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Abstract

By integrating signaling research with an institutional perspective we examine how country of origin, corporate governance, and host market effects impact foreign IPO performance. Using a sample of 202 foreign IPOs listed in the U.S. or U.K in 2002-2007 results indicate both the legal environment surrounding these organizations in their countries of origin and board independence impact the success of foreign firms at IPO. However, the institutional environment of the chosen IPO market impacts the salience of country and corporate governance signals for foreign IPO firms suggesting a more contextualized framework of IPO valuation is necessary.

1. Executive Summary

An increasing number of foreign private firms are choosing to bypass local exchanges in favor of making their first equity offers outside their country of origin (Chemmanur and Fulghieri, 2006). In 2006 foreign companies accounted for 23.4% of IPO proceeds on the New York Stock Exchange (NYSE) and non-British firms raised $22.7 billion through initial public offers on the London Stock Exchange in 2007. Few studies focus on these unique "threshold" firms (Zahra and Filatotchev, 2004) to investigate the manner in which institutional factors can impact the benefits of international listings (Bell, Moore, and Al-Shammari, 2008; Hursti and Maula, 2007; Chemmanur and Fulghieri, 2006; Davenport, Dolan, and Hayashi, 2006).

Our investigation adds to the growing body of research of foreign IPO firms by demonstrating the importance of three important drivers of IPO valuation, which can significantly impact their financing strategies. These are country of origin, governance, and market choice effects. Our hypotheses are tested on a hand-collected sample of 202 foreign private firms that made their first public equity offerings on either US or UK stock exchanges between the years 2002-2007. In support of our hypotheses, we find that country of origin, corporate governance, and market choice have direct and interaction effects on IPO performance.

By integrating signaling research with institutional perspectives, we extend the growing body of research investigating foreign private firms at IPO in entrepreneurship literature (Bell, Moore, and Al-Shammari, 2008; Hursti and Maula, 2007). Previous IPO studies recognize potential signaling effects of the firm's governance characteristics (Certo et al., 2001; Filatotchev and Bishop, 2002; Sanders and Boivie, 2004) and demonstrate how corporate governance characteristics can reduce informational asymmetries and affect IPO performance (e.g., Certo et al, 2001; Filatotchev and Bishop, 2002; Sanders and Boivie, 2004). However, because extant research has predominantly centered upon domestic IPOs listing on local stock exchanges there is very little understanding of the role of governance in foreign IPO performance. We extend this research to assert the legal environment surrounding foreign private firms at IPO is especially salient to Western investors because it relates to the degree in which minority shareholder rights will be upheld. Governance mechanisms include not only a country's laws and the regulatory institutions that enforce the laws but also formal and informal monitors of corporations (Aggarwal, Erel, Stulz, and Williamson, 2007). For example, independent directors serve as an important mechanism which can reduce investor uncertainties and demonstrate to investors that a foreign IPO intends to break away from the governance model of the firm's home country.

Yet, while investors may indeed reference home country and corporate governance cues, we find the importance of these signals depend upon the institutional and regulatory traditions of its chosen country of listing. Therefore, we incorporate the regulatory institutional contexts in which investors are conducting their evaluation (i.e., "host country effects") is especially important to IPO performance. Consequently, we assert the informal "gentlemanly capitalism" (e.g., Cain and Hopkins, 1986; 1993) regulatory framework of the U.K. capital market may prompt U.K. investors to attach relatively higher weight to monitoring-related governance practices compared to the more formal regulatory framework inherent to the U.S. capital market.

Unlike much of the prior research that has focused on mature firms in North America, this research clearly shows that board independence and investor protection can have a significant effect on performance. However, results also confirm that national institutional settings affect the relative significance of country of origin and corporate governance signals of foreign IPOs. Therefore, we discuss these findings and suggest a number of implications for research and practice.

2. Introduction

Recently, the growth in international capital market integration has enabled an increasing number of firms to bypass local exchanges in favor of making their first equity offers outside their country of origin (Chemmanur and Fulghieri, 2006). According to Thomson Financial, in 2006 foreign companies accounted for 23.4% of IPO proceeds on the New York Stock Exchange (NYSE). The National Association of Securities Dealers Automated Quotations system (NASDAQ) also raised over $38.3billion. Likewise, non-British companies raised $22.7 billion through initial public offers on the London Stock Exchange in 2007. While growing research is devoted to the study foreign IPOs, little attention has been devoted to the institutional factors which impact the benefits of international listings (Bell, Moore, and Al-Shammari, 2008; Hursti and Maula, 2007; Davenport, Dolan, and Hayashi, 2000; Chemmanur and Fulghieri, 2006). To address this, we examine how three drivers of IPO valuation—country of origin effects, corporate governance, and market choice—impact foreign IPO performance.

