“First Tranche Maximum Payout” shall mean \$20,000,000.

“First Tranche Period” shall mean the calendar year ending December 31, 2004.

“Gross Profit” shall mean (i) Net Sales less (ii) Cost of Goods Sold less (iii) Uncollectible Accounts.

“Net Sales” shall mean the revenue recognized by the Company (prior to the Closing) or Parent and its consolidated subsidiaries (after the Closing) during the relevant period from the sale, lease, license, exchange, provision or other disposition for value of Earn-Out Products to third parties determined in accordance with GAAP consistently applied and in a manner consistent with Parent’s normal accounting policies. In the event that any Earn-Out Products are offered in combination with any other products or services, Net Sales attributable to such Earn-Out Products shall be determined based upon the relative published list prices of each product or service sold, leased, licensed, exchanged, provided or otherwise disposed of within such combination.

“Second Tranche Ceiling” shall mean \$64,237,000.

“Second Tranche Difference” shall equal \$12,765,000.

“Second Tranche Floor” shall mean \$51,472,000.

“Second Tranche Maximum Payout” shall mean \$15,000,000.

“Second Tranche Period” shall mean the calendar year ending December 31, 2005.

3. Giant Industries acquisition of BP PLC-Refinery, Form 10-K405, 4.1.2002

This example provides for payments to be made to the target firm contingent on future gasoline and oil prices obtained from contracts trading on the New York Mercantile Exchange. This non-financial performance benchmark is unrelated to both the acquirer and target firms’ performance, and the linearity of payment structure is not classified. Potential cash payments are capped at \$25 million, and the earnout measurement intervals are monthly for a total length of three years.

Margin Payment. For the period commencing January 1, 2003 through and including December 31, 2005 (except as set forth otherwise herein) (the "Margin Payment Period"), Buyer shall pay to Seller (or Seller's designee) on a monthly basis in immediately available funds, by wire transfer to an account designated by Seller, an amount (each such amount, a "Margin Payment") equal to (I) the Gasoline Margin Payment for such month, plus (II) the Heating Oil Margin Payment for such month, plus (III) any portion of any previous Margin Payment (including any interest accrued thereon) that remains unpaid; provided, however, that Buyer's total Margin Payments under this Agreement shall not exceed Twenty Five Million Dollars (\$25,000,000) (excluding interest paid, if any, by Buyer to Seller as a result of Buyer's failure to make payment when due on any Margin Payment), and the Margin Payment Period shall expire upon Buyer's payment of such amount. Buyer's obligation to pay each Margin Payment when due shall not be conditioned upon or related in any way to the performance of the Business or any other businesses of the Buyer, Buyer's operation thereof, the condition of the Purchased Assets or Buyer's ownership of the Purchased Assets.

(i) For purposes of this Section 3(e), the "Gasoline Margin Payment" in any month shall equal an amount determined by multiplying (x) 10,000 by (y) the amount by which the Actual Gasoline Margin exceeds \$5.500 per barrel by (z) the number of days in the month. For purposes of this Section 3(e), the "Heating Oil Margin Payment" in any given month shall equal an amount determined by multiplying (x) 10,000 by (y) the amount by which the Actual Heating Oil Margin exceeds \$4.000 per barrel by (z) the number of days in the month.

(ii) For purposes of this Section 3(e), the "Actual Gasoline Margin" shall be an amount equal to (a) the average amount per barrel of the near month unleaded gasoline contract quoted on the New York Mercantile Exchange for each day of the month on which such contract is quoted, measured at settlement less (b) the average amount per barrel of the near month light sweet crude oil contract quoted on the New York Mercantile Exchange for each day of the month on which such contract is quoted, measured at settlement. For purposes of this Section 3(e), the "Actual Heating Oil Margin" shall be an amount equal to (a) the average amount per barrel of the near month heating oil contract quoted on the New York Mercantile Exchange for each day of the month on which such contract is quoted, measured at settlement, less (b) the average amount per barrel of the near month light sweet crude oil contract quoted on the New York Mercantile Exchange for each day of the month on which such contract is quoted, measured at settlement.

