

## CORPORATE GOVERNANCE AND INVESTORS' PERCEPTIONS OF FOREIGN IPO VALUE: AN INSTITUTIONAL PERSPECTIVE

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**This article investigates stock market responses to different constellations of firm-level corporate governance mechanisms by focusing on foreign initial public offerings (IPOs) in the United States. We build on sociology-grounded research on financial market behavior and use a “nested” legitimacy framework to explore US investor perceptions of foreign IPO value. Using a fuzzy set theoretic methodology, we demonstrate how different combinations of monitoring and incentive-based corporate governance mechanisms lead to the same level of investor valuation of firms. Moreover, institutional factors related to the strength of minority shareholder protection in a foreign IPO’s home country represent a boundary condition that affects the number of governance mechanisms required to achieve high value perceptions among US investors. Our findings contribute to the sociological perspective on comparative corporate governance and the dependencies between organizations and institutions.**

The rapid globalization of financial markets in recent years has been accompanied by a growing number of companies raising capital abroad. Since the late 1990s, foreign initial public offerings (IPOs)—wherein private firms bypass stock exchanges in their country of origin to “go public” on a foreign stock exchange (Hursti & Maula, 2007)—have become a significant class of companies, particularly in the United States. These foreign firms seek equity financing not only to achieve financial goals, but also to achieve marketing, political, and employee relations benefits (Saudagaran, 1988). However, foreign IPOs may suffer from various “liabilities of foreignness” and have less legitimacy among investors than domestic listings (Bell, Filatotchev, & Rasheed, 2012). Although foreign firms may try to increase their appeal to US investors by

complying with their expectations about corporate governance, a growing number of finance and management studies (Bruner, Chaplinsky, & Ramchand, 2006; Francis, Hasan, Lothian, & Sun, 2010; Moore, Bell, Filatotchev, & Rasheed, 2012) demonstrate that home country institutional environments significantly affect foreign firms’ valuations and, ultimately, the success of their IPOs. At present, there is a dearth of research on how governance factors influence host country investors’ perceptions of foreign IPO value and how these perceptions are affected by a firm’s home country institutional environments.

Finance and management researchers have traditionally relied on the agency perspective to understand the complex relationships between IPO corporate governance and stock market performance. An assumption in these studies is that an IPO firm may rationally use multiple governance mechanisms to mitigate agency conflicts between its insiders and public market investors to optimize the stock market valuations (Francis et al., 2010). Agency-theory-grounded governance studies often conceptualize and operationalize monitoring, managerial incentives, and other types of governance mechanisms as independent, as each having a unique

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ability to impact the behaviors of stock market participants (Beatty & Zajac, 1994; Sanders & Boivie, 2004). In combination, these governance mechanisms are expected to have a positive, additive effect on investors' valuation of an IPO firm.

More recently, sociological approaches to financial market behavior have suggested that market values and stock market reactions to firm-level factors are socially constructed (Zajac & Westphal, 1995, 2004). As a result, stock market valuations are an outcome of investors' perceptions of firms' legitimacy rather than rational, efficiency-centered investor decisions. Legitimacy is defined as a "generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate, within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995: 574). When faced with uncertainty associated with the process of IPO, investors are more likely to focus on institutionalized rules when evaluating the quality of IPO firms (Pollock, Fund, & Baker, 2009). This process of legitimation frames investors' assessment of various firm-level governance mechanisms because they are perceived as standard and useful, and are legitimated in large part by their presumed efficacy in the highly uncertain IPO market environment. Yet the overall legitimacy impact of corporate governance mechanisms is more complex than previously assumed. Indeed, research has shown that scholars should not consider corporate governance mechanisms in isolation from each other, but should instead look at them in "bundles" when determining their overall legitimacy impact, because mechanisms can be functionally equivalent (Aguilera, Filatotchev, Gospel, & Jackson, 2008). It is unclear, however, what institutional mechanisms link adherence to a specific constellation of governance factors and investors' perceptions in the specific case of IPO firms that choose to bypass their home country capital markets and make their first public equity offers on US exchanges.

In addition, when seeking to exploit overseas capital markets, foreign IPO firms are exposed to potentially different institutional logics, or sets of "beliefs and rules that shape the cognitions and behaviors of actors" (Dunn & Jones, 2010: 114), in their home and host countries. Because the process of legitimation involves the interaction of both country-level institutions and firm-level practices (Moore et al., 2012), there is a need to better understand how differences in home and host country institutional logics impact investors' perceptions of

firm governance. Foreign IPOs listing in the US represent a unique laboratory for theory building related to the multifaceted interplay between regulatory institutions and firm-level governance, since these firms often originate in countries with different governance regulations than the US. Little research investigates whether dissimilarities in home/host country institutional logics impact the process of legitimation through adoption of various practices in a firm's overall governance bundle.

These theoretical arguments lead to two related questions not addressed in previous studies of IPO governance. First, given that a firm's governance mechanisms are important for managing investor perceptions, can different bundles of governance mechanisms in foreign IPO firms lead to the same perceived valuation outcomes? Second, how do differences between a foreign IPO firm's home and host country institutional contexts affect this process of gaining legitimacy through governance mechanisms? By answering these questions, we make a number of theoretical and empirical contributions to existing sociological understanding of both financial markets in general and corporate governance in particular. First, although governance mechanisms underpin the process of legitimation of foreign IPOs in the US investor community, unintended outcomes can occur when firms adhere to multiple, and perhaps redundant, governance mechanisms (Aguilera et al., 2008; Pollock, Chen, Jackson, & Hambrick, 2010). Hence, our focus is on the boundary conditions that determine how different combinations, or bundles, of governance mechanisms in foreign IPO firms might lead to similar investors' perceptions of their value. Second, we offer a nested model of legitimacy in which investor perceptions of a foreign IPO firm's overall legitimacy fall at the intersection of the cognitive and regulatory institutional domains. We sustain the view that IPO firms can have flexibility in obtaining legitimacy from their governance bundles only when they meet a minimal regulatory legitimacy threshold—that is, they come from jurisdiction in which governance is strong. Conversely, IPO firms originating from countries with institutional environments granting weak minority shareholder protections will have to adopt a larger number of governance mechanisms to gain the same level of legitimacy as IPOs from strong governance jurisdictions. Our research, therefore, provides an important extension to previous sociology-grounded studies of financial markets by showing how the complex interplay of multilevel le-

gitimation factors affects investor perceptions of firm value.