Scholars have focused upon uncovering a range of characteristics associated with the IPO firm that managers employ to convey its value to potential investors at IPO (e.g., Certo et al., 2001; Filatotchev and Bishop, 2002; Sanders and Boivie, 2004). Sending the right signals is particularly important to managers of foreign private firms because these firms suffer from both "liabilities of newness," and "liability of foreignness". We extend extant research that predominantly centers upon domestic IPOs listing on local exchanges to argue that one factor that impacts the success of new equity issues of foreign firms relates to the legal environment surrounding these organizations at home. The important functions of a legal system include holding managers accountable to shareholders, ensuring shareholder voting privilege, preventing self-dealing by managers, and protecting creditors. In order for external investors to provide financing to unproven organizations in institutionally distant countries, legal protection must be accessible. For example, Demirguc-Kunt and Maksmimovic (1998) found greater respect for the law leads to greater use of external finance for firms. Building on these arguments, we find "country-of-origin" effects associated with home country investor protection levels impact the performance of foreign IPOs to such an extent that strategic considerations in governance and capital market choice is necessary.

Considerable research has explored the effects corporate governance has on corporate investment, cost of funds, and company growth. In fact, a recent McKinsey survey of more than 200 institutional investors who hold accounts worldwide revealed that their decision to invest is largely determined by the governance structure of a firm (Coombes and Watson, 2000). Citing board practices as a critical concern, a majority of these institutional investors indicated that a well governed firm would prompt them to pay a premium over a comparable firm that had lower governance measures (Gillan and Starks, 2003). In a separate study, Useem, Bowman, Myatt and Irvine (1993) pointed out that an independent board that also had a diverse set of skills and experiences was considered important to investors. However, until the current study, the relationship between board independence and the success of foreign IPOs had yet to be empirically tested.

Despite the importance of both home country and internal governance signals, the institutional context in which these signals are received may impact their salience with potential investors. This paper builds on comparative governance and institutional theories to contrast the impact of corporate governance on performance of foreign IPOs in the UK and the USA. While belonging to the same common law family of corporate governance (La Porta et al., 1997), these two countries have followed distinctively different paths in terms of corporate governance regulation. In fact, the U.S. approach has been to develop regulatory mechanisms in the fields of corporate and securities law. On the other hand, U.K. investors and corporate actors have proposed voluntary codes as an alternative to law (Aguillera, Filatotchev, Jackson and Gospel, 2008). The importance of country of origin and corporate governance signals of foreign firms reveals how investors respond to foreign IPO firms and heightens the need to examine signals in multiple institutional contexts.

Utilizing a sample of foreign IPOs in which the U.S. or U.K represent the first public listing for a foreign firm, we integrate signaling research and institutional perspectives to make a number of contributions to previous research. First, we develop theoretical arguments and provide empirical evidence that suggest investor protection in the country of origin significantly affects performance. Second, although previous IPO studies recognize potential signaling effects of the firm's governance characteristics (Certo et al., 2001; Filatotchev and Bishop, 2002; Sanders and Boivie, 2004), there is very little research on corporate governance effects on performance of foreign IPOs. By focusing on the signaling role of board independence, we attempt to close this conceptual and empirical gap. Finally, we extend prior studies by recognizing that up this point the impact of corporate governance on IPO performance is limited to single institutional settings. Scholars tend to treat signaling framework as a universal theory that will be applied exactly the same in different institutional environments. Yet, it is reasonable to expect that signaling theory should be applied from a finer-grained perspective that makes adaptations based on the institutional setting. Therefore a conceptual contribution of this study includes the integration of institutional and signaling theories.

More specifically, we explore two- and three-way interactive effects of board independence, host country, and country-of-origin effects. This approach also controls for many other explanatory variables utilized in previous research, while examining the role that differences in institutional environments and regulatory approaches play on the inter-relationships between corporate governance and performance.

3. Theory and hypothesis

3.1. Signaling theory and foreign IPO performance

Signaling theory describes the methods investors may use in situations of information asymmetry (Spence, 1973) and is consistent with the notion that insiders of an IPO hold more information than outsiders. Researchers have looked at a wide assortment of organizational, and extra-organizational attributes that serve as important cues regarding the quality of a firm at IPO and lessen the likelihood managers would need to reduce the offer price in order to attract investors (e.g., Beatty, 1989; Carter and Manaster, 1990; Ritter, 2003). Governance characteristics are a particularly potent signal that investors consider when making decisions about the firm's ability to deal with information asymmetries and associated agency costs (e.g., Certo et al., 2001; Filatotchev and Bishop, 2002; Sanders and Boivie, 2004). We extend this strand of research further by suggesting that firm-level governance signals should be considered in conjunction with institutional environments of the IPO's firm home and host countries. In the subsequent sections we develop these arguments further and suggest testable hypotheses.

