

A Proclivity to Cheat: How Culture influences Illegal Insider Trading

Bart Frijns, Aaron Gilbert*, Alireza Tourani-Rad

*Department of Finance, School of Business and Law, Auckland University of Technology,
Auckland, New Zealand*

* Corresponding Author. Aaron Gilbert, Department of Finance, Auckland University of Technology, Private Bag 92006, 1020 Auckland, New Zealand, Email: agilbert@aut.ac.nz, phone: +64 9 921 5713, Fax: +64 9 921 9940.

A Proclivity to Cheat: How Culture influences Illegal Insider Trading

Abstract:

Insider trading has been subjected to increasing sanctions in many markets without completely deterring insider dealing or even, on the basis of some evidence, making it more prevalent. This suggests that other factors may impact on the prevalence of insider dealing such as culture, a system of norms and values which may enhance or undermine the laws in place. We examine the impact of culture by relating the four Hofstede (2001) cultural dimensions to the price and volume run-ups prior to a takeover announcement. Our results show that higher uncertainty avoidance, a proxy for risk aversion, deters insider dealing, although other cultural dimensions show little connection with insider trading. Our findings suggest that law makers may need to consider culture when establishing insider trading laws, specifically, stronger sanctions in low uncertainty avoiding countries.

JEL Codes : K22, G15, G38

Key Words: Cultural Dimensions, Insider Dealing, Price Run-Ups

1. Introduction

In recent times the importance of investor protection laws and corporate governance have been emphasised by law makers and academics. A string of studies based on the arguments of La Porta et al. (1997) have shown that stronger legal protections of minority investors make markets more efficient, increase access to capital and result in more developed markets. As a result, there has been the introduction and the tightening of legal protections of investors in a range of regulatory areas in most developed countries. This trend can be seen particularly in the laws on insider trading. Bhattacharya and Daouk (2002) note that since the 1980's the number of countries which have enacted insider trading laws has increased considerably, from 34 to 87 of 103 countries worldwide as of 1998. However, many countries have also re-written or strengthened the sanctions regimes of their insider trading laws. Given that financial markets are in competition with one another for capital, corporate governance and investor protection laws improvements represent a way of attempting to attract new investors and retain existing investors within a market. There seems to be a race to the top, particularly in the wake of Sarbanes-Oxley Act 2002 which focused investors' attention on corporate governance. These changes have been motivated, at least in part, by a need to assure investors that the legislative regime within a country is comparable, or better, than other markets. However, in spite of these improvements, Bris (2005) finds that insider trading is not only still prevalent and profitable, but that laws may have increased, rather than decreased, the incidence of insider dealing. As laws seem unable to completely deter insiders, and may in fact increase incentives for insider dealing, it may be that other factors also play a role with determining compliance.

Laws represent formal institutional responses that are typically drafted to deter or regulate activities or behaviours that are deemed socially undesirable. However, legal responses are not the only channel by which 'bad' activities can be addressed (Fidrmuc and Jacob, 2010), and in fact may be either enhanced or undermined by informal institutions which also impact on behaviours such as culture (Posner, 2000). Culture is often thought of as an embedded and unconscious set of shared set of values, beliefs and expected behaviours (Herbig, 1994; Hofstede, 1980) that affect the way those who hold them evaluate and respond to situations, people and events (Schwartz, 1994). In essence culture tells members of a group what the group finds acceptable and legitimate behaviour (Breuer and Quinten, 2009). Consequently, this means culture can either reinforce laws, where compliance is encouraged, or undermine regulatory efforts, where societal values run contrary to the legal system (Cowell, 1990). The literature has also observed that, in spite of the relative sophistication of investors and executives, economic and financial decisions in a range of areas including corporate capital structures (Chui et al., 2002), corporate cash holdings (Ramirez and Tadesse, 2009), investment returns based on momentum strategies (Chui et al., 2010) and the level of asset allocation (Frijns and Beugelsdijk, 2010) are affected by cultural and social norms.

In this paper we explore the effect of culture on the prevalence of illegal insider trading within a country. An understanding of how culture impacts on insiders behaviour, especially its interaction with the regulatory environment within a country may assist policy makers in designing better laws, a process that is often based on ad hoc comparisons with other countries with little or no discussion of relevant differences. We employ the four Hofstede cultural dimensions namely; uncertainty avoidance, individualism, power distance and masculinity to measure culture. We examine the prevalence of illegal insider trading by

calculating the cumulative abnormal returns and cumulative abnormal volume in the period immediately prior to the announcement of an acquisition by a company for a publicly listed target. We use acquisitions as they represent a very profitable opportunity for insiders to exploit their information. This method has been used by a number of prior studies including Keown and Pinkerton (1981), Bris (2005) and King (2009) to examine insider dealing.

We employ a sample of 7,853 acquisitions announced between January 1990 and August 2008 with targets in 28 countries. Our results show that culture plays a significant role in explaining the level of cumulative abnormal returns and cumulative abnormal volume for uncertainty avoidance, a national measure linked to risk aversion. Our results hold even after we control for regulatory differences. We argue that high uncertainty avoidance aids the deterrence value of laws by making people less willing to risk breaking the rules. Other measures of culture however do not appear to be related to the prevalence of insider dealing. The implication of our findings are that law makers may need to stop comparing laws to other countries with different cultural values in developing their own regulations and instead focus on developing laws that consider their own embedded cultural norms. Specifically, for insider dealing, less uncertainty avoiding countries may need to look at ways of significantly increasing the deterrence value of their insider trading laws if they are to be as effective as the sanction in more risk averse countries.

The rest of the paper is structured as follows. Section 2 provides a review of the relevant literature on insider trading and the role of culture in decision making and develops our hypotheses. Section 3 provides an overview of the methodology and the data used. Section 4 discusses our results while Section 5 concludes the paper.

2. Literature Review

Insider trading is a broad term that has been used to capture all trading by insiders. However, in the vast majority of countries, the law distinguishes between so-called legal and illegal insider trading, the later often being referred to as insider dealing. Legal trading is usually allowed when insiders are not trading on specific corporate information that would impact the price and where insiders, usually quickly after the trade, are required to disclose their trade to the market. In this situation it has been argued that insiders are acting as analysts by identifying and exploiting mis-pricings in the market (Kim et al., 1997). The literature has shown that insiders do relatively well based on these disclosed trades, with insiders trades all almost universally profitable irrespective of country or time **period (see)**. Provided insiders, at the time of the trade, have no material private information, and follow the disclosure requirements, insiders have no reason to fear legal repercussions for their trading.

Most countries, in contrast, prohibit insiders from trading on the basis of specific non-public information that would be expected to have a price impact. While trading on profitable information has been banned, the prosecutions for insider trading show that insiders do so regardless of the legal jeopardy they face as a result. In addition, it is not uncommon to see media reports stating the well-established perception that insider dealing is rife within most markets. However, the empirical evidence on insider dealing and its prevalence is not well developed, largely as a result of the difficulty in identifying illegal insider trading. Several studies have employed court records to investigate the impact illegal trades have on market prices (Muelbroek, 1992; Cornell and Sirri, 1992; Chakravarty and McConnell 1997, 1999). However, these studies offer little evidence on the prevalence of insider trading. The more

common approach to measuring insider dealing has been to examine the behaviour of prices and trading volumes in the period prior to a major announcement (Keown and Pinkerton, 1981; Keown et al., 1992; Eysell and Arshardi, 1993; Bris, 2005; King, 2009). Takeovers are an obvious event that has been employed as acquirers will usually offer a premium above the market price on the announcement day giving insiders an almost guaranteed profit.