Finally, because our theoretical approach addresses the intersection between bundles of firm-level governance mechanisms and country-level institutional factors, the traditional methods used in the majority of IPO studies have limited capability to tackle our research questions. Therefore, we also make a methodological contribution to IPO governance research by testing our conceptual model using fuzzy set qualitative comparative analysis (fs/QCA; Ragin, 2008). Fs/QCA is intended not to isolate the net, independent effects of single explanatory factors on a particular outcome, but rather to identify the combinations of factors that bring about the particular outcome (Ragin, 2008). This methodological advance allows us to probe deeper empirically and theoretically into the factors that affect stock market legitimation processes. More specifically, we can demonstrate that a firm's legitimacy can be captured not only by the relationships between governance practices and macro institutions, but also by other organizational and third-party contingencies associated with the IPO process.

## THEORY AND HYPOTHESES

### IPO Corporate Governance Mechanisms and Legitimacy

IPO studies within financial economics and management fields have developed a substantial body of research intended to link stock market performance with governance characteristics of an IPO firm. Grounded in agency theory, these studies emphasize rational adaptation of IPO firms to a set of external market conditions and contractual relationships between insiders, early stage investors, underwriters, and public market investors that are associated with potential agency costs of moral hazard and adverse selection (Certo, Daily, & Dalton, 2001; Filatotchev & Bishop, 2002; Sanders & Boivie, 2004). They also argue that, facing these costs, an IPO firm should rationally respond by enhancing its governance mechanisms, such as board monitoring and executive incentives, to reduce informational asymmetries and convey its quality to investors and ultimately improve its stock market value.

However, the results of a large body of empirical studies of the agency-grounded governance predictors of IPO performance are inconclusive. This particularly extends to the three most salient gover-

nance mechanisms identified in IPO research: board independence (compare Arthurs, Hoskisson, Busenitz, and Johnson [2008] with Certo et al. [2001]); equity-based compensation (compare Ellul and Pagano [2006] with Filatotchev and Bishop [2002] and Lowry and Murphy [2007]); and monitoring by venture capital (VC) firms (see Bruton, Filatotchev, Chahine, & Wright, 2010). These mixed results are further confirmed by Daily, Certo, Dalton, and Roengpitya's (2003) meta-analysis of IPO research uncovering considerable empirical ambiguity in the hypothesized governance-performance relationships.

A number of organizational theorists have put forward a sociological perspective on corporate and investor behavior questioning the rather simple, rational assumptions of agency-driven research. These studies' argument is that dominant governance beliefs based on the agency model of corporate control have become an institutional logic that underpins the process of firm legitimation among investors (Zajac & Westphal, 2004). For example, scholars maintain that "considerable uncertainty inherent in valuations, which is compounded by the social nature of investing, gives special urgency to the need for legitimacy" (Zuckerman, 1999: 1401). Within this line of analysis, research shows that in the face of increasing uncertainty, such as within the IPO process, firms are more likely to follow institutionalized rules that are taken for granted in organizational decision making (Pollock et al., 2009). Yet little is known about how different constellations of governance mechanisms affect investor perceptions of firm value.

Drawing on neoinstitutional theory (Kraatz & Zajac, 1996; Meyer & Rowan, 1977; Scott, 2001), we suggest that the governance mechanisms of IPO firms are a product not only of coordinative demands imposed by market efficiency concerns, but also of rationalized norms legitimizing the adoption of appropriate governance practices (Zajac & Westphal, 2004). The neoinstitutional perspective enables our analysis to focus less attention on the individual efficiency outcomes of different governance mechanisms at the core of an agency perspective and instead center our theoretical efforts on understanding how governance mechanisms affect a firm's legitimacy through perceptions of external assessors of organizational legitimacy—the stock market audience (Deephouse & Suchman, 2008; Zuckerman, 1999), or investor community. Capital markets represent a particularly useful setting for studying social processes that capture le-

gitimation and, hence, investors' valuation of IPO firms (Higgins & Gulati, 2006; Pollock, Rindova, & Maggitti, 2008).

In addition, an institutional approach to corporate governance research maintains that "corporate governance systems themselves are embedded in larger institutional and legal frameworks" (Fiss, 2008: 390; see also Aguilera & Jackson, 2003, 2010). Thus, the process of legitimation may be contingent on the institutional environment within which a firm operates (Chung & Luo, 2008), in particular the extent of protection of minority investors (Bruton et al., 2010). Importantly, Berger, Ridgeway, Fisek, and Norman claimed that "legitimation is inherently a multilevel process" requiring a theory that involves analysis of factors at "both the local level of the object of legitimation and the level of encompassing social framework" (1998: 379). Governance researchers are increasingly recognizing that firm-level governance should be analyzed in conjunction with institutional factors, such as laws and regulations (Aguilera et al., 2008; Bruno & Claessens, 2007). However, extant IPO research neglects the importance of the effects of firms' home country institutional environments on investors' perceptions of overall IPO governance bundles. In the following section, we discuss IPO firms' legitimation based on firm governance and IPO firms' home country institutions.

### **Nested Legitimacy: Home Country Institutions and Firm-Level Corporate Governance**

Our previous discussion suggests US investors' perceptions of foreign IPO firm value may be based on what sociology-grounded research describes as a nested legitimacy framework (Deephouse & Suchman, 2008; Holm, 1995). In this framework, "the institutional arrangements at one level constitute the subject matter of an institutional system at a higher level" (Holm, 1995: 400). In the context of foreign firms making their capital market debut on US stock exchanges, "perceptions of organizational legitimacy shape investor behavior" (Tost, 2011: 686) when investors evaluate how well the foreign IPO firms comply with their perceptions of "good governance." A good governance bundle in a foreign IPO brings cognitive legitimacy (Scott, 2001) because it is "understood, recognizable, and located within the set of the widely held cognitive structures of its institutional environment" (Sanders & Tuschke, 2007: 33). However, this process of gaining legitimacy through governance does not

develop in isolation from investors' perceptions of a foreign IPO firm's home country regulatory institutional environment. The foreign IPO firm's overall legitimacy, therefore, falls at the intersection of the cognitive and regulatory institutional domains associated with its governance bundle and home country legal environment, in line with more recent research on social judgments of organizations (Bitektine, 2011; Tost, 2011).

Although foreign IPOs consider the US as a primary equity market, these firms' production and distribution systems, business networks, and other key characteristics are significantly embedded in their home countries (Bell et al., 2012). Foreign IPO firms are exposed to a different institutional logic before listing in the US, which might have a significant impact on investors' perceptions of their value because "multiple logics . . . may make agreement difficult and consensus impossible" (Dunn & Jones, 2010: 115). Greenwood, Raynard, Kodeih, Micelotta, and Lounsbury (2011) argue that the higher the number of logics, the greater will be the complexity facing an organization and its audience. These authors emphasize the importance of formalized rules for dealing with this increase in complexity, in particular in organizations that are at a juncture of multiple institutional logics, such as foreign IPOs whose primary audience includes US investors.