3.1.1. Legal protection

Unlike other types of IPO signals which emanate from the firm itself or through third party affiliations, a foreign IPO firm's country of origin represents a unique extra-organizational signal. Issues surrounding a firm's country of origin may work to enhance investor uncertainties regarding the safety and security of their investments. For many years, finance authors have pointed to the benefits that cross-border diversification can bring to equity portfolios (Grubel, 1968; Levy and Sarnat, 1970; Solnik, 1974; Grauer and Hakansson, 1987; Eldor, Pines, and Schwartz, 1988; DeSantis and Gerard 1997; among others). Yet despite the benefits, research has also shown that investors do not always exploit such international diversification opportunities. Instead, investors tend to allocate a relatively large fraction of their wealth to domestic equities, a phenomenon commonly called the "home bias" (Obstfeld and Rogoff, 2000; Tesar and Werner, 1995). While there is an array of potential country-related risks, finance researchers often cite unstable regulatory and legal environments as a significant deterrent to foreign investment.

While investors are accustomed to the legal environment surrounding Western firms, they tend to be more apprehensive in the security of investments in foreign firms. Studies show that the legal protection afforded to outside investors has a significant bearing on the size, value, and liquidity of a nation's capital markets. La Porta, et al. (1998, 1999) found that while common-law countries tend to grant the best legal protection to investors, French civil law countries grant the weakest protection. Others have also endeavored to examine the support that a country's legal environment provides organizations seeking additional resources. Demirguc-Kunt and Maksimovic (1998) utilize the International Company Risk Guide's Law and Order indicators of the effectiveness of a country's legal system rather than those employed by La Porta, et al. (1998, 1999) to show that countries with appropriate legal systems offer greater protection of long-term external financing and are able to grow faster. Scholars have observed that Anglo-Saxon legal systems do appear to provide stronger protection for shareholder rights (Coffee, 2002), and that financing activity is significantly reduced in countries with poor investor protection systems. Subsequent research lends support to these observations (Lins, Strickland and Zenner, 2004; Reese and Weisbach, 2002).

Because of the uncertainty surrounding a foreign IPO, the strength of a home country's legal environment may have a significant bearing on the success of foreign firms at IPO. Some legal scholars suggest foreign firms that engage in the process of listing on U.S. stock exchanges commit themselves to respect minority investor rights and to provide fuller disclosure (Coffee, 2002). However, the legal environment surrounding foreign new issues is especially salient to investors in the U.S. and U.K. markets because it relates not only to minority investor rights, but also in the ability of investors to sue and enforce a legal judgment to recover all or a sizable portion of their investments. Even if a U.S. investor was successful in bringing a lawsuit against a firm domiciled in a foreign country, enforcement of judgments may be difficult if not impossible. Western courts generally do not have jurisdiction over foreign defendants; thus, foreign courts often do not recognize judgments of Western courts for liabilities grounded in U.S. or U.K. securities laws. Therefore, the only protection available to Western investors of foreign firms may be whatever legal remedies are available in the issuer's home country. In some cases, these legal remedies may be very similar to those of Western investors, and investors may feel more at ease in backing riskier investments in firms originating from these countries. Alternatively, the legal remedies against firms domiciled within emerging economies may be limited to such an extent that Western investors may be hesitant to invest in firms which originate from these markets. Thus, we expect IPOs from countries with higher levels of investor protection to perform better in Western capital markets. Formally stated,

Hypothesis 1: There is a positive relationship between investor protection in the country of origin and performance of the foreign IPO.

3.1.2. Board independence

In a recent survey, Gillan and Starks (2003) revealed that institutional investors considered corporate governance practices at least as important as financial performance when evaluating new issues. In fact, a majority of respondents revealed that a well governed firm would prompt them to pay a premium over a comparable firm that had lower governance measures. Board independence is considered important to investors because of the diverse set of skills and experiences of members (Useem, Bowman, Myatt, and Irvine; 1993) and because it provides an important cue to outsiders that the firm will be better governed and capable of attaining higher performance levels (Millestein and MacAvoy, 1998).

In light of the weight investors place in well governed firms coupled with information asymmetry of foreign listings, foreign IPOs with independent boards should be associated with high levels of performance in their equity offers. Certainly, foreign private firm managers have a variety of governance changes they could choose from in their effort to heighten investor interest. However, board independence is arguably the most effective governance change a foreign IPO could undertake because it clearly indicates to outsiders the willingness of managers to adhere to heightened governance standards. An independent board signals a governance structure which Western investors have grown accustomed to and may even expect when evaluating unfamiliar foreign firms attempting to raise equity capital. There is empirical evidence suggesting that investors pay a premium when the firm has an independent board (IRB, 2000). Thus, we expect higher levels of board independence to be associated with higher levels of foreign IPO performance. We state this formally as:

Hypothesis 2: There is positive relationship between the level of board independence and foreign IPO performance.