More recently, insider trading studies have started focused on the efficacy of the legislative approaches to deterring insider trading. Most studies find that insider trading laws appear to have a positive impact on markets. Bhattacharya and Daouk (2002) find that the first enforcement of insider trading laws reduce the cost of capital within a country. Although in a follow up paper, they find that countries that do not enforce their laws have greater costs of capital than countries that never enacted laws at all (Bhattacharya and Daouk, 2005). Beny (2005) finds stricter laws, based on the scope, sanctions available and enforceability, result in a reduction in the concentration of equity ownership, and increase the accuracy of stock prices and liquidity in the market. Finally, Frijns et al. (2008), using measures of information asymmetry derived from the bid-ask spread, find a marked reduction in information asymmetry following significant strengthening of insider trading laws in New Zealand.

Bris (2005) however finds contrasting evidence on the impact of laws. Particularly, looking at pre-takeover announcement price run ups and volume traded, Bris finds that that irrespective of the laws put in place, insider trading remains profitable and present in markets. Furthermore, he observes that the introduction of laws actually increases the profitability and abnormal volume, although stronger laws have a greater deterrence value than weaker laws.

Insider trading laws therefore appear to be positive for the market as a whole, but do not seem to be entirely effective in deterring the activities of insiders. It is therefore of interest to examine how other less direct mechanisms of influencing behaviour affect insider dealing, specifically culture.

Culture

The examination of the impact of culture, particularly at a national level, and the effect it has on financial decision-making is a relatively recent phenomenon. The psychology literature has long acknowledged the fact that socialisation and embedded values can influence members of a group to act in similar ways to similar events or situations. However, finance literature has only recently begun to investigate the degree to which the different values societies possess affect economic actors, and may cause them to behave differently to members of other groups with different values. While the literature is relatively new, it is becoming apparent that culture, and the differences in cultures, play an important role in the decision making process by individuals and the evolution of legal structures and institutions.

Early papers in the literature have tended to use factors like language and religion to proxy for culture, largely as a result of the difficulty in quantifying and measuring culture. Stulz and Williamson (2003) for instance use language and principle religion and find a relationship with the level of investor protection and creditor rights. Halek and Eisenhauer (2001) and Hillary and Hui (2009) also find that religion, employed as a proxy for culture, is related to the level of risk aversion of individuals and CEO's.

While language and religion do appear to relate to culture, these proxies fail to capture the full spectrum of differences in cultures, or even the differences in culture within countries sharing similar primary religions or languages (Licht et al., 2005). As a result, much of the literature has looked to the cross-culture psychology literature for ways to quantify the differences in cultures between countries. Several frameworks have been proposed and widely employed, with the most commonly used method being Hofstede's (2001) cultural dimensions. Hofstede conducted surveys with IBM employees in over 50 countries and used the survey responses to identify four key dimensions of culture that were orthogonal to each other, and so virtually uncorrelated. The four dimensions identified were *uncertainty avoidance*, *individualism*, *power distance* and *masculinity*¹. Each country was given a score for each dimension allowing countries to be ranked as having high to low exposure for a particular dimension.

Uncertainty avoidance refers to the degree to which members of a country are uncomfortable with uncertain and unstructured situations and their willingness to deal with this uncertainty. This dimension has been argued in the financial literature as a national level proxy for risk aversion. Individuals from high uncertainty avoiding nations, being uncomfortable with situations and with uncertain outcomes, will avoid risk or try to minimise it. Studies have observed that high uncertainty avoiding countries are associated with bank based financial systems (Kwok and Tadesse, 2006; Aggarwal and Goodell, 2009), higher consumption of life insurance (Chui and Kwok, 2008), lower dividend payouts (Fidrmuc and Jacob, 2010) and lower formal investor protection rules (Licht et al., 2005).

¹ Masculinity has been studied in a number of studies but in most has been found to have no influence on financial decision making. Our results also show that it has no influence and as such we do not report the results.

We argue that high uncertainty avoiding countries should have lower price run-ups and volume traded in the period prior to a takeover announcement. Given insider dealing is a prohibited activity in all the countries in our sample, there is a considerable amount of risk associated with this activity in terms of both being caught and the eventual penalty. This risk should reduce the benefits that insiders receive from exploiting their information, making it less likely they will do so. Risk averse individuals are therefore less likely to undertake insider dealing and so we should see a negative relationship with our measures of the prevalence of insiders.

Individualism measures the degree to which people are encouraged to fend for themselves and immediate family, forming loose associations with other individuals or at the other end of the scale where people are integrated into groups, looking out for each other. Within the financial literature a number of theories have been proposed around how the individualism dimension interacts with financial decision making. Chui and Kwok (2008) argue that individualism measures the degree to which an individual is motivated by self-interest over a desire to look out for other members of their social groups such as extended family. They find that highly individualistic countries consume more life insurance as individuals believe the state will be less willing to provide for their dependents, making life insurance more important. Likewise, Fidrmuc and Jacob (2010) using a similar argument find that dividend payouts are higher in individualistic countries as investors are more concerned about expropriation by managers. By contrast, Chui et al. (2010) in explaining their positive relationship between individualism and momentum profits argues that individualistic countries place greater focus on the individual and so individuals tend to have an over-

inflated belief in their abilities. Essentially they argue that individuals in individualistic countries are more prone to hubris in their decision making.

If insiders are impacted by individualism, we expect to see a positive relationship with our measures of the prevalence of insider trading. We apply the reasoning of Chui and Kwok (2008), namely that individuals in individualistic societies are more likely to be self-interested, putting their own welfare and that of their immediate family above that of other members of the society. Hofstede (1980) argue this self interest increases agency problems, where managers exploit their position for personal gain rather than working in the best interests of the shareholders. Insider dealing is a prime example of this as the insider is exploiting their information for personal gain at the expense of other investors with whom they feel only a limited connection. Insiders in more collectivistic societies by contrast are more likely to feel an obligation not to exploit outside shareholders, reducing their willingness to exploit their information for personal gain.

Power distance refers to the expectation and acceptance by less powerful members of organisations that power is unequally distributed. In essence, power distance measures the degree to which inequality is accepted by those without power. In high power distance countries inequitable distributions of power may be perceived as not only acceptable but beneficial as encouraging an orderly and structured society where individuals know their place. Power distance has been shown to reduce life insurance consumption (Chui and Kwok, 2008) and reduce dividend payouts (Fidrmuc and Jacob, 2010). Power distance should have a positive relationship with the prevalence of insider dealing. If society is accepting of

inequality, and in fact members of the society expect those in positions of authority to exploit their positions for personal gain then we should see that insiders feel that it is more socially acceptable to engage in insider dealing.