4. ILEX Oncology Inc. acquisition of Convergence Pharmaceuticals, Form 8-K, 7.30.1999

This earnout provides for payment of acquirer stock contingent on non-financial drug development milestones achieved by the target firm. The performance evaluation period occurs at frequencies of approximately two and three years from the acquisition date, for a total earnout length of three years. The linearity of this payment structure is recorded as stepwise with a maximum payment of 1 million shares.

As additional consideration and as part of the Merger Consideration and subject to the terms and conditions contained herein, (1) upon achievement of the First Milestone (as hereinafter defined), ILEX shall issue pro rata to each of the Former Seller Shareholders, subject to Section 2.8, an aggregate of 500,000 shares of the Earn-Out Shares; and (2) upon achievement of the Second Milestone (as hereinafter defined), ILEX shall issue pro rata to each of the Former Seller Shareholders, subject to Section 2.8, an aggregate of 500,000 shares of the Earn-Out Shares (the "Earn-Out Right"). The First Milestone shall be defined as the initiation of treatment of the first patient following initiation of an ILEX Phase I trial in the U.S. or Europe with any item of Intellectual Property, which such First Milestone must occur no later than December 31, 2001. The Second Milestone shall be defined as the initiation of treatment of the first patient following initiation of an ILEX Phase II trial in the U.S. or Europe with any item of Intellectual Property, which such Second Milestone must occur no later than December 31, 2002.

"Earn-Out Shares" shall mean 1,000,000 shares of ILEX Stock otherwise deliverable at the Effective Time to the Former Seller Shareholders in connection with the Merger.

"Intellectual Property" shall mean:

- (a) All rights in and to the Licenses; and
- (b) All rights in and to ApoMigren(TM), Arresten(TM), Chelerythrine, NM-3, Restin(TM), TumStatin(TM) and CanStatin(TM); and
- (c) all of Seller's patents and applications therefor, further including, but not limited to, all divisions, reissues, substitutions, reexaminations, continuations, continuations-in-part and extensions thereof (the "Patents"); and
- (d) all of Seller's inventions, whether or not patentable, further including, but not limited to, all new developments and inventions, as well as all improvements on prior inventions regardless of prior inventorship; and
- (e) all of Seller's know-how and work product, regardless of form and whether tangible or intangible, further including, but not limited to, flow charts, test data, records and journals; blueprints, drawings and photographs; research reports, including any models or other hardware; licensing, marketing or development analysis; and
- (f) all of Seller's copyright interests regardless of actual or potential registrability, and including moral rights, rights of publication and rights of attribution and integrity; and
- (g) all of Seller's trademark or service mark interests, together with all of the goodwill of the business associated therewith and represented thereby (the "Trademarks"); and
- (h) all of Seller's trade secrets; and
- (i) all of Seller's other intellectual property and other proprietary interests, whether or not identifiable as of the date of execution hereof, relating to, or used in connection with, the Business or

Assets now or at any time in the future (to the extent consistent with the respective contractual obligations of the Shareholders as of the date hereof to the academic institutions with which each is affiliated).

"Licenses" shall mean (i) that certain license dated as of July 2, 1999 between Seller and Beth Israel Deaconess Medical Center; (ii) that certain license dated as of July 6, 1999 between Seller and Arch Development Corporation; and (iii) that certain license dated as of July 13, 1999 between Seller and Microbial Chemistry Research Foundation and Mercian Ltd. (the "Microbial Licence").

Table 1
Descriptive Statistics

Descriptive statistics for a sample of 990 mergers completed between 1994 and 2003 that include an earnout contract. Panel A presents an annual time profile for the sample firms and for the Securities Data Corporation universe of completed mergers. Panel B presents ownership and industry data for the sample target firms and for the SDC universe of target firms in mergers. Panel C presents size and form of non-contingent payment data for the sample mergers and the SDC universe. Acquirer market value is its market value of equity. The transaction value is the total amount of consideration offered to the target firm in the merger, including both non-contingent and either maximum or expected contingent amounts.