3.1.3. Interactive effects of board independence and investor protection

Previous arguments suggest that "country-of-origin" effects and board independence may be powerful governance-related signals that affect foreign IPO firm's performance. However, these signals are not mutually independent, and they may complement each other. For instance, Ang and Brau (2003) suggest that an IPO allows multiple signals, making a confounding strategy possible. Previous research has found that strategic actions such as increasing the level of international operations and board insider ownership effectively mitigate the effect of negative country of origin signals when going public (Bell et al., 2008). As a result, the IPO firm is involved in a complex process of evaluating the costs and benefits of various signaling mechanisms in search of an optimal combination that minimizes both information asymmetry and costs of signaling (Titman and Trueman, 1986). One strategic action that foreign IPOs can take to mitigate negative country of origin effects is to increase board independence levels. In fact, board independence may suggest to potential investors the managers of a foreign IPO firm is attempting to increase its level of transparency and monitoring by adhering to a more demanding corporate governance system than the accepted model espoused in its home market. Thus, governance signals should interact with country of origin signals and significantly predict foreign IPO valuation. Hence:

Hypothesis 3: The level of board independence positively moderates the relationship between investor protection and foreign IPO performance.

3.2 Market of listing and regulatory trade-offs

Our previous discussion is focused on potential signaling effects of the IPO firm's country of origin and board characteristics on its valuation. However, these effects may be also contingent on the IPO firm's selection of its listing market.

A major theme in the "law and finance" literature in recent years has been the importance of legal origins in determining cross-national differences in corporate governance (La Porta et al., 1998; La Porta et al., 2000). While the legal origins approach allows for variation within the group of civil law countries, less attention has been paid to differences within the Anglo-Saxon group of common law countries. Common law countries use similar types of law, yet substantial variation exists in terms of corporate governance regulatory traditions.

The U.K. has long tended to supplement legal regulation with a strong tradition of voluntary self-regulation in areas related to listing, takeovers, and accounting. In recent years, this tradition has advanced through the development of a set of codes for corporate governance, which have culminated in the Combined Code. This system established corporate governance guidelines, yet compliance with the U.K. "Code of Best Practice" is not mandatory. Firms are free to not comply as long as an explanation is provided for any deviation. Supporters of comply-or-explain systems contend they are built upon the concept of principles, rather than strict regulation

(Hubbard and Thornton, 2006), allowing firms the ability to modify and adapt their corporate governance policies to their particular needs.

The U.K. tradition contrasts with that of the U.S. which developed a more extensive body of securities and corporate law at both Federal and State level beginning from the inter-war years. The most recent manifestation of the "hard law" approach was the passage of the Sarbanes-Oxley Act (SOX) in 2002 in which the U.S. Congress mandated new and more stringent governance regulations and increased the costs of non-compliance to all public firms, both foreign and domestic. While SOX is just one legislative effort which mandated governance and heightened transparency of public firms in the U.S., it is indicative of the coercive regulative environment found in the U.S.

Bearing in mind these differences in regulatory approaches in the U.S. and U.K., we argue that the foreign IPO firm's performance will be affected by institutional and regulatory traditions not only in its country of origin but also in its chosen country of listing. Thus, in addition to "home country" effects, we suggest "host country" effects may also impact the inter-relationships between firm-level parameters and performance. More specifically, we argue that corporate governance regulation within a host country may have an impact on the salience of foreign IPO signals and possible confounding effects that, in turn, affect performance.

With the passage of Sarbanes-Oxley legislation, the playing field for new issues in New York may be somewhat more level than that of its London counterpart. Once a foreign IPO has met the stringent transparency and listing standards of the SEC and New York exchanges, individual signals associated with a new foreign issue's legal environment as well as its governance structures may become less salient to investors evaluating their participation levels in a foreign new issue. Alternatively, in London, legal protection levels, as well as board independence, should prove especially important to first day investors because the LSE and AIM listing standards are considerably less stringent than their New York counterparts. Since the

U.K. regulatory environment is based on a comply-or-explain principle, it is reasonable to believe that investors may put a premium on IPOs with more robust governance systems and firms coming from countries with higher governance standards and legal protection of minority investors.

In addition, Aguillera et al. (2008) emphasize that governance attributes impose monitoring costs on firms. More specifically, in their discussion of signaling effects of governance factors in IPO firms, Sanders and Boivie (2004) argue that an increase in the marginal costs of monitoring may more than offset the reduction in investor uncertainty. These arguments are consistent with more recent research that suggests that investors may be concerned with "over-regulation" of firms. For example, Claessens et al. (2007) provide evidence that the stock-market performance of firms with higher individual Institutional Shareholder Service (ISS) corporate governance scores is relatively lower in countries with high governance standards compared to well-governed firms in countries with lower standards. They argue that investors may consider a combination of stringent internal governance and high national governance standards as too excessive to the extent that investors put a discount on this specific population of firms. Building on the signal salience and over-regulation arguments, we suggest the following two-way interaction effects:

Hypothesis 4a: The relationship between investor protection and performance of foreign IPOs is negative for listings in the U.S.