3. Data and Methodology

Insider dealing is by nature difficult to observe directly. However, while it is hard to observe illegal trading, a number of studies have linked movements in prices and volumes behave in advance of major new announcements to the presence of insiders. This is particularly true for merger and acquisition announcements where advance knowledge offers insiders a significant opportunity to profit from their information. This is driven by the requirement for firms to offer significant premiums over the current market price to successfully take over another firm. For an insider, this offers an almost guaranteed opportunity to earn significant returns by trading in advance of the announcement before the news is factored into the price. As a result, the presence of significant abnormal returns and trading volume before the announcement, and therefore before the market has a chance to adjust to the information, has been used in a number of studies as a significant indicator of the presence of insider trading (Keown and Pinkerton, 1981; Bris, 2005; King, 2009). Bris (2005) shows that the level of price run up and abnormal volume are also related to the strength of the insider trading laws in place within a country. If laws can affect the level of insider dealing, as proxied by price run ups and abnormal volume, then it is also likely that a similar systematic factor affecting economic behaviour like culture should also influence the level of these proxies.

We calculate abnormal returns using the market model as follows

$$R_{ijt} = \alpha_i + \beta_i R_{mjt} + \epsilon_{it}$$

Where R_{ijt} are the returns for target company i in country j and R_{mjt} is the market return on the MSCI index in country j on day t . We estimate the regression during a clean observation period between -330 and -80 days prior to the announcement of a takeover. These estimates are then applied to our estimation window of -60 to 1. We then sum the abnormal returns over the period -60,1 and -30,1 to calculate our cumulative abnormal return measures.

To calculate abnormal volume, we again employ the observation period -330 to -80 to calculate the average natural log of volume traded. Over the estimation period -60 to 1, we then calculate abnormal volume as the difference between the natural log of the volume on day t and the average volume from the observation period. This is then accumulated over the two testing windows -60,1 and -30,1.

To examine the impact of culture on our measures of insider trading prevalence, we conduct cross-sectional regressions using the measures of insider trading as the dependent variables. In addition, we include the four Hofstede Cultural Dimension Scores; uncertainty avoidance, individualism, power distance and masculinity, in addition to a number of controls variables.

We control for a number of factors that are likely to affect the profitability and prevalence of insider trading. First, we control for the size of the deal. Lakonishok and Lee (2001) show that smaller firms offer insiders the opportunity to make higher abnormal returns. Next we control for the regulatory environment within a country which should account for differences in the likelihood of being caught and prosecuted for insider trading. From a deterrence point

of view we would expect less insider trading and therefore smaller price run ups prior to an announcement in better regulated markets. We use a number of measures for the regulatory environment controls including the Kauffman et al. (2009) measures for Rule of Law and Anti-corruption index, Djankov () anti-self dealing index, the accounting standards measure from La Porta, et al. (1998), and the legal origin of a country; English common law, French, German or Scandinavian civil law. We also employ ownership concentration index from La Porta et al. (1999) as a measure of corporate governance.

Finally, we further control for time and industry effects by employing year and industry dummies based on the target firms SIC code. To control for any additional country differences that we have not captured with our control variables, we employ standard errors clustered by country.

To undertake this testing, we collect data on mergers and acquisitions from the Thompson Bankers One Database. To be included we select completed deals for more than 50% of the shares. Firms also had to have a value of greater than \$1 million US. We then matched the target companies of those deals with Thompson Datastream to ensure the availability of data on prices and volumes. We therefore were restricted to examining only the acquisitions of publicly listed targets. We also remove any targets from countries where Hofstede Cultural Dimension scores were not available. This gave us a sample of 7,853 acquisitions from 28 countries for the period January 1990 to August 2008. Deal value, announcement date and target SIC code were collected from the Banker One database, while price and volume data was collected from Thompson Reuters Datastream.

4. Results

4.1 Summary Statistics

The first four columns of Table 1 detail the Hofstede Cultural Dimension scores on; uncertainty avoidance, individualism, power distance and masculinity. All the cultural distance scores show considerable variation between countries. Uncertainty avoidance varies between 112 (Greece) and 8 (Singapore). As a measure of national risk aversion, a high uncertainty avoidance score means Greece is the most risk averse country in the sample while Singapore is the least. Individualism has a narrower range from 17, Taiwan which represents the most collectivistic country in the sample, to 91, the United States. Of note with regards to the individualism scores is some clustering in the scores. Asian countries have the six lowest individualism scores, while Anglo-Saxon countries represent five of the top six individualism scores.

Power distance, or the degree to which people perceive and accept an unequal distribution in power, ranges between 104, high acceptance of inequality in Malaysia, and 11, low acceptance in Austria. Some clustering with the three highest scores all belonging to emerging markets, Malaysia, Philippines and India can be observed in the sample. We notice that there is a considerable gap between the two highest scores, 104 and 94 and the rest of the sample. Low acceptance of inequality is however more common in the sample with 11 countries having scores in the 30's or less.

The remainder of Table 1 presents the country level scores for the control variables we employ in our analysis. These variables are used to account for regulatory differences which may explain the observed differences in the level of insider trading before mergers and acquisitions. While there is variation in these variables, many of the observations tend to cluster around the higher scores. This is not surprising given the sample is predominantly from developed countries. For Kauffman et al.'s (2009) measure of rule of law, which can take values between 2.5 and -2.5, we see 7 countries with scores of 1.8 or greater, and only one, the Philippines, with a negative score. The Anti-corruption index, also from Kauffman et al. (2009), shows even greater clustering, 13 out of 28 score better than 1.8, although the Philippines is joined by Taiwan and India in having a negative score. For both these measures, we note that emerging countries typically have much lower scores. We do not see the same developed versus emerging split for the shareholder protection scores from Djankov et al. (). The country with the worst anti-director rights is Belgium, followed closely by Italy, Philippines and Germany. The accounting standards measure shows limited variation with all but three countries scoring in the 60-80 range. The countries with the poorest accounting standards are Austria, 54, and Greece, 55, while Sweden scores the highest on 83. The final measure is ownership concentration. The country with the highest ownership concentration is Greece, .67, while the lowest is Japan at .18. Again, many of the countries in the sample have relatively similar scores.

Table 2 gives summary statistics clustered by the target country. The largest number of targets are located in the US, 2,812 out of a total of 7,853 representing just over one-third of the sample. A considerable number of acquisitions take place in the UK, Canada, Japan and Australia. The CAR (-60,1) column shows the average cumulative abnormal returns earned

over the period from 60 days prior to the day before the announcement of an acquisition. Over that period, we see considerable abnormal returns in virtually all countries. Most countries have abnormal returns of 10-20% in the 60 days prior to the acquisition. The highest average is the US at 26.82% followed by Canada with an average of 22.97%. Considering the shorter windows, we observe that the vast majority of the CAR occurs in the period shortly prior to the acquisition. The average across countries in the -60,1 window is 18.76%, 17.14% for the -30,1 window and 15.43% for the -15,1 window respectively.