This suggests that legitimation should be analyzed at multiple levels, including possible interactions among the levels (Deephouse & Suchman, 2008: 68–69). Hence, the process of legitimation through governance may be nested in a broader context of investors' perceptions of the legitimacy of institutions associated with a foreign IPO's home country. The nesting of firm-level governance with country-level institutions and the associated complexity it creates represent an important boundary condition that affects foreign IPO legitimation in the eyes of US investors through firm-level governance. Although some recent studies emphasize this nested nature of cognitive and regulatory institutional factors (e.g., Bitektine, 2011; Fiss, 2008; Greenwood, Diaz, Li, & Lorente, 2010), little research exists on their intersection in the context of capital markets.

From the US investor perspective, an especially relevant feature of foreign IPOs' home environments is the extent to which regulatory institutions protect minority investor rights. Neoinstitutional theorists argue that regulatory institutions hold a preeminent place in shaping organizational legiti-

mation (Deephouse & Suchman, 2008), chiefly in the realm of corporate governance. This is because “the logic of shareholder value maximization became the dominant guiding principle informing top management strategic decision making in listed firms as well as . . . the way institutional shareholders evaluated their performance” (Lok, 2010: 1305). Scott (1998) also highlights the importance of governmental organizations, legislation, and court decisions as “primary regulative agents” of the structure and activities of organizations. The functions of a regulatory system include establishing rules to hold managers accountable to shareholders, ensuring shareholder voting privilege, preventing self-dealing by managers, protecting creditors, and enforcing these rules in practice. In countries with regulations lacking in these elements, US investors may suspect that, for example, insiders or controlling shareholders may be diverting resources from the corporation to the detriment of minority investors (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2008; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998). Other things being equal, this would negatively affect a firm’s legitimacy in the dominant logic of shareholder value maximization (Zajac & Westphal, 2004).

The nesting of firm-level governance with country-level institutions securing protection of investors in public markets has key implications for foreign IPOs. During their evaluations, investors attempt to gauge whether a firm will grow and succeed as a public firm in US capital markets. Yet a cornerstone of their overall evaluation is the legitimacy US investors attach to the regulative institutional environment from which the foreign IPO firm originates. As Tost (2011: 692) emphasizes, “regulative legitimacy represents social cues indicating the validity of the entity.” This forms an integral part of what Bitektine conceptualizes as a model of the social judgment formation: “The evaluator selects the most appropriate form of judgment, given the context and objectives of his or her evaluation, and then conducts a search for information on the organization’s features that may be relevant for the selected form of judgment” (2011: 164).

In line with our nested legitimacy discussion above, foreign IPOs will likely have different paths to achieving legitimacy in the eyes of investors available to them. What these paths are is contingent on the strengths of their home country regulative institutional environments. For example, IPO firms coming from countries with strong investor

protection rules operate in a home institutional environment with an agency-grounded institutional logic, similar to the US. Similarities between a foreign IPO’s home and host markets’ regulatory institutional logics reduce investor uncertainties and their need to rely on the firm’s compliance with multiple governance mechanisms. The legitimacy of firm-level governance mechanisms being nested within home regulative institutions challenges the agency framework’s assumption of the linear additivity of governance practices (essentially, the idea that “more governance is better”) by suggesting a scope for different bundles of governance practices. In our context, this means that when a firm has reached a certain level of the first-order, regulatory legitimacy, it may achieve equivalent levels of perceived IPO stock-market evaluation via different and limited combinations of governance mechanisms. For example, Zuckerman (1999) describes a social process that explains why US investors put a discount on companies that were not covered by the securities analysts specializing in their industry. He argues that gaining investor favor requires conformity with this audience’s “minimal criteria” and that the analysts’ coverage represents the main differentiation from illegitimate offers. Companies that fit this minimal criterion are not under pressure to use other means to conform.

In the IPO context, a firm from a country with regulative institutions similar to those of the US may gain a first-order, “minimal” legitimacy and thus have “the capacity to constitute itself by choosing its identities and commitments from the menu of choices presented by its would-be constituencies” (Kraatz & Block, 2008: 255). This menu may be related to different monitoring and incentive-based governance practices that lead to the second-order, cognitive legitimacy. The nested legitimacy framework implies that the marginal effect of additional governance practices on investor perceptions may be declining in foreign IPOs that are over the regulatory legitimacy threshold. Bitektine (2011), for example, indicates that the legitimation process develops in an environment of “cognitive economy” and that evaluators may be tempted to use “cognitive shortcuts.” Pollock et al. (2010) provide analysis of the potential redundancies of value signals associated with multiple certifying affiliates of IPO firms, such as VCs and underwriters. They discuss social mechanisms behind diminishing marginal legitimacy associated with these affiliates and suggest that the amount of

uncertainty that their certification can reduce may be finite. As endorsements accumulate, each subsequent signal will have less impact than prior signals. To put this argument into our context, because they are required to adhere to regulatory standards in their home country, foreign IPOs from countries with strong investor protection may carry less uncertainty from the US investors' point of view. As a result, they may need less governance. We build on these arguments and suggest:

*Hypothesis 1. The effect of a foreign IPO's governance mechanisms on investor value perceptions is contingent on the legitimacy of its home country regulatory institutions, and the value of multiple mechanisms does not accumulate for foreign IPOs originating from countries with strong legal protection for minority investors.*

Given the importance of meeting the minimum threshold of regulatory legitimacy, the question facing foreign IPO firms from countries with less legitimate regulatory institutions, such as those associated with weak protection of minority investors, is this: What combinations of governance mechanisms are likely to enable firms from countries with weak regulatory institutions (e.g., China, Russia, or Brazil) to achieve comparable levels of valuation on US exchanges as firms from countries with strong legal institutions (e.g., Canada, UK)?

The sociological perspective on financial markets offers three reasons why investors would likely demand that firms originating from less legitimate regulative institutional environments adopt more governance practices to achieve the same level of legitimacy as IPOs originating from countries with regulative institutions similar to US institutions. First, a regulatory void in the formal institutional environment in a foreign IPO's home represents a missing minimal condition in a stock market's nested social legitimacy framework. Following Zuckerman's (1999) arguments, firms coming from outside "accepted" countries are penalized not because they raise information costs for US investors, but because they threaten interpretive frameworks that investors base their investment evaluations upon. Hence, to achieve the same level of investors' value perception, foreign IPOs may have to rely on a broader range of governance practices. Indeed, more firm-level governance would be required to compensate for the legitimacy loss associated with not surpassing a minimal threshold of home regulatory institutions.