Panel A: Time Profile

Year	Sample		All Mergers		Sample / All Mergers
	N	%	N	%	
1994	70	7.1%	2,223	8.8%	3.1%
1995	66	6.7%	2,271	9.0%	2.9%
1996	69	7.0%	2,781	11.0%	2.5%
1997	128	12.9%	3,688	14.6%	3.5%
1998	141	14.2%	3,710	14.7%	3.8%
1999	105	10.6%	2,960	11.7%	3.5%
2000	110	11.1%	2,678	10.6%	4.1%
2001	95	9.6%	1,763	7.0%	5.4%
2002	101	10.2%	1,602	6.4%	6.3%
2003	<u>105</u>	<u>10.6%</u>	<u>1,537</u>	<u>6.1%</u>	6.8%
Total	990	100.0%	25,213	100.0%	

Panel B: Target Characteristics

	Sample %	All Mergers %
Target Ownership		
Private	74.4%	50.6%
Public	1.9%	19.0%
Subsidiary	23.1%	28.7%
J.V.	0.5%	1.4%
Primary SICs (3-digit)		
Same Industry	40.2%	43.4%
Cross Industry	59.8%	56.6%
Secondary SICs (3-digit)		
Same Industry	51.4%	51.2%
Cross Industry	48.6%	48.8%

Panel C: Deal Characteristics

<i>Mean (Median), \$ in thousands</i>	Sample	All Mergers
Acquirer Market Value	\$2,439,364 (\$181,341)	\$7,411,025 (\$507,000)
Transaction Value	\$93,884 (\$17,500)	\$238,830 (\$21,445)
Trans./Acquirer Value	26.8% (11.2%)	79.6% (5.9%)

Method of Payment ¹	% of Observations	
Cash	43.8%	52.3%
Cash & Other	2.4%	3.2%
Stock	17.9%	25.6%
Stock & Other	1.3%	0.7%
Mixed - Cash/Stock	29.4%	15.3%
Mixed - Cash/Stock & Other	4.1%	2.1%
Neither Cash or Stock	1.0%	0.8%

¹ For the non-earnout portion of the transaction payment.

Table 2
Earnout Characteristics

Descriptive statistics on contract terms for earnouts included in merger transactions completed between 1994 and 2003. Panel A presents statistics on earnout size. Maximums are obtained from SEC filings. SDC Reported figures reflect a mix of maximum and expected payouts. Panel B details the performance measures on which earnout payments are based. Panel C presents statistics on the length of the total time period over which the earnouts are in effect and the frequency with which performance is measured during the contract. Panel D indicates the form in which earnout payments are contracted to be made.

Panel A: Distribution of earnout payments

<i>(in thousands)</i>	<i>N</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>25th%</i>	<i>Median</i>	<i>75th%</i>	<i>Max</i>
SDC Reported (U.S. Dollars)	990	\$22,314	\$89,228	\$15	\$1,650	\$4,577	\$14,000	\$2,000,000
Maximum Stated (U.S. Dollars) ¹	447	\$21,099	\$65,822	\$150	\$2,000	\$5,000	\$14,013	\$700,000
Maximum Stated (Common Stock Shares)	71	8,859	44,888	16	348	713	2,391	349,500
SDC Reported Percentage of Transaction Value	990	32.7%	20.9%	1.0%	15.9%	28.6%	45.5%	100.0%
Maximum Percentage of Transaction Value ¹	447	33.4%	23.1%	1.4%	15.6%	27.7%	47.3%	161.0%

¹ Includes only earnout payments denominated in U.S. Dollars.

Panel B: Performance Measures

	<i>N</i>	<i>%</i>
Cash Flows ¹	160	32.1%
Sales	157	31.5%
Non-Financial	61	12.2%
Pre-Tax Income	51	10.2%
Gross Profit	24	4.8%
Net Income	23	4.6%
Multiple Measures ²	8	1.6%
Stock Price	6	1.2%
Earnings Per Share	3	0.6%
Return on Investment	2	0.4%
Other	3	0.6%
Total	498	100.0%

¹ Includes EBIT, EBITA, EBITD, EBITDA, EBITD, and EBTDA.