Columns 5-7 in Table 2 report the abnormal volume traded in the windows, -60,1, -30,1 and -15,1. All countries in our sample bar Germany, have abnormal volume traded in the lead up to an acquisition over the -60,1 window. Much of the abnormal volume occurs in the shorter window, although to a lesser degree. Singapore has the greatest abnormal volume in the -60,1 and -30,1 windows, while Malaysia has the highest average abnormal volume in the -15,1 window. Overall, the average abnormal volume is 8.9 in the -60,-1 window, 6.1 in the -30,1 window and 3.92 in the -15,1 window respectively.

4.2 Culture and Insider Trading

To examine the link between the cultural dimensions and insider trading we conduct multivariate regression where our measures of insider trading prevalence, cumulative abnormal returns and cumulative abnormal volume, are the dependent variable. We regress the dependent variables against each of the four cultural dimensions independently, and control variables to account for the regulatory environment and the level of insider trading. We also control for country differences by employing clustered standard errors.

4.2.1 Uncertainty Avoidance

We start by examining the link between uncertainty avoidance and insider trading. Prior literature has linked uncertainty avoidance with risk aversion. Given the potential consequences for insiders to be caught and prosecuted, we expect that in countries with high uncertainty avoidance, or high risk aversion, would have less prevalent insider dealing. As a result, we would expect to see smaller cumulative abnormal returns, and less abnormal trading in high uncertainty avoiding countries.

The results reported in Table 3 supports our hypothesis that national risk aversion impacts on the prevalence of insider dealing. The first six columns present the regressions coefficients where the cumulative abnormal returns are the dependent variable. Irrespective of whether we include control variables, columns two, four and six, or not, columns one, three and five, we see a consistently negative relationship between the insider trading measures and uncertainty avoidance. Likewise, where we employ abnormal volumes as the dependent variable, we see consistently negative coefficients, with the exception of the abnormal volume -60 to 1 window. The results indicate that insider dealing in high uncertainty avoiding countries is less prevalent. This is likely due to the deterrence effect of the laws being enhanced by the higher risk aversion of the investors. The observed difference is economically significant. The largest gap in uncertainty avoidance of 104 points, between Greece and Singapore, equates to a difference of 12.5% in the cumulative abnormal returns for the -30 to 1 window, after controlling for other effects.

With respects to the control variables, deal value is negatively related to the CAR's for the -30,1 and -15,1 windows. This indicates that larger deals have less profitable insider dealing which is in line with Lakonishok and Lee (2001). For the CAR's, we also see negative relationships between the anti-corruption index, anti-self dealing index and accounting standards. These are all consistent with there being less profitable insider dealing in better regulated and controlled markets. We observe a negative and significant relationship with the German legal origin dummy, suggesting countries from Germanic civil law countries have less profitable insider dealing. The cumulative abnormal volume regressions differ with regards to the significance of the control variables. Rule of law is consistently significantly negative, while anti-corruption is only significant for the -15,1 window. Ownership concentration has a positive relationship, suggesting that higher ownership concentration, which proxies for poor corporate governance, increases abnormal volume traded. Accounting standards has a positive sign, indicating that better accounting standards actual increases the level of trading before a takeover announcement. Overall, the results suggest that both the regulatory environment and culture, particularly the uncertainty avoidance measure, are important in controlling the prevalence of insiders.

4.2.2 Individualism

Chui and Kwok (2008) argue that in highly individualistic societies people are highly motivated by self-interest. Fridumac and Jacob (2006), argue that as a result of individuals self-interest, agency problems are greater in countries with a high individualism score. These agency problems result in managers putting their own personal benefits ahead of that of other stakeholders. We argue that insider trading represents a similar situation, where the insider

exploits the information they possess at the expense of other shareholders including other owners of the firm.

Table 4 provides little evidence to suggest that individualism does affect the prevalence of insider trading. We observe significant coefficients for CAR-60,1, CAR-30,1 and CAR-15,1 and the individualism scores, suggesting that more individualistic countries have higher price run-ups than more collectivistic countries. However, once we control for the regulatory environment and the size of the deal the statistical significance disappears. This suggests that the regulatory environment has a more powerful influence over insiders behaviour than individualism. The results, in addition, indicate that individualism is not at all related to the level of abnormal volume. With regards to the control variables, we find that the same variables are significant for the abnormal volume regressions. However, for the CAR's we observe some differences. Anti-corruption and anti-self dealing remain significant and negative, as we expect them to be. We further note that both the French and German civil law dummies are negative and significant, suggesting less insider trading in countries from those legal origins.

4.2.3 Power Distance

Power distance measures the acceptance and expectation of inequality by the least powerful members of a society. In essence, it is the degree to which low ranked or grouped members of a society accept social segregation and exploitation by those more powerful than themselves. If a society is more accepting of exploitation by more powerful members of society, like

corporate insiders, then we would expect to see that those societies with a high power distance index would have more prevalent insider dealing.

The results in Table 5, however, do not fully support this. For all three CAR windows we observe significant negative relationships between the power distance score and CAR's, suggesting insider dealing is more profitable in countries with lower power distance. However, as with individualism, once we add in the controls for deal size and the regulatory environment, any significant relationship disappears. **Again, this implies that while culture does have some effect, the regulatory environment has a stronger influence.** Abnormal volume also appears to have no relationship with power distance. We also observe the same patterns in the sign and significance of the control variables for the power distance regressions as we did for individualism, particularly the anti-corruption and anti-self dealing control variables have negative and significant coefficients.

4.3 Dimension Score Sorts

As an additional test we split the sample countries on the basis of their score in each dimension into high (top 30%) and low (bottom 30%) dimension groups. We then average the cumulative abnormal returns for all the takeovers occurring in the top and bottom groups and plot them against one another. This procedure not only allows us to observe differences in the level of the CARs around the announcement day, but also to observe differences in the pre-announcement period with regards to when CARs begin.

The results are portrayed in Figures 1 through 3. We see further evidence that risk aversion, as measured by uncertainty avoidance, has a significant impact on the price run-ups. In particular, we observe that the low uncertainty avoiding nations have markedly higher run-ups that seem to begin very early, somewhere between days -60 and -50. The high uncertainty avoiding nation's CARs on the other hand stay around zero until about day -20. Of equal interest is the fact that there is a very marked difference in the day 0 reactions, with risk seeking countries seeing a much greater jump on CARs around the announcement day.

We also observe similar patterns in Figure 2, the countries are separated based on their individualism scores. Here, it is high individualism countries that start to trend upwards from a relatively early period, while it is not until around Day -20 that we see increases in collectivistic countries. We observe a much greater jump in the CARs on around the announcement day for individualistic countries. Figure 3 shows the CAR plot when the sample is split on the basis of power distance. The two groups appear to track each other reasonably closely, including around the announcement day, further supporting the regression findings that power distance has little role to play in explaining pre-announcement price run-ups.

Our results overall provide some evidence to support the hypothesis that culture plays a role in deterring or encouraging insider dealing. In particular, we observe a very clear link between uncertainty avoidance, which has been related to risk aversion, and both the cumulative abnormal returns and cumulative abnormal volume traded. Specifically, we see that risk aversion appears to act as an added deterrent over and above the more formal legal

institutions. From a policy view point, this finding would suggest that countries with low levels of risk aversion will need stricter penalties to reduce insider dealing than their more risk averse counterparts. We also see some support for individualism and power distance having an effect on price run-ups, however, once we control for the regulatory environment and the deal size the effect of culture disappears.