Hypothesis 4b: The relationship between board independence and performance of foreign IPOs is negative for listings in the U.S.

Finally, a number of studies suggest viewing corporate governance as a system of inter-related elements having strategic and institutional complementarities (Aoki, 2001; Milgrom and Roberts, 1994; 1995). Some authors have recognized that governance mechanisms operate interdependently, with the overall effectiveness depending on a simultaneous operation of several mechanisms in limiting managerial opportunism and strategic errors (Rediker and Seth, 1995; Walsh and Seward, 1990). A more recently developed set-theoretic approach to organizations suggests that for individual firms, corporate control involves different sets of practices that need to operate as a whole in order to be effective (Fiss, 2007). Since alternative control mechanisms exist, greater use of one mechanism need not to be positively related to firm performance. Similarly, where one specific mechanism is used less, others may be used more, resulting in equally good performance (Agrawal and Knoweber, 1996). Different governance mechanisms can operate in concert, and the cost-benefit trade-offs among a variety of governance mechanisms would determine their use. Therefore, investors may evaluate their participation levels in foreign IPOs less upon individual signals and more on the unique bundle of signals surrounding a foreign IPO. Our arguments suggest that this bundle includes not only focal firm's corporate governance but also country-of-origin and host country effects. Once a foreign IPO has met the stringent transparency and listing standards of the New York exchanges, individual signals associated with a new foreign issue's legal environment at home and its governance structures may become less important to investors evaluating a new foreign issue. In this sense, both legal protection and board independence levels would have a stronger interactive effect among those firms that choose to list in London compared to on U.S. exchanges. In addition, a combination of high legal protection at home, board independence and listing in the US may create the "over-regulation" effect outlined above. These arguments suggest a three-way inter-relationship between the foreign IPO firm's home legal protection, its board independence, and its choice of a listing market. Hence,

Hypothesis 5: There is a three-way interaction between investor protection, board independence and choice of listing market in explaining performance of foreign IPOs: when investor protection and board independence are both high, listing in the U.S. has negative relationship with performance of foreign IPOs.

4. Research method

4.1. Design and sample

This study is based upon a hand-selected sample of foreign private firms making their initial public equity offers on U.S. or U.K. exchanges. We began by utilizing Thomson Financial's Security Data Corporation (SDC) New Issues database to identify all foreign firms that made initial public offerings in the U.S market, as well as those that made first initial public offerings in the U.K market between 2002 and 2007. This sample period was chosen as it reflects the time period after the governance provisions specified within Sarbanes-Oxley legislation went into effect for U.S. new issues. We classified "foreign" in both the U.S. and U.K samples to be those companies incorporated and whose primary executive offices are located outside of the U.S., for the U.S. sample, and outside the U.K. for the U.K. sample. Consistent with prior IPO research conducted upon domestic samples, firms excluded from both the U.S. and U.K. samples were stock listings resulting from mergers or acquisitions, as well as from spin-offs of publicly-listed firms. In addition, units, warrants and rights offerings were excluded from analysis. We also followed selection procedures outlined by Bruner et al*.,* (2006) by removing all new issues of foreign utility firms from consideration. Finally, we eliminated from consideration U.S. or London financial services incorporated in Bermuda, Bahamas, or the Cayman Islands. These firms often choose to incorporate in these countries for tax purposes alone. After identifying the sample of foreign IPOs made on U.S. and U.K. exchanges between 2002 and 2007, we then referred to each offering firm's prospectus to acquire our governance and control variables. Our final sample includes 103 and 99 foreign IPOs in the U.S. and U.K., respectively.

4.2. Variables

We utilized *IPO Success* (Gulati and Higgins, 2003) as our dependent variable. Previous research in finance and strategic management fields has generated a number of proxies for IPO performance, including underpricing (e.g., difference between offer and first day of trading prices), offer price-to-sales, and offer price-to-assets ratios. However, these proxies have been criticized for over-restrictive underlying assumptions, such as an ability of first-day traders to obtain full information about the quality of IPO firms (see Chahine and Filatotchev, 2008, for a discussion). Instead, we employ a compound measurement of IPO performance suggested in more recent research (Gulati and Higgins, 2003). *IPO Success* is a composite measure of four separate financial measures: net proceeds of the IPO offering, pre-money market valuation, the 90-day post-IPO market valuation, and 180-day post-IPO valuation. This measurement combines both the short-term and longer-term proxies of IPO stock market performance, and not based on restrictive assumptions about the stock market participants described above.