² Indicates a combination of several listed measures.

Panel C: Distribution of earnout period

<i>(in years)</i>	<i>N</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>25th%</i>	<i>Median</i>	<i>75th%</i>	<i>Max</i>
Total Measurement Time	529	2.57	1.89	0.08	1.00	2.00	3.00	20.00
No Expiration Date	6							

Measurement frequency	<i>N</i>	<i>%</i>
Monthly	2	0.4%
Quarterly	23	4.3%
Four Months	1	0.2%
Semi-Annual	26	4.9%
Eight Months	2	0.4%
Nine Months	3	0.6%
Annually	411	77.4%
> One Year, ≤ Five Years	60	11.3%
> Five Years	3	0.6%
Total	531	100.0%

Panel D: Earnout payments

Form of payment	<i>N</i>	<i>%</i>
Cash	186	38.7%
Common Stock	137	28.5%
Cash & Common Stock	125	26.0%
Debt	10	2.1%
Cash & Debt	9	1.9%
Common Stock & Debt	3	0.6%
Preferred Stock	2	0.4%
Other Combinations ¹	5	1.0%
Other	4	0.8%
	481	100.0%

¹ Includes combinations of cash, common stock, preferred stock, convertible preferred stock, debt, and convertible debt.

Table 3
Earnout Size

Univariate statistics and cross-sectional regressions on earnout size, measured as the ratio of earnout payment (as defined by SDC) to transaction value in mergers completed between 1994 and 2003 that include earnout contracts. Panel A presents mean and median values of potential determinants of earnout size across earnout size quartiles. Means are reported with medians below in parentheses. Panel B presents estimates obtained by regressing earnout size on the potential determinants. Transaction value is the value of the total payment that could be made in the merger. Acquirer market value is its market value of equity. Earnout time is the total time period over which the earnout is in effect. Payment in cash is a dummy variable that takes the value one if the earnout payment is made entirely in cash and zero otherwise. Cross-industry is a dummy variable that takes the value one if the acquirer and target have different primary 3-digit SIC codes and zero otherwise. Target industry standard deviation of daily returns, industry R&D%, and industry Q are the median values of these variables for firms in the same SIC code as the target firm. R&D % is the ratio of R&D to sales. Q is the ratio of market value of a firm, measured as book value of total assets less book value of equity plus market value of equity, to the book value of its total assets. In Panel B, t-statistics are provided in parentheses with ***, **, and * indicating significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Means and Medians

	Quartile 1	Quartile 2	Quartile 3	Quartile 4
Earnout / Transaction Value	9.9% (10.3%)	22.3% (22.1%)	37.1% (37.8%)	61.5% (58.1%)
Transaction / Acquirer Mkt Value	32.1% (14.7%)	32.2% (11.8%)	19.8% (9.2%)	22.2% (10.3%)
Earnout Value (\$ in thousands)	\$10,030.5 (\$2,600.0)	\$29,113.4 (\$4,000.0)	\$26,679.7 (\$5,770.0)	\$23,391.3 (\$7,000.0)
Earnout Time (years)	2.25 (2.00)	2.58 (2.00)	2.57 (2.00)	2.87 (3.00)
Payment in Cash	0.49 (0.00)	0.41 (0.00)	0.34 (0.00)	0.31 (0.00)
Cross-Industry Primary 3-digit level	0.66 (1.00)	0.57 (1.00)	0.56 (1.00)	0.61 (1.00)
Target Industry Std. Dev. Daily Returns	4.4% (4.2%)	4.7% (4.5%)	4.9% (4.9%)	4.9% (4.7%)
Target Industry R&D%	6.7% (2.2%)	13.2% (5.9%)	20.9% (7.2%)	11.7% (6.9%)
Target Industry Q	1.70 (1.42)	1.92 (1.63)	1.99 (1.68)	1.95 (1.71)