5. Conclusion

While insider trading laws have been introduced and significantly strengthened in many countries in recent decades, particularly in the wake of the corporate governance scandals of the early 2000's, the efficacy of these laws is an open question. Bris (2005) shows that insider dealing continues to be both prevalent and profitable, and while tougher laws are more effective than weaker laws, even strict laws have not completely removed the problem. In this paper, we explore another factor that may influence the behaviour of insiders, culture. We examine several proxies for the prevalence and profitability of illegal insider trading in the period prior to an acquisition announcement and relate them to the four Hofstede's Cultural Dimensions, uncertainty avoidance, individualism, power distance and masculinity, to see what role culture plays.

Our results show that culture plays a significant role in explaining the level of cumulative abnormal returns and cumulative abnormal volume for uncertainty avoidance, a national measure linked to risk aversion. These results support our belief that high uncertainty avoidance aids the deterrence value of laws by making people less willing to risk breaking the rules. Our other measures of culture however provide only mixed evidence of impacting

on CAR's or abnormal volume, which usually disappears once we control for the regulatory environment. Overall we find that insiders are affected by social norms and cultural values. The implication of this finding is that law makers may need to stop comparing laws to other countries with different cultural values in developing their own regulations and instead focus on developing laws that adapt to those values. As an example, less uncertainty avoiding countries may need to look at ways of significantly increasing the deterrence impact of their insider trading laws if they are to be effective.

References

- Aggarwal, R. and Goodell, J. (2008). Equity premia in emerging markets: national characteristics as determinants. *Journal of Multinational Financial Management*, 18, 389-404.
- Beny, L. (2005). Do Insider Trading Laws Matter? Some Preliminary Comparative Evidence. *American Law and Economics Review*, 7, 144-183.
- Beugelsdijk, S. and Frijns, B. (2010). A cultural explanation of the foreign bias in international asset allocation. *Journal of Banking and Finance* 34, 2121-2131.
- Bhattacharya, U., & Daouk, H. (2002). The World Price of Insider Trading. *Journal of Finance*, 57, 75-108.
- Bhattacharya, U., & Daouk, H. (2009). When No Law is Better than a Good Law. *Review of Finance*, 13, 577-627.
- Breur, W., and Quinten, B. (2009). Cultural Finance. *Working Paper* ssrn.com/abstract=1282068
- Bris, A. (2005). Do Insider Trading Laws Work? *European Financial Management*, 11, 267-312.
- Chakravarty, S., and McConnell, J. (1997). An Analysis of Prices, Bid/Ask Spreads, and Bid and Ask Depths Surrounding Ivan Boesky's Illegal Trading in Carnations Stock. *Financial Management Association*, 26, 18-34.
- Chakravarty, S., and McConnell, J. (1999). Does Insider Trading Really Move Stock Prices? *Journal of Financial and Quantitative Analysis*, 34, 191-209.
- Chui, A. and Kwok, C. (2008). National culture and life insurance consumption. *Journal of International Business Studies* 39, 88-101.
- Chui, A., Lloyd, A. and Kwok, C. (2002). The Determination of Capital Structure: Is National Culture a Missing Piece of the Puzzle. *Journal of International Business Studies*, 22, 99-127.
- Chui, A., Titman, S. and Wei, J. (2010). Individualism and Momentum around the World. *Journal of Finance*, 65, 361-392.
- Cornell, B., and Sirri, E. (1992). The Reaction of Investors and Stock Prices to Insider Trading. *Journal of Finance*, 47, 1031-1059.
- Cowell, F. (1990). *Cheating the Government: The Economics of Evasion*. MIT Press, Cambridge, MA.

Djankov, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2006). The Law and Economics of Self-Dealing. *Journal of Financial Economics*, 88, 430-465.

Eyssell, T. and Arshadi, N. (1993). Insiders, Outsiders or Trendchasers?: An Investigation of Pre-Takeover Transactions in the Shares of Target Firms. *The Journal of Financial Research*, 16, 49-59.

Fidrmuc, J., and Jacob, M. (2010). Culture, Agency Costs and Dividends. *Journal of Comparative Economics*, 38, 321-339.

Frijns, B. and Beugelsdijk, S. (2010). A Cultural Explanation of the Foreign Bias in International Asset Allocation. *Journal of Banking and Finance*, 34, 2121-2131.

Frijns, B., Gilbert, A. and Tourani-Rad, A. (2008). Insider Trading, Regulation, and the Components of the Bid-Ask Spread. *Journal of Financial Research*, 31, 225-246.

Halek, M., and Eisenhauer, J. (2001). Demography of risk aversion. *Journal of Risk and Insurance* 68, 1–24.

Herbig, P. (1994). *The Innovation Matrix: Culture and Structure Prerequisites to Innovation*. Quorum, Westport, CT.

Hilary, G. and Hui, K. (2009): Does religion matter in corporate decision making in America? *Journal of Financial Economics*, 93, 455-473.

Hofstede, G. (1980). *Culture's Consequences*. Sage Publications: Beverly Hills, CA, 2nd edition.

Hofstede, G. (2001). *Culture's Consequences*. Sage Publications: Beverly Hills, CA, 2nd edition.

Kaufmann, D., Kraay, A. and Mastruzzi, M. (2010). *Worldwide Governance Indicators*. Available at <http://info.worldbank.org/governance/wgi/index.asp>.

Keown, A., and Pinkerton, J. (1981). Merger Announcements and Insider Trading Activity: An Empirical Investigation. *The Journal of Finance*, 36, 855-869.

Keown, A., Pinkerton, J., and Bolster, P. (1992). Merger Announcements, Asymmetrical Information, and Trading Volume: An Empirical Investigation. *The Journal of Business Finance and Accounting*, 19, 901-910.

Kim, S., Lin, J., and Stein, J. (1997). Market Structure, Informed Trading and Analysts Recommendations. *Journal of Financial and Quantitative Analysis*, 32, 507-524.

King, M. (2009). Prebid Run-ups Ahead of Canadian Takeovers: How Big is the Problem? *Financial Management*, 38, 699-726.

- Kwok, C. and Tadesse, S. (2006). National culture and financial systems. *Journal of International Business Studies* 37, 227-247.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (1998). Law and Finance, *Journal of Political Economy* 52, 1113-1155.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. (1999). Corporate ownership around the world. *Journal of Finance* 54, 471-517.
- Lakonishok, J. and Lee, I. (2001). Are Insider Trades Informative? *Review of Financial Studies*, 14, 79-111.
- Licht, A. (2008). Social Norms and the Law: Why Peoples Obey the Law. *Review of Law and Economics*, 4, 715-750.
- Licht, A., Goldschmidt, C. and Schwartz, S. (2005). Culture, law, and corporate governance. *International Review of Law & Economics*, 25, 229-255.
- Muelbroek, L. (1992). An Empirical Analysis of Illegal Insider Trading. *Journal of Finance*, 47, 1661-1699.
- Posner, E. (2000). Law and Social Norms: The Case of Tax Compliance. *Virginia Law Review*, 86, 1781-1819.
- Ramirez, A. and Tadesse, S. (2009). Corporate Cash Holding, Uncertainty Avoidance and the Multinationality of Firms. *International Business Review*, 18, 387-403.
- Schwartz, S. (1994). Beyond individualism/collectivism: New Cultural Dimensions of Values. In Kim, U., Triandis, H., Kagitcibasi, C., Choi, S., and Yoon, G. (1994). *Individualism and Collectivism: Theory, Method and Applications*. Sage Publications, Thousand Oaks, CA.
- Stulz, R. and Williamson, R. (2003). Culture, Openness and Finance. *Journal of Finance*, 70, 313-349.