Investor protection is commonly defined as the protection of outside investors by the enforcement of regulations and laws (La Porta et al. 2000; Shleifer and Wolfenzon 2002). La Porta et al. (2000) first suggested that investors rights are protected when investors receive dividends on pro-rata terms, are allowed to vote for directors, to participate in shareholders' meeting, to subscribe to new issues of securities on the same terms as the insiders, and to sue directors or the majority for suspected expropriation. Investors who do not have these powers are susceptible to the possibility that insiders can unfairly appropriate a firm's profits. Following Defond and Hung (2004) and Leuz, Nanda, and Wysocki (2003), we measure the strength of a country's law enforcement institutions using the mean score of three law enforcement variables identified by La Porta et al. (1998): 1. the efficiency of a country's judicial system, 2. tradition of law and order within a country 3. extent of government corruption. La Porta's index ranges from 0 to 6, with higher scores representing stronger law enforcement institutions. We utilize these proxies to assess investor protection levels in the countries represented in this study.

Board independence was measured as the ratio of independent directors to total board size (Carpenter et al., 2003; Certo et al., 2001). In order to capture director independences, our board composition measure classifies independent (non-management) directors as only those with no prior professional or personal tie to the company or to management. This information was collected from the offering prospectuses.

Market choice indicated the firm's market of listing: Non-U.S. IPOs that listed on U.S. exchanges (NYSE and NASDAQ) were coded as 1, and while those foreign firms that listed on UK exchanges (LSE and AIM) were coded as 0.

Following previous research, we controlled for the effects of firm size, age, and industry as well as a host of other firm related factors which could impact their success at initial offering. Firm size was accounted for by accounting for the revenues at the time of IPO (Sanders and Boivie, 2004). Firm age was operationalized by taking the difference in years between the IPO firm's founding date and the date of the IPO (Daily, Certo, Dalton, and Roengpitya, 2003). We controlled for the effect that prestigious underwriters may have on the success of foreign firms at IPO by utilizing the Carter and Manaster (1990) index. Following Daily et al. (2005), we controlled for industry effects using a dichotomous variable indicating whether the IPO operates in a high-tech industry or not. Firms identified as operating in high technology industry sectors were coded as 1, while those in low-technology industry sectors were coded as 0. We also controlled for foreign IPOs that were shipping or mining firms because these firms tended to have 100% international assets. In addition, consistent with prior research, we summed the number of risk factors listed in a foreign firm's prospectus to provide an overall level of foreign IPO firm risk at the time of the IPO (Welbourne and Andrews 1996; Certo et al. 2001). Previous studies indicate that firms with larger boards can be beneficial to experience better performance IPO (Certo et al. 2001; Daily, et al.., 2003). We summed the number of individuals serving as directors on the board to account for board size. Finally, research suggests that the size of a company's top management team (TMT) can affect cognitive differences, social integration, and consensus (Lester, et al., 2006). Similar to the rationale for controlling for board size, investors may look favorably upon distant and otherwise unknown companies with a large TMT.

Following Carpenter et al. (2003) we measured TMT size by summing all individuals identified in each offering prospectus as key company executives.

5. Analyses and results

Descriptive statistics and correlations are provided in Table 1. Based on the correlation matrix, there are minimal levels of multicollinearity between independent variables. Only the correlations of the U.S. IPO indicator variable with firm risk and underwriter prestige have high degrees of correlation. We examined models with firm risk and underwriter prestige auditor reputation removed and found no change in the interpretation of the results. Moreover, the variance inflation factor values of all variables in Table 2 range from 1.03—2.17, which suggests a lack of multicollinearity before including the interaction terms (Neter, Wasserman, and Kunter 1990).

Insert Table 1 about here

In order to examine the direct relationship between investor protection and IPO success (H1), we performed a hierarchical regression analysis that initially controls for generally accepted predictors of IPO performance. Our various control variables are in the direction we would theoretically expect (see Model 1 in Table 2) and tend to significantly relate to IPO success (R^2=21.3%). The regression results of Model 2 in Table 2 provide empirical support for the direct effects of investor protection on IPO success (H1), while controlling for other effects. We find a positive relationship between investor protection and IPO success (β=0.122, $p<0.01$). Thus, we find support for the direct relationship between country of origin effect (i.e., investor protection) and firm performance hypothesized in H1. This addition increased the explained variance in IPO Success (ΔR^2 = .017, $p<0.001$). Our second hypothesis argued for a positive relationship between board independence and IPO success (H2). This addition increased the explained variance in IPO Success (ΔR^2 = .011, $p<0.001$). Contrary to H2, Model 3 in Table 2 finds a significant, negative relationship between board independence (β=-0.037, $p<0.05$). Interestingly, board independence appears to be a significant cost when considering the longer-term performance implications after the firm has gone public.