Panel B

	Earnout / Transaction Value (OLS)	Earnout / Transaction Value (Tobit)
Intercept	0.224 *** (4.006)	0.106 (1.158)
Transaction / Acquirer Mkt Value	-0.034 ** (-2.211)	-0.069 ** (-2.112)
Earnout Time	0.016 *** (2.666)	0.024 *** (2.680)
Payment in Cash	-0.077 *** (-3.313)	-0.127 *** (-3.271)
Cross-Industry Primary 3-digit level	-0.006 (-0.273)	-0.010 (-0.271)
Target Industry Std. Dev. Daily Returns	1.326 ** (2.043)	2.012 ** (1.965)
Target Industry R&D%	-0.058 (-1.133)	-0.092 (-1.040)
Target Industry Q	0.024 * (1.771)	0.036 * (1.697)
Sigma		0.251 *** (15.059)
R ²	8.31%	

Table 4
Performance Measures

Univariate statistics and logit regressions on earnout performance measure in mergers completed between 1994 and 2003 that include earnout contracts. The dependent variable in the three logit models is a dummy variable equal to one if the performance measure is sales, income, and non-financial, respectively. Panel A presents mean and median values of potential determinants of performance measure across performance measure categories. Means are reported with medians below in parentheses. Panel B presents estimates obtained by regressing a performance dummy on the potential determinants. Transaction is the value of the total payment that could be made in the merger. Acquirer market value is its market value of equity. Earnout time is the total time period over which the earnout is in effect. Payment in cash is a dummy variable that takes the value one if the entire earnout payment is made in cash and zero otherwise. Cross-industry is a dummy variable that takes the value one if the acquirer and target have different primary 3-digit SIC codes and zero otherwise. Target industry standard deviation of daily returns, industry R&D%, and industry Q are the median values of these variables for firms in the same SIC code as the target firm. R&D % is the ratio of R&D to sales. Q is the ratio of market value of a firm, measured as book value of total assets less book value of equity plus market value of equity, to the book value of its total assets. In Panel B, p-values are provided in parentheses with ***, **, and * indicating significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Means and Medians

	Sales <i>N = 157</i>	Cash Flow <i>N = 160</i>	Income <i>N = 101</i>	Non-Financial <i>N = 61</i>
Transaction / Acquirer Mkt Value	24.1% (10.9%)	47.9% (22.6%)	32.0% (16.2%)	37.4% (11.9%)
Earnout Time (years)	2.30 (2.00)	2.47 (2.00)	2.90 (3.00)	3.12 (2.00)
Payment in Cash	0.44 (0.00)	0.39 (0.00)	0.32 (0.00)	0.46 (0.00)
Payment in Stock	0.29 (0.00)	0.16 (0.00)	0.35 (0.00)	0.33 (0.00)
Payment in Cash & Stock	0.21 (0.00)	0.34 (0.00)	0.27 (0.00)	0.14 (0.00)
Cross-Industry Primary 3-digit level	0.55 (1.00)	0.61 (1.00)	0.71 (1.00)	0.44 (0.00)
Target Industry Std. Dev. Daily Returns	5.0% (4.9%)	4.7% (4.5%)	4.3% (4.0%)	4.6% (4.4%)
Target Industry R&D%	14.5% (10.0%)	5.5% (1.7%)	7.6% (2.6%)	18.3% (14.0%)
Target Industry Q	2.19 (1.92)	1.76 (1.58)	1.71 (1.51)	2.22 (2.02)