Table 1: Country Characteristics

	Legal Origin	Uncertainty Avoidance	Individualism	Power Distance	Rule of Law	Anti-Corruption Index	Anti-Self Dealing	Accounting Standards	Ownership Concentration
Australia	English	51	90	36	1.725	1.906	4.00	75	0.28
Austria	German	70	55	11	1.829	1.952	2.00	54	0.58
Belgium	French	94	75	65	1.306	1.375	0.00	61	0.54
Canada	English	48	80	39	1.704	1.987	5.00	74	0.4
Denmark	Scand	23	74	18	1.860	2.322	2.00	62	0.45
Finland	Scand	59	63	33	1.889	2.327	3.00	77	0.37
France	French	86	71	68	1.397	1.390	2.70	69	0.34
Germany	German	65	67	35	1.622	1.863	0.92	62	0.48
Greece	French	112	35	60	0.841	0.512	1.24	55	0.67
Hong Kong	English	29	25	68	1.304	1.613	4.11	69	0.54
India	English	40	48	77	0.159	-0.355	2.08	57	0.4
Italy	French	75	76	50	0.633	0.479	0.83	62	0.58
Japan	German	92	46	54	1.307	1.184	3.59	65	0.18
Malaysia	English	36	26	104	0.525	0.363	2.71	76	0.54
Netherlands	French	53	80	38	1.719	2.084	2.00	64	0.39
New Zealand	English	49	79	22	1.818	2.256	4.00	70	0.48
Norway	Scand	50	69	31	1.883	2.035	4.00	74	0.36
Philippines	French	44	32	94	-0.386	-0.510	0.82	65	0.57
Singapore	English	8	20	74	1.550	2.194	3.43	78	0.49
South Africa	English	49	65	49	0.068	0.366	2.21	70	0.52
South Korea	German	85	18	60	0.884	0.455	1.07	62	0.23
Spain	French	86	51	57	1.197	1.228	3.12	64	0.51
Sweden	Scand	29	71	31	1.813	2.169	3.00	83	0.28
Switzerland	German	58	68	34	1.836	2.061	2.00	68	0.41
Taiwan	German	69	17	58	0.890	0.685	2.56	65	0.18
Thailand	English	64	20	64	0.190	-0.200	1.25	64	0.47
United Kingdom	English	35	89	35	1.646	1.896	4.28	78	0.19
United States	English	46	91	40	1.541	1.528	5.00	71	0.2

Note: We report the per country scores for Uncertainty Avoidance, Individualism and Power Distance (Hofstede, 2001), Rule of Law and Anti-Corruption Index (Kaufmann et al., 2010), Anti-Self Dealing (Djankov et al., 2006), Accounting Standards (La Porta et al., 2008) and Ownership Concentration (La Porta et al., 2009)

Table 2: Deal Characteristics By Country

	Num Deals	CAR -60,1	CAR -30,1	CAR -15,1	Ab_Vol -60,1	Ab_Vol -30,1	Ab_Vol -15,1	Av Deal Value
Australia	664	0.1445	0.1412	0.1293	9.83	6.06	3.31	299.07
Austria	15	0.1260	0.0969	0.0864	10.70	6.97	3.95	487.32
Belgium	40	0.1178	0.0992	0.1002	13.02	7.07	4.36	1206.95
Canada	677	0.2297	0.1990	0.1729	17.71	11.90	7.22	661.50
Denmark	48	0.1433	0.1275	0.0989	18.79	9.65	4.46	567.32
Finland	58	0.1402	0.1324	0.1177	9.33	4.96	2.60	198.80
France	316	0.0731	0.0644	0.0498	5.46	4.25	2.68	958.32
Germany	152	0.1384	0.1096	0.0956	-1.54	0.77	0.86	753.67
Greece	27	0.1262	0.1420	0.0905	5.25	6.90	5.39	409.23
Hong Kong	80	0.1326	0.1406	0.1198	9.43	6.84	4.52	208.60
India	75	0.1111	0.1118	0.1287	5.42	4.39	3.70	108.87
Italy	80	0.0889	0.0773	0.0707	12.57	9.10	5.30	969.46
Japan	611	0.0511	0.0593	0.0579	6.88	3.78	2.18	449.92
Malaysia	72	0.0961	0.1081	0.0630	20.44	14.57	9.62	443.23
Netherlands	72	0.1300	0.1577	0.1433	11.16	8.63	5.54	2282.32
New Zealand	74	0.1331	0.1155	0.0999	4.63	4.80	3.27	203.20
Norway	103	0.1701	0.1662	0.1764	11.92	7.95	6.00	640.18
Philippines	27	0.1828	0.1337	0.1360	16.10	9.19	6.55	185.46
Singapore	79	0.1895	0.1384	0.1297	25.52	16.44	9.47	240.88
South Africa	135	0.1257	0.1068	0.0713	10.64	6.83	3.64	375.85
South Korea	66	0.1813	0.1527	0.1160	3.07	3.87	3.52	566.40
Spain	65	0.0693	0.0664	0.0575	12.16	7.25	5.29	1359.57
Sweden	131	0.1781	0.1667	0.1629	5.01	5.90	4.45	408.14
Switzerland	38	0.1432	0.1351	0.1375	10.63	4.85	3.97	1358.25
Taiwan	47	0.0841	0.0700	0.0758	5.03	3.67	2.93	549.08
Thailand	33	0.1928	0.1139	0.1066	10.11	5.92	4.11	122.81
United Kingdom	1256	0.1634	0.1375	0.1169	7.59	4.72	2.99	624.28
United States	2812	0.2682	0.2492	0.2288	7.61	5.69	3.87	1462.03

Note: The table reports per country averages for our sample of 7853 acquisitions. Cumulative abnormal returns are calculated based on the model $R_{i,t} = \alpha_i + \beta_i R_{m,t} + \epsilon_{i,t}$ where α_i and β_i are estimated over the period -330 to -80 days prior to the announcement. Market returns are obtained from the MSCI index for each country. Abnormal volumes are calculated as the log of daily trading volume less the log mean volume over the estimation period.