Second, Kraatz and Block (2008) argue that when organizations are situated in a pluralistic institutional context, their audiences may become suspicious about their priorities and commitment to the rules. In addition, as Edelman, Uggen, and Erlanger emphasize, "legal rules are not self-enforcing . . . those subject to [them] must determine what constitute compliance and what actions they will take to demonstrate compliance" (1999: 409). Therefore, in the context of a foreign IPO with heightened institutional duality, investors are likely to rely on what Kraatz and Block call "second-order evaluative criteria in assessing its legitimacy" (2008: 249), and to achieve the high levels of legitimation and consequently valuation, the IPO firm must deploy a wider range of governance practices to reassure US investors that their interests are well protected.

Finally, a related argument is that foreign IPOs from countries with nonlegitimate regulatory institutions are often exposed to divergent and conflicting institutional logics in their home and host markets. The multiplicity of attention associated with institutional duality may result in conflicting demands and lack of consensus (Dunn & Jones, 2010), a result that increases the level of complexity and uncertainty surrounding these firms (Greenwood et al., 2010). When IPO firms are facing increasing uncertainty, the scope for redundancies in legitimacy signals diminishes (Pollock et al., 2010), and investors become more likely to follow a wider range of standard or institutionalized rules (Pollock et al., 2009). Together, these arguments suggest that positive US investor perceptions may still be associated with foreign IPO firms that originate from countries with weak legal protections to minority investors, but only if these firms adopt a broader range of monitoring- and incentive-related mechanisms in their governance bundle.

In sum, while we do not claim that there is only a single path for IPOs from countries with weak investor protection to achieve favorable investors' perceptions when going public on a US exchange, we argue that the benefits of adhering to multiple governance mechanisms are likely to be more valuable to these firms in order to overcome perceived legitimacy concerns. Hence:

*Hypothesis 2. To achieve high investor value perceptions, foreign IPOs from countries with weak legal protection for minority investors must employ a larger number of mechanisms in their governance bundles than IPOs from*

**TABLE 1**  
Foreign IPO Yearly Statistics

Issue Year	IPO Volume	Average Age	Average Offer Price	Average Shares Offered <sup>a</sup>	Net Proceeds <sup>a</sup>
2006	22	9.2	15.43	9.5	291.7
2005	23	5.78	14.19	7.9	150.5
2004	19	7.83	15.06	7.7	192.05
2003	3	2.33	15.95	5.6	460.5
2002	5	17.8	14.16	5.1	259.02
2001	6	19.67	12.4	19.54	50.65
2000	13	5.07	14.36	7.8	59.58
1999	7	5.42	14.51	10.65	55.98
1998	9	7.33	18.52	11.59	170.12
1997	42	10.09	14.63	10.27	85.77
1996	49	8.89	13.33	8.52	94.97
Total	198				

<sup>a</sup> In millions of dollars.

*countries with strong protection for minority investors.*

## SAMPLE AND METHODOLOGY

To construct our sample, we utilized the Security Data Corporation (SDC) database New Issues to identify all foreign firms that made first-time “firm commitment” IPOs in the US between 1996 and 2006. The SDC database defines foreign firms as those incorporated and with primary executive offices outside of the US. As has prior IPO research, we excluded from our sample stock listings resulting from mergers or acquisitions or from spin-offs of publicly listed firms. We also eliminated from our analysis unit trusts, warrants, and rights offerings. We then followed the selection procedures outlined by Bruner et al. (2006) and removed all utilities from consideration and all firms incorporated in Bermuda, Bahamas, or the Cayman Islands.<sup>1</sup> We then acquired each firm’s initial S-1 registration filing and final prospectus from the Securities and Exchange Commission (SEC).

Tables 1 and 2 provide summary statistics of our final sample, which is comprised of 198 firms from 36 countries. Despite the slowdown in foreign listings after 2001, recent yearly totals suggest that the popularity of US exchanges is gaining strength. Table 2 shows that most of the foreign firms that

<sup>1</sup> While these firms technically conform to the “foreign” criteria, they are often US or UK financial services firms incorporated in these countries to reduce their domestic tax burdens.

**TABLE 2**  
Foreign IPO Home Markets

Region	IPOs
North America	24
South America	12
Europe	90
Asia/Pacific	72
BRIC countries	43

choose to list on US exchanges originate from either Europe or from the Asia Pacific region.

To test our hypotheses, we utilized fs/QCA, which is based on set theory and in which causal claims are developed by means of supersets and subsets (Ragin, 2008). Fs/QCA is quite effective in evaluating both the number and complexity of alternative paths leading to a desired outcome (Fiss, 2011; Greckhamer, Misangyi, Elms, & Lacey, 2008; Ragin, 2008). Given that our hypotheses are built on the premise that investors’ perceptions of high foreign IPO value can be achieved through multiple combinations of governance features, the fs/QCA approach is particularly useful.

In the following section, we identify our variables and then calibrate them into crisp sets and fuzzy sets. Crisp sets define membership status as either “fully in” or “fully out” of a given set. In contrast, fuzzy sets allow researchers to account for the varying degrees of membership of cases in a set by using the anchor 1 to designate “fully in” a particular set, 0 for nonmembership, and .5 as the point of maximum ambiguity, neither in nor out of a particular set. Ragin (2008) advised that both substantive and theoretical knowledge be used when calibrating measures and translating them into set membership scores.

## Outcome Condition: Price Premium

Price premium is a useful measure of investor IPO valuations because it represents the potential value that investors perceive in an issuing firm’s shares that exceeds their book value (i.e., the value of the firm’s equity as reported in its financial statements) (Rasheed, Datta, & Chinta, 1997; Welbourne & Andrews, 1996). We chose this measure to assess investor valuations because traditional IPO valuation measures that are based on determining issue price relative to prevailing market price suffer three key limitations (Rasheed et al., 1997). First, only after trading has begun can a firm’s initial owners

and underwriters determine whether a new issue is over- or underpriced, and the extent of the over- or underpricing often varies with time. Second, initial increases in prices may be the result of overvaluation, market fads, or intentional underwriter price support. Finally, valuation assessments based on an initial return measure may overestimate the return available to investors and the underpricing costs to an issuer. Assessing a firm's stock price beyond book value allows us to control for assets, and thus, enables us to provide a robust estimate of investors' *perceived* future value. Empirically, IPO premium reflects investors' intention of participation and offers a sense of their (the market's) perceptions of a firm's competitiveness because underwriters set the offer price after ascertaining the views of investors through the book-building process (i.e., generating, capturing, and recording investor demand for shares during an IPO).