Panel B: Logit Model

	Sales	Non-Financial	Income
Intercept	-1.928 *** (0.003)	-2.322 *** (0.009)	-0.617 (0.430)
Transaction / Acquirer Mkt Value	-0.464 (0.146)	0.129 (0.548)	-0.283 (0.266)
Earnout Time	-0.163 * (0.067)	0.163 ** (0.043)	0.090 (0.198)
Payment in Stock	-0.381 (0.210)	0.614 (0.132)	1.216 *** (0.000)
Cross-Industry Primary 3-digit level	-0.230 (0.390)	-0.435 (0.267)	0.735 ** (0.025)
Target Industry Std. Dev. Daily Returns	23.232 *** (0.003)	-13.521 (0.281)	-16.660 * (0.080)
Target Industry R&D%	0.414 (0.532)	1.207 * (0.078)	0.374 (0.688)
Target Industry Q	0.331 ** (0.035)	0.114 (0.592)	-0.526 ** (0.030)
Pseudo R ²	14.34%	10.85%	13.39%
Wald Chi-Square	28.36 ***	16.94 **	23.96 ***
P-Value	0.000	0.018	0.001

Table 5
Length of Earnout Period

Univariate statistics and regressions on length of earnout period in mergers completed between 1994 and 2003 that include earnout contracts. Panel A presents mean and median values of potential determinants of total earnout period length across earnout period quartiles. Means are reported with medians below in parentheses. Panel B presents estimates obtained by regressing length of earnout period on the potential determinants. Earnout value is the SDC-reported earnout payment. Transaction is the value of the total payment that could be made in the merger. Acquirer market value is its market value of equity. Earnout time is the total time period over which the earnout is in effect. Payment in cash is a dummy variable that takes the value one if the entire earnout payment is made in cash and zero otherwise. Cross-industry is a dummy variable that takes the value one if the acquirer and target have different primary 3-digit SIC codes and zero otherwise. Target industry standard deviation of daily returns, industry R&D%, and industry Q are the median values of these variables for firms in the same SIC code as the target firm. R&D% is the ratio of R&D to book value of total sales. Q is the ratio of market value of a firm, measured as book value of total assets less book value of equity plus market value of equity, to the book value of its total assets. In Panel B, t-statistics are provided in parentheses with ***, **, and * indicating significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Means and Medians

	Quartile 1	Quartile 2	Quartile 3	Quartile 4
Earnout Time (years)	0.45 (0.50)	1.03 (1.00)	2.03 (2.00)	4.12 (3.00)
Earnout / Transaction Value	31.5% (28.6%)	27.9% (22.8%)	32.7% (28.3%)	35.8% (33.1%)
Transaction / Acquirer Mkt Value	17.7% (11.6%)	39.1% (13.7%)	31.3% (14.3%)	32.8% (16.9%)
Earnout Value (\$ in thousands)	\$22,289.0 (\$4,500.0)	\$10,214.2 (\$3,200.0)	\$19,815.7 (\$4,101.0)	\$24,611.9 (\$6,000.0)
Payment in Cash	0.35 (0.00)	0.33 (0.00)	0.38 (0.00)	0.46 (0.00)
Cross-Industry Primary 3-digit level	0.57 (1.00)	0.56 (1.00)	0.60 (1.00)	0.61 (1.00)
Target Industry Std. Dev. Daily Returns	5.7% (5.7%)	5.0% (4.9%)	4.6% (4.4%)	4.4% (4.2%)
Target Industry R&D%	12.5% (13.0%)	10.5% (7.4%)	8.2% (3.8%)	11.8% (2.4%)
Target Industry Q	2.01 (1.52)	2.08 (1.83)	1.99 (1.68)	1.78 (1.58)

Panel B

	Length of Earnout Period (OLS)	Length of Earnout Period (Tobit)
Intercept	3.450 *** (7.148)	3.097 ** (2.333)
Transaction / Acquirer Mkt Value	0.022 (0.159)	0.048 (0.123)
Earnout Size / Transaction Value	1.315 *** (2.666)	3.565 *** (2.625)
Payment in Cash	0.439 ** (2.078)	1.159 ** (2.020)
Cross-Industry Primary 3-digit level	-0.250 (-1.201)	-0.683 (-1.226)
Target Industry Std. Dev. Daily Returns	-21.736 *** (-3.748)	-62.379 *** (-3.332)
Target Industry R&D%	1.227 *** (2.679)	2.566 *** (2.639)
Target Industry Q	-0.297 ** (-2.381)	-0.832 ** (-2.168)
Sigma		2.947 *** (9.596)
R ²	8.42%	