Table 3: Uncertainty Avoidance

	CAR -60-1	CAR -60-1	CAR -30-1	CAR -30-1	CAR -15-1	CAR -15-1	Ab_Vol -60-1	Ab_Vol -60-1	Ab_Vol -30-1	Ab_Vol -30-1	Ab_Vol -15-1	Ab_Vol -15-1
Uncertainty Avoidance	-0.0023***	-0.0018***	-0.0019**	-0.0014***	-0.0017**	-0.0014***	-0.0599*	-0.0424	-0.0442*	-0.0403	-0.0285*	-0.0363***
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.000)	(0.034)	(0.054)	(0.024)	(0.024)	(0.015)	(0.013)
Deal Value		-0.0000		-0.0000**		-0.0000*		0.0000		0.0000		0.0000
		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)		(0.000)
Rule of Law		0.0233		0.0194		0.0129		-4.5389***		-3.2368***		-2.0881***
		(0.019)		(0.015)		(0.015)		(1.556)		(0.752)		(0.385)
Anti-Corruption Index		-0.0535**		-0.0475***		-0.0428**		-0.3140		-0.9085		-1.0226***
		(0.020)		(0.015)		(0.016)		(1.432)		(0.648)		(0.311)
Anti-Self Dealing		-0.0712***		-0.0642***		-0.0619***		0.1121		-0.7141		-0.6381**
		(0.014)		(0.012)		(0.011)		(1.206)		(0.545)		(0.246)
Accounting Stds		-0.0026		-0.0036*		-0.0044*		0.3671		0.2587**		0.1640***
		(0.002)		(0.002)		(0.002)		(0.240)		(0.104)		(0.041)
Ownership Conc		0.0793		0.0480		0.0075		33.0245***		23.8179***		15.1167***
		(0.100)		(0.066)		(0.063)		(5.152)		(2.704)		(1.524)
French		-0.0188		-0.0386		-0.0517*		1.6227		1.1074		0.6931
		(0.027)		(0.029)		(0.029)		(3.266)		(1.496)		(0.907)
German		-0.0225		-0.0488*		-0.0641**		2.9415		2.0718		1.4434
		(0.030)		(0.026)		(0.030)		(4.625)		(2.056)		(1.028)
English		0.0270		0.0051		-0.0133		-1.4442		-1.1225		-1.3147**
		(0.022)		(0.019)		(0.021)		(3.079)		(1.174)		(0.585)
Constant	0.3076***	0.5651**	0.2714***	0.6061***	0.2440***	0.6581***	11.9741***	-45.1153**	8.3913***	-	5.3820***	-
	(0.063)	(0.214)	(0.062)	(0.158)	(0.061)	(0.172)	(2.480)	(20.441)	(1.708)	28.2414***	(1.049)	15.6066***
										(9.326)		(4.591)
Observations	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853
R-squared	0.0128	0.0732	0.0149	0.0892	0.0168	0.1036	0.0010	0.0256	0.0016	0.0301	0.0021	0.0342

Note: The table reports per country averages for our sample of 7853 acquisitions. Cumulative abnormal returns are calculated based on the model $AR_{i,t} = \alpha_i + \beta_i R_{i,t} + \epsilon_{i,t}$ where α_i and β_i are estimated over the period -330 to -80 days prior to the announcement. Market returns are obtained from the MSCI index for each country. Abnormal volumes are calculated as the log of daily trading volume less the log mean volume over the estimation period. Uncertainty Avoidance (Hofstede, 2001), Rule of Law and Anti-Corruption Index (Kaufmann et al., 2010), Anti-Self Dealing (Djankov et al., 2006), Accounting Standards (La Porta et al., 2008) and Ownership Concentration (La Porta et al., 2009) are all per country scores. French is a dummy that equals 1 if a country has a French civil law legal system. German is a dummy that equals 1 if a country has a Germanic civil law legal system. English is a dummy that equals 1 if a country has an English Common law legal system. Standard errors are clustered based on the target firms country.

Table 4: Individualism

	CAR -60-1	CAR -60-1	CAR -30-1	CAR -30-1	CAR -15-1	CAR -15-1	Ab_Vol - 60-1	Ab_Vol - 60-1	Ab_Vol - 30-1	Ab_Vol - 30-1	Ab_Vol - 15-1	Ab_Vol - 15-1
Individualism	0.0024** (0.001)	0.0003 (0.001)	0.0022** (0.001)	0.0004 (0.001)	0.0020** (0.001)	0.0004 (0.000)	-0.0281 (0.040)	-0.0467 (0.057)	-0.0138 (0.029)	-0.0236 (0.027)	-0.0091 (0.019)	-0.0177 (0.013)
Deal Value		-0.0000 (0.000)		-0.0000* (0.000)		-0.0000 (0.000)		0.0000 (0.000)		0.0000 (0.000)		0.0000 (0.000)
Rule of Law		0.0142 (0.026)		0.0100 (0.021)		0.0031 (0.022)		-3.6096* (1.919)		-2.7893*** (0.939)		-1.7599*** (0.459)
Anti-Corruption Index		-0.0508** (0.022)		-0.0461** (0.017)		-0.0413** (0.017)		0.0896 (1.683)		-0.6533 (0.815)		-0.8146* (0.417)
Anti-Self Dealing		-0.0655*** (0.016)		-0.0588*** (0.013)		-0.0562*** (0.012)		-0.2271 (0.960)		-0.8556* (0.477)		-0.7344** (0.272)
Accounting Stds		-0.0013 (0.002)		-0.0024 (0.002)		-0.0031 (0.002)		0.3482 (0.253)		0.2605** (0.113)		0.1691*** (0.049)
Ownership Conc		0.1027 (0.118)		0.0762 (0.082)		0.0370 (0.071)		28.7447*** (7.198)		21.5904*** (3.610)		13.4258*** (1.992)
French		-0.0894*** (0.020)		-0.0956*** (0.021)		-0.1101*** (0.025)		0.6159 (3.979)		-0.1118 (1.815)		-0.4519 (1.007)
German		-0.0820** (0.037)		-0.0931*** (0.032)		-0.1092*** (0.035)		0.2411 (4.982)		-0.0114 (2.235)		-0.3520 (1.023)
English		0.0298 (0.035)		0.0050 (0.027)		-0.0135 (0.025)		-0.2601 (2.859)		-0.4218 (1.162)		-0.7562 (0.682)
Constant	-0.0003 (0.059)	0.3810 (0.241)	-0.0007 (0.050)	0.4450** (0.174)	-0.0048 (0.045)	0.4925*** (0.167)	11.1065*** (3.415)	-41.7187* (21.903)	7.2086*** (2.494)	-27.9868** (10.366)	4.6343*** (1.634)	- 15.8912*** (5.545)
Observations	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853
R-squared	0.0151	0.0719	0.0212	0.0880	0.0255	0.1017	0.0002	0.0256	0.0002	0.0299	0.0002	0.0337

Note: The table reports per country averages for our sample of 7853 acquisitions. Cumulative abnormal returns are calculated based on the model $R_{i,t} = \alpha_i + \beta_i R_{m,t} + \epsilon_{i,t}$ where α_i and β_i are estimated over the period -330 to -80 days prior to the announcement. Market returns are obtained from the MSCI index for each country. Abnormal volumes are calculated as the log of daily trading volume less the log mean volume over the estimation period. Individualism (Hofstede, 2001), Rule of Law and Anti-Corruption Index (Kaufmann et al., 2010), Anti-Self Dealing (Djankov et al., 2006), Accounting Standards (La Porta et al., 2008) and Ownership Concentration (La Porta et al., 2009) are all per country scores. French is a dummy that equals 1 if a country has a French civil law legal system. German is a dummy that equals 1 if a country has a Germanic civil law legal system. English is a dummy that equals 1 if a country has an English Common law legal system. Standard errors are clustered based on the target firms country.