Following previous research, we calculated price premium using this formula:  $(\text{offer price} - \text{book value}) / \text{offer price}$ . We then undertook two steps to arrive at our breakpoints to define membership in the set of highly valued foreign IPOs. First, we reviewed prior studies from leading management and entrepreneurship journals that incorporated price premium as the IPO valuation measure.<sup>2</sup> Results of these studies show that on average IPO firms receive premiums of 66 percent. Following Fiss (2011), we used this information and coded an issuing firm 0, or fully out of the set of highly valued foreign IPOs, if it did not receive a price premium of at least 66 percent.

Our second step involved defining the upper threshold of our set of high-price-premium foreign IPOs. Since no prior literature has conceptualized what price premium constitutes a high investor valuation, we turned to similar measures that scholars have relied upon to help define our breakpoint for full inclusion in the set. As for the price premium measure, numerous studies in finance and management have also relied on pre-IPO book value to obtain similar proxies that researchers consider to capture investor perceptions of new issues. For example, a firm's offer-to-book ratio can be seen as an indication of growth opportunities, whereby the larger the offer-to-book ratio, the higher the market's perception of the firm's growth opportu-

nity. Others have used Tobin's *Q* (market price/book value per share) as a measure of perceived market potential for an IPO (Welbourne & Andrews, 1996). Here, the higher the ratio, the more the firm's value because it means that investors are more willing to "gamble" on the firm's intangible assets. Fama and French (2002), among others, utilized book-to-market values to gauge investor perceptions, defining high investor valuations to be those in the upper quartile or even the highest decile of their respective samples. Following Fama and French (2002), we define high investor valuations as valuation in the highest decile of firms in our study sample, which in our case refers to a 95 percent price premium. This level agrees with research suggesting that investors are willing to pay a premium that far exceeds an issuing firm's book value when they perceive the issuing firm will capture the growth opportunities available to it (Chung, Li, & Yu, 2005). We coded firms that achieved 95 percent price premiums 1, or as fully in the set of highly valued foreign IPO firms. Following Fiss (2011), we defined the midpoint as the average of these two breakpoints.<sup>3</sup>

### Predictor Conditions

In our analysis of governance bundles, we first focused on the three most important governance mechanisms used in previous IPO research: board independence, executive share options, and venture capital backing (Arthurs et al., 2008; Beatty & Zajac, 1994; Certo et al., 2001). We have also added a proxy for the strength of foreign IPO home country investor protection. The following section explains how we constructed these key variables.

**Board independence.** We approximated the extent of internal monitoring with board independence. We classified as independent (nonmanagement) directors only those with no prior professional or personal ties to a firm or its management

<sup>2</sup> See: Bruton et al. (2010), Lester et al. (2006), Daily et al. (2005), Certo et al. (2003), Nelson (2003), Rasheed et al. (1997), Welbourne and Andrews (1996).

<sup>3</sup> Certo et al. (2003) suggested replacing a firm's offer price with the closing price on the first day the firm's shares go public as a means to account for the premium that is determined by all investors, and not just that determined by initial investors. Hence, in addition to the price premium measure derived with the offer price, we also evaluated governance configurations using the following percentage price premium measure:  $([\text{first day closing price} - \text{book value}] / \text{first day closing price})$ ; using this measure controls for underpricing (Certo et al., 2003) and does not change our results.



on the basis of indicated in the firm's prospectus (Certo et al., 2001). We do not include VC-related board members as independent directors. The *2010 Spencer Stuart Board Index* indicates that the boards of the largest and best-established US firms had on average 70 percent independent members during our sample time frame (Spencer Stuart Board Services, 2010). Using this information, we coded firms as 1, or fully in, this set if at least 70 percent of their board members were independent. Surveys also show that board independence in US firms may be as low as 20–30 percent independent members (Davis, Polk, & Wardwell, 2009). Using this information, we coded as 0, or fully out of the set, boards with 30 percent of their members independent. Following Fiss (2011), we defined the midpoint as the average of the two breakpoints.

**Venture capital backing.** Researchers have identified private equity investors, such as VCs, as important external monitors in IPO firms (Bruton et al., 2010). Previous studies have generally used a dichotomous variable to indicate the importance of VCs to IPOs (Certo, Daily, Cannella, & Dalton, 2003). Thus, we generated a crisp set to indicate the presence of VCs among a firm's principal pre-IPO shareholders. Foreign IPOs backed by VCs prior to the date the firms went public are considered fully in the set, whereas those firms who were not backed by VCs are coded as out of the set.

**CEO stock.** Stock options were used as a proxy for executive incentives; they have become an important element of CEOs' compensation packages because of the widespread belief that they are effective in aligning executive and shareholder interests. Drawing on previous IPO research (Beatty & Zajac, 1994; Certo et al., 2003), we built the executive incentive set as a crisp set, coding a firm as 1 (fully in this set) if stock options were offered to the issuing firm's CEO prior to IPO and 0 otherwise.

**Strong home country investor protection.** Our next step was evaluation of the extent to which home country institutional factors impacted the combinations of governance conditions that lead to high premiums for foreign IPOs. We relied on two widely recognized indexes to categorize firms as to the degree to which their home country protects the interests of minority investors. First, we utilized La Porta et al.'s (1998) antidirector index, as revised by Djankov et al. (2008), which has six subindexes capturing the possibility of voting by mail and of depositing shares, aspects of cumulative voting, oppressed minority, preemptive rights, and percent-

age of share capital needed to call a meeting. This index covers aspects of de jure regulation since it does not control for the level of regulatory enforcement. Therefore, we also relied on the International Country Risk Guide "law and order index," as it assesses both the legal system and the de facto law and order tradition of a country. After standardizing these indexes to a scale ranging from 0–1, we multiplied values obtained from each to combine de jure and de facto aspects of investor protection (Bruno & Claessens, 2007; Durnev & Kim, 2005). Like earlier studies that have used these indexes (e.g., Leuz, Lins, & Warnock, 2009), we classified countries with scores above the sample median as fully in the set of high minority investor protection countries and those below the median as out of the set. After performing these steps, we had a final sample comprised of 97 firms from countries that provide weak investor protection to minority investors and 101 firms from countries that provide strong investor protection. The weak investor protection sample includes Argentina, Brazil, China, France, Greece, Mexico, Russia, and Venezuela. The strong investor protection sample includes Australia, Canada, Hong Kong, Ireland, Israel, Japan, New Zealand, Singapore, Spain, Taiwan, and the United Kingdom.

### Contextual Conditions

While the focus of our study is the importance of corporate governance to foreign IPOs' perceived values, we are acutely aware that contextual factors beyond governance can impact IPO valuations. However, including too many contextual factors beyond those most salient to IPO valuation assessments would add exponentially to the number of configurations and cause limited diversity.<sup>4</sup> Therefore, we constructed fuzzy and crisp sets in terms of the four contextual factors likely the most salient to investors evaluating foreign IPOs.