Insert Table 2 about here

In order to further examine the inter-relationships between variables, we conducted hierarchical moderated regression to verify two-way interactions described in hypotheses 3, 4a, and 4b. We centered all moderating variables on their respective means as suggested by Aiken and West (1991) to remove the inherent multicollinearity between predictor variables and interaction terms that include these predictors. After performing these steps, we find support for our third hypothesis, which examines the moderating effect that board independence has on investor protection's relationship with IPO success (H3). In Model 4 of Table 2 (H3), board independence was found to positively moderate the relationship between investor protection and IPO success (β=0.061, $p<0.05$). This addition increased the explained variance in IPO Success (ΔR^2 = .033, $p<0.001$). Thus, we find support for our third hypothesis such that high board independence increases the positive relationship between investor protection and IPO success. We further analyzed the interaction by performing a simple slope analysis (Aiken and West, 1991) for each regression line to test whether its slope was significantly different from zero. In support of Hypothesis 3, we find that the relationship between investor protection and IPO success is significantly positive when board independence is high (b=0.24, $p<0.01$). Additionally, we have plotted the interaction in Figure 1. This Figure shows that high levels of board independence increase IPO Success more than low levels of board independence for IPOs from countries with high to moderate levels of investor protection. With the broad-term measure of performance (IPO success), high board independence has a steeper slope as investor protection increases. Based on this figure, board independence increases firm performance, but has a more pronounced effect for IPOs coming from countries where investor protection is high.

Insert Figure 1 about here

In H4a, we argued that investor protection would have differential effects on IPO success for the U.S. versus the U.K. market. In Model 5 of Table 2, we found a significant difference in IPO success (β=-0.052, $p<0.05$) based on the market chosen by the firm. This addition increased the explained variance in IPO Success ($\Delta R^2 = .087$, $p<0.001$). In order to further validate the moderating effects, we have plotted the interactions in Figure 2 for IPO success, where we find that the positive slope for the curve representing the U.K. market is steeper than that of the U.S. market. We also find that the slope of the line representing the relationship between investor protection and IPO success in the U.S. (b=0.03, $p<0.10$) and the U.K. (b=0.09, $p<0.05$) is significantly different from zero. In all, these results show considerable moderation by taking into account the choice of market when examining the effect that investor protection has on firm performance. While higher levels of investor protection result in increased performance for both markets, the effect is more pronounced in the UK. The data suggest that UK investors value IPOs from countries with moderate to high levels of investor protection higher than U.S. investors.

Insert Figure 2 about here

In H4b, we made the argument that the relationship between board independence and IPO success would differ in the U.S. and U.K. markets. In Model 6 of Table 2, we found further evidence that market choice moderated the relationship between board independence and IPO success (β=-0.028, $p<0.05$), in line with Hypothesis 4b. This addition increased the explained variance in IPO Success ($\Delta R^2 = .067$, $p<0.001$). However, we find in Figure 3 that board independence appears to have decreasing returns in both the U.K. and U.S. markets, although the slope in the U.S. is significantly steeper that in the U.K. (b = -0.08, p<0.05).

Insert Figure 3 about here

Finally, in H5 we hypothesized a three-way interaction between investor protection, board independence, and listing in the U.S. for explaining performance of foreign IPOs. We argued when investor protection and board independence are both high, listing in the U.S has negative relationship with the performance of foreign IPOs. The results of our analysis are contained in Model 7 of Table 2. We find consistent evidence of a three-way interaction between investor protection, board independence, and market choice for IPO Success (β=-0.149, p<0.01). The full model significantly explains 32.3% of the variance in IPO Success (p<0.01). In absolute terms and based on the regression coefficient, when investor protection and board independence are both high, listing in the U.S. has negative relationship with performance of foreign IPOs as predicted in Hypothesis 5.

In order to further validate three-way interaction results, we have plotted the interaction in Figure 4. Based on face validity, we find that when we compare board independence and investor protection, the market choice for the IPO is an important predictor of success. The graphs show that high board independence has differential effects in the U.S. and U.K. markets, such that high board independence appears to be valued higher in the U.K. than U.S., which is in support of Hypothesis 5. We performed a significance test for slope differences (Dawson and Richter 2006) for each regression line in Figure 4. The analysis supports our prediction that the relationship between investor protection, board independence, and IPO success was different in the U.S. and U.K. markets. We find that the slope for firms with high levels of board independence that are from countries with high levels of investor protection that list in the U.S. are significantly different from those that list in U.K. (b= 1.99, p<0.05).