Table 5: Power Distance

	CAR -60-1	CAR -60-1	CAR -30-1	CAR -30-1	CAR -15-1	CAR -15-1	Ab_Vol -60-1	Ab_Vol -60-1	Ab_Vol -30-1	Ab_Vol -30-1	Ab_Vol -15-1	Ab_Vol -15-1
Power Distance	-0.0025** (0.001)	-0.0009 (0.001)	-0.0022** (0.001)	-0.0004 (0.001)	-0.0020** (0.001)	-0.0003 (0.001)	0.0468 (0.066)	0.0128 (0.065)	0.0316 (0.044)	-0.0003 (0.032)	0.0231 (0.028)	-0.0001 (0.018)
Deal Value		-0.0000 (0.000)		-0.0000* (0.000)		-0.0000 (0.000)		0.0000 (0.000)		0.0000 (0.000)		0.0000 (0.000)
Rule of Law		0.0050 (0.030)		0.0102 (0.025)		0.0063 (0.024)		-4.3696** (2.009)		-3.2906*** (1.024)		-2.1335*** (0.549)
Anti-Corruption Index		-0.0593** (0.022)		-0.0487*** (0.018)		-0.0421** (0.017)		-0.0546 (1.873)		-0.8028 (0.852)		-0.9251** (0.406)
Anti-Self Dealing		-0.0654*** (0.015)		-0.0606*** (0.012)		-0.0587*** (0.012)		0.1386 (1.120)		-0.6488 (0.506)		-0.5797** (0.275)
Accounting Stds		-0.0006 (0.002)		-0.0023 (0.002)		-0.0032 (0.002)		0.3797 (0.265)		0.2833** (0.117)		0.1861*** (0.048)
Ownership Conc		0.1162 (0.096)		0.0634 (0.065)		0.0158 (0.057)		32.2998*** (6.591)		23.6988*** (3.188)		15.0009*** (1.694)
French		-0.0659** (0.031)		-0.0819** (0.031)		-0.0993*** (0.033)		-0.2393 (4.286)		-0.4043 (1.975)		-0.6741 (1.039)
German		-0.0729** (0.034)		-0.0939*** (0.030)		-0.1131*** (0.034)		1.0986 (5.033)		0.5439 (2.263)		0.0621 (1.016)
English		0.0378 (0.029)		0.0131 (0.023)		-0.0052 (0.023)		-1.2324 (2.938)		-0.9048 (1.188)		-1.1186* (0.656)
Constant	0.2928*** (0.063)	0.4059** (0.196)	0.2639*** (0.061)	0.4877*** (0.141)	0.2421*** (0.059)	0.5410*** (0.147)	6.8964** (3.088)	-48.1058** (19.742)	4.7701** (2.003)	-31.379*** (9.328)	2.9297** (1.233)	-18.432*** (4.951)
Observations	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853	7,853
R-squared	0.0066	0.0721	0.0085	0.0879	0.0107	0.1016	0.0003	0.0255	0.0004	0.0298	0.0006	0.0336

Note: The table reports per country averages for our sample of 7853 acquisitions. Cumulative abnormal returns are calculated based on the model $R_{i,t} = \alpha_i + \beta_i R_{m,t} + \epsilon_{i,t}$ where α_i and β_i are estimated over the period -330 to -80 days prior to the announcement. Market returns are obtained from the MSCI index for each country. Abnormal volumes are calculated as the log of daily trading volume less the log mean volume over the estimation period. Power Distance (Hofstede, 2001), Rule of Law and Anti-Corruption Index (Kaufmann et al., 2010), Anti-Self Dealing (Djankov et al., 2006), Accounting Standards (La Porta et al., 2008) and Ownership Concentration (La Porta et al., 2009) are all per country scores. French is a dummy that equals 1 if a country has a French civil law legal system. German is a dummy that equals 1 if a country has a Germanic civil law legal system. English is a dummy that equals 1 if a country has an English Common law legal system. Standard errors are clustered based on the target firms country.

Figure 1: Countries sorted by Uncertainty Avoidance

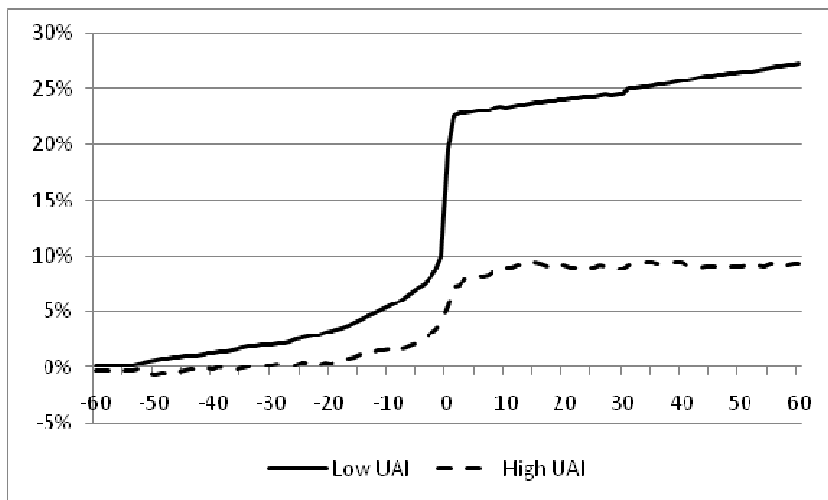


Figure 2: Countries sorted by Individualism

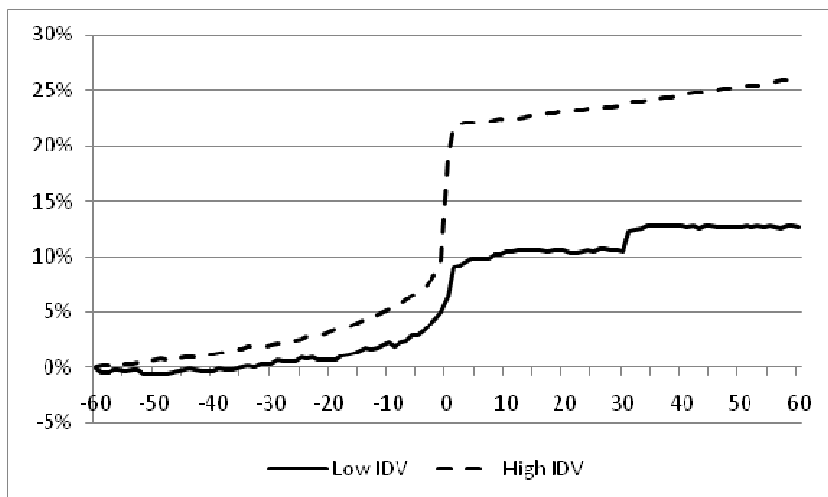


Figure 3: Countries sorted by Power Distance