**Prestigious underwriter.** The Carter and Manaster (1990) index is the most widely recognized means to capture the prestige of underwriters on the basis of their position on "tombstone" announcements. On the final index, 0 is the lowest, and 9 the highest, rating. Studies in leading strat-

<sup>4</sup> Limited diversity is due to large numbers of logical remainders—that is, combinations of causal conditions that are logically possible but not observed in the given data (Ragin, 2008).

egy, entrepreneurship, and finance journals generally agree that underwriters with rankings of 8 or higher are prestigious (Loughran & Ritter, 2004; Pollock et al., 2010). Therefore, we coded firms backed by underwriters with rankings of 8 or higher to be fully in the set of prestigious underwriters. Secondly, Loughran and Ritter (2004) considered underwriters with rankings between 5 and 7.9 to be “quality regional” or “niche underwriters,” and underwriters lower than 5 to be “lower quality” and most frequently associated with penny stocks. Following these guidelines, we established the breakpoint for fully out of the set of prestigious underwriters to be a Carter and Manaster index score lower than 5 and used the midpoint between these breakpoints to establish the midpoint in the set.<sup>5</sup>

**Mature IPO.** Firm age is a frequently used control variable in IPO research (Beatty & Zajac, 1994) and is one factor that investors use to gauge the growth prospects of a firm, both negatively and positively. Megginson and Weiss (1991) showed that the older a firm is upon listing, the lower its growth prospects. This is because the older the firm, the more firm-specific information there is available to the public. However, others suggest that investors tend to perceive older firms as already tested in their industry and as having established networks and routines that are vital for survival (e.g., Stinchcombe, 1968). Some foreign IPOs choose to go public early in their lives, whereas others choose a US listing after spending considerable time as private firms in a foreign market. Hence, age may be particularly salient to investors evaluating foreign IPOs. We accounted for the age of firms at IPO by taking the difference in years between founding date and date of IPO. Firms were coded 1 or fully in the set of mature IPOs if they had been in existence for at least 20 years since their founding date. They were considered fully out of this set if they had been in existence for 1 year or less. We considered 5-year-old foreign IPO firms to be at the crossover point, following Loughran and Ritter (2004), who showed that IPO age can average as low as 2 years, and others who have shown that foreign firms listing in the US can exceed 20 years of age (Ejara & Ghosh, 2004).

<sup>5</sup> A complete list of IPO underwriter reputation rankings is available on Jay Ritter’s website: (<http://bear.cba.ufl.edu/ritter/ipodata.htm>).

**TABLE 3**  
**Descriptive Statistics**

Variables	Mean	s.d.
Industry	0.58	0.49
Age	8.71	12.71
Market	33.64	20.17
Executive incentives	0.78	0.41
Venture capital	0.51	0.5
Underwriter prestige	8.06	1.91
Board independence	0.38	0.21
Price premium: Pre-IPO book value	0.79	0.27
Price premium: First day closing price	0.81	0.26

**High-tech industry.** Researchers very often control for industry effects when evaluating investor perceptions of IPOs. Industry is a particularly salient control factor for foreign IPOs in light of the growing literature showing that industry does influence foreign listing decisions, and more importantly, an IPO market’s receptivity and understanding of a new issue can be contingent on the industry a firm competes in. One of the most common ways is to isolate whether an IPO firm operates in a high-tech industry or not, since technological orientation may also be a proxy for investors’ perceptions of riskiness (Daily, Certo, & Dalton, 2005; Loughran & Ritter, 2004; Lowry & Murphy, 2007). We categorized all Internet-related, electronics, and software firms as fully in the set of high-tech foreign IPO firms.

Table 3 provides summary statistics of the governance and contextual conditions in our analysis. We then used fs/QCA’s truth table function to generate the different combinations of our governance and contextual conditions that are sufficient for a particular outcome to occur (Ragin, 2008). Fs/QCA’s truth table algorithm enables researchers to deal with the issue of limited diversity by distinguishing between parsimonious and intermediate solutions based on both easy and difficult counterfactuals (Ragin, 2008).<sup>6</sup> Truth table reduction re-

<sup>6</sup> Fiss (2011) points out that easy counterfactuals are those situations where a redundant causal condition is added to a set of causal conditions that by themselves already lead to the outcome in question. Difficult counterfactuals occur when a condition is removed from a set of causal conditions leading to the outcome on the assumption that this condition is redundant. Fs/QCA’s parsimonious solution includes all simplifying assumptions regardless of whether they are based on easy or difficult counterfactuals. Alternatively, intermediate solutions re-

**TABLE 4**  
**Configurations for Achieving High Perceived Value for Foreign IPOs Listing in the US, 1996–2007<sup>a</sup>**

Variables	Solution					
	1	2	3	4	5	6
<i>Contextual Conditions</i>						
High-tech industry	●	●	⊗	●	⊗	⊗
Mature IPO firm		⊗	●	⊗	⊗	
Prestigious underwriter	●	●	●		●	●
<i>Country of Origin Condition</i>						
Strong home country legal protection	●	●	●	⊗	⊗	⊗
<i>Governance Conditions</i>						
Board independence	⊗	⊗	●	⊗	●	●
CEO stock	●		⊗	●	●	●
Venture capital		●	⊗	●	⊗	●
Consistency	0.86	0.89	0.99	0.87	0.89	0.87
Raw coverage	0.16	0.11	0.01	0.08	0.05	0.03
Unique coverage	0.06	0.03	0.01	0.08	0.03	0.02
<i>Overall Solution Consistency</i>	<b>0.88</b>					
<i>Overall Solution Coverage</i>	<b>0.54</b>					

<sup>a</sup> The outcome condition is a price premium. Full circles indicate the presence of a condition. Crossed-out circles indicate the absence of a condition. Large circles indicate conditions that are part of both parsimonious and intermediate solutions. Small circles refer to conditions that only occur in intermediate solutions. Blank cells indicate that particular causal condition is not relevant within that solution configuration.

quires evaluating the consistency levels across configurations and establishing a frequency threshold that will be applied to the data listed. In this study, we adopted a consistency cutoff of .80 (Rihoux & Ragin, 2009). In addition, Ragin suggests that when establishing a frequency threshold, “the issue is not which combinations have instances, but which combinations have enough instances to warrant conducting an assessment of the subset relationship” (2008: 133). In general, frequency thresholds should be based on the number of cases included in an analysis, the knowledge of cases by researchers, the precision of calibration of fuzzy sets, and a goal of capturing at least 75–80 percent of the cases (Ragin, 2008). We adopted a threshold of two as this level allowed us to include 84 percent of the cases in the analysis in Table 4. Tables 4, 5, and 6 (which we describe below) follow the format used by Crilly, Zollo, and Hansen (2012), Fiss (2011), Crilly (2011),

