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Insider trading restrictions and top executive compensation ☆

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ABSTRACT

The use of equity incentives is significantly greater in countries with stronger insider trading restrictions, and these higher incentives are associated with higher total pay. These findings are robust to alternative definitions of insider trading restrictions and enforcement, and to panel regressions with country fixed effects. We also find significant increases in top executive pay and the use of equity-based incentives in the period immediately following the initial enforcement of insider trading laws. We conclude that insider trading laws are one channel through which cross-country differences in pay practices can be explained.

1. Introduction

Recent studies document substantial cross-country variation in both the level of executive compensation and the use of equity-based incentives for top executives (see, e.g., Murphy, 1999, forthcoming). However, the underlying factors contributing to these observed differences remain the topic of active investigation. For example, although Conyon et al. (2011) find that higher levels of pay for U.S. CEOs relative to their U.K. and E.U. counterparts can be explained (at least in part) by their higher stock and option incentives, their findings leave open the question of why incentives are so much higher for U.S. CEOs. Indeed, Conyon et al. suggest that “researchers should shift their efforts toward better understanding the reason for differences in incentives between CEOs in the U.S. and CEOs in the U.K. and other parts of the world”.

We analyze whether country-level restrictions in insider trading contribute to cross-country differences in top executive compensation. Specifically, we analyze several (not mutually exclusive) channels through which compensation and insider trading restrictions might be related. One possibility is that insider trading represents a form of compensation for top

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executives. Thus, when insider trading laws are restrictive, equilibrium in the labor market forces firms to increase the level of top executive compensation. A second possibility is that the strength of insider trading laws affects the optimal use of equity incentives. If insider trading represents a form of equity incentives (e.g., Manne, 1966), restricting such trading might lead firms to substitute other types of equity incentives in the executive compensation contract. Similarly, when insider trading laws are weaker, firms might choose to use relatively fewer incentives in pay packages so as to avoid trading-related agency conflicts (see, for example, Baiman and Verrecchia, 1995). Because greater equity incentives expose top executives to greater risk, the increased use of equity incentives when insider trading is restricted also leads to higher levels of compensation. A third possibility is that insider trading laws are themselves a response to cross-country differences in pay practices. Specifically, in countries in which firms use greater equity incentives, stronger insider trading laws are required to mitigate trading-related agency conflicts with executives.

To provide evidence on these hypotheses, we analyze both levels of top executive compensation and the use of equity-based incentives for a broad set of executives in 41 different countries. Our primary sample consists of 468 non-U.S. firms with American Depository Receipts (ADRs) and 1852 U.S. firms in 2006. The primary virtue of analyzing compensation in foreign firms with ADRs is that such firms are required to file Form 20-F with the SEC. Thus, we are able to obtain complete, standardized compensation data at the firm level for all of our sample firms. By contrast, most prior cross-country compensation studies have been forced to rely upon survey-based and country-aggregate compensation data.[1] We recognize that a possible limitation of our data is that firms with ADRs are not representative of the population of firms in that country and later address this potential limitation.

We measure insider trading restrictions in two ways. First, following Du and Wei (2004), we use an insider trading restriction (ITR) index that is based on global executive opinion surveys about the extent of insider trading restrictions in individual countries. Second, we use an insider trading law (ITL) index from Beny (2006) that captures differences in the strength of insider trading laws. Importantly, for our purposes, both ITR and ITL exhibit substantial cross-country variation.

Our baseline analysis indicates that equity incentives are positively related to insider trading restrictions. These findings are robust to the inclusion of a variety of firm-level and country-level control variables, such as firm size, leverage, R&D, growth opportunities, board structure, shareholder protection, and country GDP. Moreover, the implied impact of insider trading restrictions on equity incentives is also economically important. A one-unit increase in the ITR index (approximately one standard deviation) is associated with an increase in overall equity incentives of over 200%, and an increase in the percentage of equity-based pay (i.e., the incremental flow of incentives) of about 22 percentage points. We also find that the level of top executive total pay is positively associated with insider trading restrictions. However, we cannot reject that this finding is driven by the greater use of equity incentives (and, therefore, higher risk premium) in countries with stronger insider trading restrictions.

These baseline findings are consistent with all three hypothesized channels for the association between insider trading restrictions and compensation. In addition, a fourth possibility is that there is no causal connection between insider trading restrictions and top executive pay/incentives. Under this explanation, the association between the two is a spurious byproduct of the fact that our regressions omit potentially important factors that are correlated with both insider trading restrictions and executive pay.

To further discriminate among these alternative explanations, therefore, we conduct several additional tests. First, we exploit time-series variation in insider trading restrictions to estimate panel regressions with country and year fixed effects. The results from these tests indicate that greater restrictions on insider trading are associated with significant increases in the use of incentive compensation.

Second, we analyze changes in compensation around the dates of initial enforcement of insider trading laws. After controlling for time trends and fixed country effects, we find that both the level of total executive compensation and the use of equity-based incentives increase significantly following the initial enforcement of insider trading laws.

Third, we analyze whether the observed link between executive compensation and insider trading restrictions is associated with the level of insider ownership. Because higher insider ownership diminishes the need for additional incentives at the margin, this should weaken the link between insider trading restrictions and the use of equity incentives if the direction of causation runs from trading restrictions to executive pay. Consistent with this argument, the results from these tests indicate that higher inside ownership weakens the link between insider trading restrictions and both overall equity incentives and the level of pay.

Based on the results of these additional tests, we conclude that the evidence appears most consistent with a causal link that runs from insider trading restrictions to compensation incentives. Such a link is consistent with both (i) insider trading serving as an implicit form of compensation, and (ii) firms optimally choosing to use greater (fewer) equity incentives when insider trading restrictions are strong (weak). Because (i) depends on insider trading restrictions leading to reduced trading profits for executives whereas (ii) does not, distinguishing between these two explanations requires observation of whether stronger insider trading restrictions actually do reduce executive trading profits.

Unfortunately, we are unaware of systematic data on the profitability of insider trading outside of the U.S. Therefore, we conduct an indirect test by analyzing the run-up in stock prices prior to acquisition announcements in each of our sample

[1] Examples include Abowd and Bognanno (1995), Abowd and Kaplan (1999), and Murphy (1999) who rely on Towers Perrin's Worldwide Total Remuneration reports.