Table 6
Earnout Measurement Intervals

Univariate statistics and regressions on earnout measurement intervals in mergers completed between 1994 and 2003 that include earnout contracts. Panel A presents mean and median values of potential determinants of measurement interval across measurement interval frequency categories. Means are reported with medians below in parentheses. Panel B presents estimates obtained by regressing measurement interval on the potential determinants. Earnout is the SDC-reported earnout payment. Transaction is the value of the total payment that could be made in the merger. Acquirer market value is its market value of equity. Earnout time is the total time period over which the earnout is in effect. Payment in cash is a dummy variable that takes the value one if the entire earnout payment is made in cash and zero otherwise. Cross-industry is a dummy variable that takes the value one if the acquirer and target have different primary 3-digit SIC codes and zero otherwise. Target industry standard deviation of daily returns, industry R&D%, and industry Q are the median values of these variables for firms in the same SIC code as the target firm. R&D % is the ratio of R&D to sales. Q is the ratio of market value of a firm, measured as book value of total assets less book value of equity plus market value of equity, to the book value of its total assets. In Panel B, t-statistics are provided in parentheses with ***, **, and * indicating significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Means and Medians

	< 1 Year <i>N</i> = 57	Annual <i>N</i> = 411	> 1 Year <i>N</i> = 63
Measurement Interval (years)	0.40 (0.50)	1.00 (1.00)	3.43 (3.00)
Earnout Time (years)	1.56 (1.00)	2.55 (2.00)	3.52 (3.00)
Earnout / Transaction Value	33.3% (29.6%)	32.0% (26.9%)	36.2% (31.4%)
Transaction / Acquirer Mkt Value	28.3% (11.9%)	33.5% (15.9%)	41.0% (15.8%)
Earnout Value (\$ in thousands)	\$13,998.9 (\$4,000.0)	\$19,995.3 (\$4,300.0)	\$17,164.0 (\$5,000.0)
Payment in Cash	0.33 (0.00)	0.40 (0.00)	0.40 (0.00)
Cross-Industry Primary 3-digit level	0.46 (0.00)	0.62 (1.00)	0.54 (1.00)
Target Industry Std. Dev. Daily Returns	5.4% (5.2%)	4.6% (4.4%)	4.4% (4.7%)
Target Industry R&D%	10.0% (8.1%)	8.8% (3.5%)	24.2% (13.4%)
Target Industry Q	2.12 (1.59)	1.87 (1.63)	2.12 (1.99)

Panel B: OLS Regression

	Measurement Interval
Intercept	0.142 (0.463)
Transaction / Acquirer Mkt Value	0.065 (0.784)
Earnout Size / Transaction Value	-0.258 (-0.873)
Earnout Time	0.445 *** (13.680)
Payment in Cash	-0.065 (-0.519)
Cross-Industry Primary 3-digit level	-0.082 (-0.668)
Target Industry Std. Dev. Daily Returns	-3.101 (-0.885)
Target Industry R&D%	0.676 ** (2.467)
Target Industry Q	0.124 * (1.667)
R ²	40.58%

Table 7
Form of Earnout Payment

Univariate statistics and logit regressions on form of earnout payment in mergers completed between 1994 and 2003 that include earnout contracts. Panel A presents mean and median values of potential determinants of form of earnout payment across earnout form of payment categories. Panel B presents estimates obtained by regressing dummy variables for payment in stock only or for any stock payment on the potential determinants. Earnout is the SDC-reported earnout payment. Transaction is the value of the total payment that could be made in the merger. Acquirer market value is its market value of equity. Earnout time is the total time period over which the earnout is in effect. Payment in cash is a dummy variable that takes the value one if the entire earnout payment is made in cash and zero otherwise. Cross-industry is a dummy variable that takes the value one if the acquirer and target have different primary 3-digit SIC codes and zero otherwise. Target industry standard deviation of daily returns, industry R&D%, and industry Q are the median values of these variables for firms in the same SIC code as the target firm. R&D % is the ratio of R&D to sales. Q is the ratio of market value of a firm, measured as book value of total assets less book value of equity plus market value of equity, to the book value of its total assets. In Panel B, p-values are provided in parentheses with ***, **, and * indicating significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Means and Medians