Greckhamer (2011), and Ragin and Fiss (2008) in that they account for fs/QCA’s parsimonious and intermediate solutions. Overall solution coverage refers to the joint importance of all causal paths (Schneider, Schulze-Bentrop, & Paunescu, 2010). Unique coverage is useful because it illustrates the relative weight of each path in leading to high foreign IPO perceived values by measuring the degree of empirical relevance of a certain cause or causal combination to explain the outcome (Fiss, 2011; Ragin, 2008).<sup>7</sup>

<sup>7</sup> The notation for the presence and absence of conditions can be downloaded from Peer Fiss’s website. In addition, to reduce their size and complexity, the solution tables only list configurations that consistently led to our outcome of interest, high foreign IPO perceived value. We include those solutions with unique coverage exceeding the value of 0 and those that include home country legal protection levels within the configuration.

strict logical remainders to only those that are the most plausible.

**TABLE 5**  
**Configurations for Achieving Low Perceived Value for Foreign IPOs Listing in the US, 1996–2007<sup>a</sup>**

Variables	Solution		
	1	2	3
<i>Contextual Conditions</i>			
High-tech industry		●	●
Mature IPO firm	●	●	●
Prestigious underwriter	⊗	●	⊗
<i>Country of Origin Condition</i>			
Strong home country legal protection	●	⊗	⊗
<i>Governance Conditions</i>			
Board independence	⊗		●
CEO stock	●	⊗	⊗
Venture capital	●	●	⊗
Consistency	0.81	0.89	0.90
Raw coverage	0.01	0.03	0.01
Unique coverage	0.01	0.03	0.01
<i>Overall Solution Consistency</i>	<b>0.86</b>		
<i>Overall Solution Coverage</i>	<b>0.08</b>		

<sup>a</sup> The outcome condition is a price premium. Full circles indicate the presence of a condition. Crossed-out circles indicate the absence of a condition. Large circles indicate conditions that are part of both parsimonious and intermediate solutions. Small circles refer to conditions that only occur in intermediate solutions. Blank cells indicate that particular causal condition is not relevant within that solution configuration.

### Results: Sufficient Conditions for High Foreign IPO Price Premiums

Table 4 shows that there are six solution configurations with acceptable consistency levels (consistency  $\geq .80$ ). The unique coverages for each solution configuration confirm that each of these six combinations offers a unique contribution to the explanation of high foreign IPO perceived value. The combined solution configurations in Table 4 account for about 54 percent of membership in the outcome, high foreign IPO price premiums.<sup>8</sup>

<sup>8</sup> We followed Helwege and Liang (2004) in defining the IPO time period as a “hot IPO market” and used three-month-centered moving averages of the number of IPOs for each month in the sample. These monthly averages are then used to define the breakpoints for our target set “hot market.” Our analysis indicated that a hot IPO

Solutions 1–3 apply to firms originating from countries with strong legal protection of investors. A comparison of solution configurations 1–3 reveals that these foreign IPOs can achieve high price premiums with only one governance mechanism. Solution 1 shows that the presence of incentive alignment and the absence of an independent board lead to high perceived value for older firms competing in technology-related industries. Prestigious underwriters also contribute to the bundle of governance and contextual factors leading to high perceived value. Solution 2 provides similar evidence in that younger technology-based IPOs from strong investor protection countries can achieve high perceived values with just the external monitoring of venture capital. Finally, solution 3 demonstrates that IPOs competing in non-technology-related industries can achieve high price premiums with just the backing of an independent board. This is in line with our first hypothesis, which suggests that similar levels of perceived IPO stock market evaluation may be achieved by different and limited combinations of governance practices when a firm comes with a certain level of regulatory legitimacy.

Solutions 4–6 in Table 4 apply to firms that do not originate from countries that offer strong legal protection to investors and show that these firms need to adopt multiple governance mechanisms to achieve high perceived value at IPO. Indeed, the combination of incentive alignment and external monitoring via venture backing (solution 4), the combination of incentive alignment and internal monitoring via an independent board (solution 5), and a combination of all three of these governance mechanisms (solution 6) enable these firms to reach high premiums at IPO. A comparison of solutions 1–3 with solutions 4–6 provides support to our second hypothesis by demonstrating that to attain comparably high perceived values, IPOs from countries that do not grant regulatory legitimation must adopt more governance mechanisms than IPOs from countries with strong investor protection.

Our results also reveal that the process of firm legitimation among stock market investors depends not only on the interplay between a firm’s institutional context and governance mechanisms, but

market was a necessary condition for high foreign IPO perceived value. Following Ragin (2008), we dropped this condition from our final table, yet highlight this finding in our Discussion.

**TABLE 6**  
**Robust Configurations for Achieving High Perceived Value for Foreign IPOs Listing in the US, 1996–2007<sup>a</sup>**

Variables	Solutions									
	1	2	3	4	5	6	7	8	9	10
<i>Country of Origin Condition</i>										
Strong home country legal protection	●	●	●	●	●	●	⊗	⊗	⊗	⊗
<i>Industry</i>										
High-tech firm	⊗	⊗	●	●	⊗	⊗	●	⊗	⊗	⊗
<i>Founder Status</i>										
CEO is not a founder	●	●	⊗	●	⊗	●	⊗	●	●	⊗
<i>Third Party</i>										
Prestigious auditor	●	●	●	●	●	●	●	●	●	●
<i>Governance Conditions</i>										
High insider-retained ownership	⊗	⊗	●	⊗	●	●	●	●	⊗	●
Board independence		⊗	⊗	⊗	●	⊗	⊗	⊗	●	●
CEO stock	●	●	⊗	⊗	⊗		●	●	●	●
Venture capital	⊗		●	●	⊗		●	●	●	●
Consistency	0.99	1.00	0.99	1.00	1.00	0.96	0.92	0.86	0.98	0.91
Raw coverage	0.04	0.04	0.02	0.01	0.01	0.03	0.04	0.02	0.01	0.01
Unique coverage	0.02	0.02	0.02	0.01	0.01	0.01	0.04	0.02	0.01	0.01
<i>Overall Solution Consistency</i>	0.94									
<i>Overall Solution Coverage</i>	0.33									

<sup>a</sup> The outcome condition is a price premium. Full circles indicate the presence of a condition. Crossed-out circles indicate the absence of a condition. Large circles indicate conditions that are part of both parsimonious and intermediate solutions. Small circles refer to conditions that only occur in intermediate solutions. Blank cells indicate that particular causal condition is not relevant within that solution configuration.