Insert Figure 4 about here
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6. Discussion

By using a unique, hand-collected matched sample of IPOs in the U.S. and U.K., we integrate institutional and signaling theory to contrast corporate governance effects in two common law countries. Our results generally provide support for the relationships hypothesized in the paper. This study has several implications for research and practice. In line with signaling research (Certo et al., 2001; Filatotchev and Bishop, 2002) our analysis suggests that IPO firms can reduce agency problems, uncertainty and associated costs of capital by adopting attributes and actions that may signal their quality to external investors. We show that board independence of the foreign IPO firms is considered by investors as a value-enhancing signal that positively affects IPO valuation. In their research on signaling through governance, Sanders and Boivie (2004) emphasize that even when such attributes impose monitoring costs on firms, the reduction in investor uncertainty may more than offset the marginal costs of monitoring. However, our paper also suggests a more complex picture and shows that the foreign IPO firm may be associated with a number of signaling mechanisms, in addition to its governance characteristics. More specifically, its country of origin and choice of country of listing may be used as other signaling factors and, as a result, the IPO firm is involved in a complex process of evaluating costs and benefits of various signaling mechanisms in search of an optimal combination that minimizes both information asymmetry and costs of signaling (Titman and Trueman, 1986). Ang and Brau (2003), for example, suggest that an IPO allows multiple signals, including positive signals, making the confounding strategy possible. Therefore, our study provides a contribution to previous research by focusing on a “bundle” of IPO signals associated with firm characteristics and its institutional environments both at home and abroad.

We show that recognition of the heterogeneity of governance regulatory mechanisms may be especially important in different institutional contexts. Specifically, national institutional differences can moderate the links between firm-level governance factors and performance. Although we expected a positive effect of increased board independence on IPO success, we found the relationship between board independence and IPO performance appears to be contingent upon the firm's market choice and home country investor protection. From Figure 1, we find that board independence does in fact benefit firms from countries with lower levels of investor protection, which suggests board independence substitutes for a lack of investor protection in the foreign IPO's country of origin when don't consider the market choice of the IPO. However, Figure 4 allows us to compare all three variables (i.e., investor protection, board independence, and market choice) simultaneously and suggests board independence is most valuable for IPOs from countries with high levels of investor protection that choose to list in the U.K. Thus, unlike much of the prior research that has focused on mature firms in North America, this research clearly shows that board independence and investor protection can have a significant effect on performance, but that national institutional setting may affect the relative significance of that impact. Independent directors play an important signaling role in the U.K. where "comply-or-explain" regulatory practices prevail. Our results confirm that governance mechanisms that reduce agency concerns are contingent on country of origin. Furthermore, these effects showed considerable differences when we also take into account the international choice of market for the foreign IPO.

The research also makes methodological advances in examining board- and investor protection-related effects on performance of newly listed firms. Prior research has focused on mature firms with highly dispersed ownership. Instead this research examines the context of IPO firms which have very short previous history of governance development. This approach has allowed an examination of firms in a setting with fewer confounding variables and with a clearer focus on the role of corporate governance.

6.1 Limitations and future research

This study has a number of limitations that suggest areas for further research. First, we limited our focus of governance factors to board independence and did not discuss other governance factors such as ownership structure and the role of the CEO/Founder. Second, in line with many other IPO papers, our study focused only on a cross-sectional design to examine predictors of stock-market performance. Longitudinal data is needed to explore the longer-term post-IPO effects of ownership patterns on performance. Third, while we have examined the distinction between regulatory regimes in the two countries, there are some other differences in the institutional infrastructure of IPO markets in the U.S. and U.K. More fine-grained analysis is needed to analyze these aspects of corporate governance.

Our findings indicate a rich set of future research possibilities. For example, the findings suggest that agency problems may be different in different national settings. This implies that the agency framework should be integrated with institutional analysis to generate robust predictions. Future research should expand on this concept further and seek to more explicitly examine agency theory and its implications when different institutional settings are involved (Aguilera et al., 2008). For example, this research contrasted U.K. and U.S., two common law countries. However, there is also a civil law tradition in Germany and France and a distinctive Scandinavian legal environment (La Porta et al., 1998). Do these institutional environments also have a significant impact on signaling properties of IPO firms? For example, investor protection in German civil law is generally seen as less than in common law but more than in French civil law. Therefore, is the impact of German civil law somewhere between the other two legal environments?

7. Conclusions

Because of the growth in foreign firms seeking equity capital on U.S. and London stock exchanges, direct foreign initial offerings have emerged as a new stream of research with a small but growing number of studies (Bell et al, 2008; Hursti and Maula, 2007; Bruner, Chaplinsky and Ramchand, 2006; Kadiyala and Subrahmanyam, 2002; Ejara, Ghosh, and Nunn, 1999). This research has provided a strong indication that board independence and "country of origin" effects can be powerful signals, these factors do not have a universal impact on IPO performance. Instead, they can be of great use in some "host country" settings. Future research should build on these findings to seek to better determine the exact nature of those settings where there can be a performance benefit associated with "good governance," and how it is obtained.

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