	Cash Only <i>N=186</i>	Stock Only <i>N=137</i>	Cash & Stock <i>N=125</i>
Transaction / Acquirer Mkt Value	29.1% (14.6%)	39.1% (10.8%)	30.6% (15.0%)
Earnout / Transaction Value	29.6% (24.0%)	35.1% (31.6%)	37.2% (36.4%)
Earnout Value (\$ in thousands)	\$22,237.7 (\$4,500.0)	\$28,014.0 (\$4,000.0)	\$15,711.8 (\$6,000.0)
Earnout Time (years)	2.76 (2.00)	2.13 (2.00)	2.20 (2.00)
Measurement Interval (years)	1.33 (1.00)	1.26 (1.00)	1.09 (1.00)
Non-Earnout Payment Includes Stock	0.34 (0.00)	0.90 (1.00)	0.78 (1.00)
Cross-Industry Primary 3-digit level	0.60 (1.00)	0.52 (1.00)	0.57 (1.00)
Acquirer Ind. Adj. LT Debt / Assets	7.6% (0.5%)	5.4% (-0.1%)	7.6% (0.0%)
Acquirer Ind. Adj. Cash / Assets	6.8% (1.3%)	5.2% (0.1%)	9.1% (4.1%)
Target Industry Std. Dev. Daily Returns	4.5% (4.3%)	5.1% (5.0%)	4.9% (4.9%)
Target Industry R&D%	11.3% (3.1%)	13.0% (13.2%)	12.3% (5.0%)
Target Industry Q	1.81 (1.58)	2.29 (2.02)	1.91 (1.74)

Panel B: Logit Model

	Stock Only		Any Stock	
Intercept	-2.585 *** (<.0001)	-4.007 *** (<.0001)	-1.073 * (0.082)	-2.418 *** (0.001)
Transaction / Acquirer Mkt Value	0.393 ** (0.036)	0.336 * (0.085)	0.304 (0.147)	0.200 (0.383)
Earnout Size / Transaction Value	0.822 (0.185)	0.839 (0.200)	2.317 *** (0.000)	2.669 *** (0.000)
Earnout Time	-0.141 (0.168)	-0.088 (0.409)	-0.196 ** (0.021)	-0.170 * (0.072)
Measurement Interval	0.135 (0.294)	0.107 (0.451)	0.087 (0.476)	0.047 (0.758)
Non-Earnout Payment Includes Stock		1.866 *** (<.0001)		2.234 *** (<.0001)
Cross-Industry Primary 3-digit level	-0.161 (0.552)	-0.095 (0.743)	-0.137 (0.580)	-0.136 (0.633)
Acquirer Ind. Adj. LT Debt / Assets	-0.164 (0.854)	-0.412 (0.648)	0.213 (0.780)	-0.156 (0.859)
Acquirer Ind. Adj. Cash / Assets	-0.135 (0.814)	-0.194 (0.743)	0.184 (0.733)	0.226 (0.713)
Target Industry Std. Dev. Daily Returns	8.101 (0.290)	7.604 (0.357)	9.309 (0.188)	9.993 (0.215)
Target Industry R&D%	-0.639 (0.345)	-0.447 (0.513)	-0.510 (0.370)	-0.302 (0.646)
Target Industry Q	0.588 *** (0.000)	0.579 *** (0.001)	0.286 * (0.078)	0.215 (0.249)
Pseudo R ²	12.25%	25.74%	12.34%	37.05%
Wald Chi-Square	25.31 ***	45.16 ***	25.78 ***	74.24 ***
P-Value	0.005	<0.0001	0.004	<0.0001