also on a number of important organizational contingencies, such a firm’s age, its technological orientation, and the presence of prestigious underwriters. Our hypotheses, therefore, may reflect only a partial picture of a broader model of nested legitimacy. It appears that, under the conditions of “cognitive economy” (Bitektine, 2011), investors may be equally satisfied with either strong external monitoring by VCs in young technology IPOs (solution 2) or with incentive alignment in mature (hence, less uncertain) technology listings (solution 1), as long as these firms originate from countries with investor-friendly regulatory regimes. At the same time, mature nontechnology firms need to have independent boards in place if they want to achieve a similar level of legitimacy as technology firms (solution 3). Yet to achieve the same level of investor valuation as technology firms (solution 1), both nontechnology companies and younger technology firms need to secure the presence of a pres-

tigious underwriter, even when they are coming from countries with high investor protection (solutions 2 and 3). Likewise, nontechnology firms from countries with weak investor protection, in addition to equipping themselves with more governance, also need to secure prestigious underwriters compared to technology firms (solutions 5 and 6). Therefore, a closer analysis of our results suggests that governance bundles should be considered in conjunction with other organizational factors, and we will come back to this in the Discussion.

We performed two additional analyses to test the robustness of our results. First, we evaluated the configurations of governance and contextual conditions that led to low price premiums. Causal asymmetry (Ragin, 2008) suggests that the conditions that lead to a foreign IPO’s high perceived value may be different from those that lead to the absence of high perceived value. The results in Table 5 are based on the inverse of the high price

premium measure used in Table 4, a consistency cutoff of .80, and a frequency threshold of 1, which captured 100 percent of the cases. Solution 1 in Table 5 complements our results found in solutions 1–3 in Table 4, in that IPOs from countries with strong protection of investors suffer low perceived value when they adopt multiple governance mechanisms. Similarly, solutions 2 and 3 in Table 5 complement solutions 4–6 in Table 4 by demonstrating IPOs from countries that do not offer strong legal protections to minority investors experience poor perceived value when they adopt very few governance mechanisms. Again, in terms of the contextual factors, the negative impact of too many governance practices is particularly prominent in technology IPOs coming from countries with strong investor protection.

Our second robustness test includes a number of other governance and contextual factors that previous studies have also identified as drivers of investors' perceptions of IPO value (see Sanders and Boivie [2004] for a review). We followed Zajac and Westphal (1995) and included both CEO stock options and retained ownership of company insiders to better capture the range of incentive alignment practices available to foreign IPO managers. We built a fuzzy set to capture the ownership of insiders, defining low equity as 5 percent holdings, moderate as 25 percent, and high as 50 percent (Certo et al., 2003). Also, research has shown that large international accounting firms play an important role in reducing IPO investor uncertainties. We followed Beatty (1989) and built a crisp set with firms backed by Big Five accountancy firms coded as fully in the set. Finally, Nelson (2003) found that firms managed by founder CEOs are likely to receive a higher percentage price premium at IPO. Yet it is unclear whether this finding applies to firms' seeking equity resources outside their home country's institutional context. Hence, we took into consideration whether the presence of a founder-CEO influenced our results and could be considered a strong governance signal. Table 6 illustrates the results of our analysis using a consistency cutoff value of .85 and reducing the truth table with a threshold of 2, which captured 78 percent of the cases.

Solutions 1–6 in Table 6 apply to firms originating from countries with strong investor protection, whereas solutions 7–10 apply to firms from countries that do not provide strong protection to investors. Solutions 1–4 show that firms that are over the regulatory legitimacy threshold need only one gov-

ernance factor (e.g., CEO share options or high retained ownership of insiders, or venture backing) to achieve the same high level of valuations, in line with our first hypothesis. Solutions 5 and 6 show these firms can achieve high valuation levels by combining high retained ownership levels with venture backing or with independent boards. Additional support for our second hypothesis comes from comparing solutions 1–6 against solutions 7–10. It demonstrates that firms from countries that do not provide strong investor protection must adopt more governance mechanisms than firms that originate from countries that do provide strong investor protection to achieve comparably high perceived values. Yet again our results show that specific governance configurations also depend on whether a foreign IPO is a high-tech firm. Finally, these results demonstrate that the presence of an international auditor may be yet another potent legitimization driver in that it is present in all the solution configurations leading to high perceived value for a foreign IPO. In sum, these results involving a broader range of governance factors are in line with our theoretical expectations and demonstrate that foreign IPOs that originate in countries that do not provide strong investor protection must adopt more incentive alignment and monitoring practices than IPOs from countries with strong protection to achieve legitimacy with US investors.

## DISCUSSION

Much of the previous research on the effects of corporate governance on the stock market performance of IPO firms is built on assumptions that governance mechanisms act independently and cumulatively. The inconsistency of evidence from prior studies suggests that the valuation implications of a range of firm-level governance mechanisms associated with IPOs represent a significantly more complex phenomenon than previously understood. We challenge these basic assumptions of past research grounded in the agency perspective both by focusing on "the workings of legitimacy at multiple levels of analysis" (Deephouse & Suchman, 2008: 67) and by proposing two important extensions building on research within the field of sociology of financial markets. First, we argue that the process of investors' perceptions of a foreign IPO's value may be based on its compliance with governance-related best practices as part of a more general framework of nested legitimation. We suggest that the same levels of IPO stock market eval-

uation may be achieved via different combinations of governance mechanisms. Second, we sustain that the impact of governance practices on investor perceptions is contingent on the strength of firms' home country regulative, governance-related institutions, and that these institutions shape the size and composition of governance bundles among firms seeking equity in foreign capital markets.

### Contributions

Our study advances both corporate governance research in general and IPO research in particular in a number of important ways. First, we show that there is no universal governance bundle leading to high levels of investors' value perceptions. In fact, our findings clearly indicate that board independence does not seem to play as central a role in affecting investor perceptions as executive incentives and VC monitoring in IPOs from countries with strong investor protection. This is in line with previous empirical IPO studies that question the signaling role of IPO boards (Arthurs et al., 2008; Filatotchev & Bishop, 2002). Second, our results demonstrate that institutional factors have a critical impact on the composition of firm-level governance bundles that lead to the same level of investor valuations. Specifically, we uncover that IPO firms that originate from a country with strong investor protection can substitute monitoring and incentive-related governance practices to achieve the same high levels of stock-market investor value perceptions. However, as our first robustness test clearly shows, having too many governance practices may actually undermine IPO valuations. This finding is in line with research on costs of overgovernance in the finance and management fields (Aguilera et al., 2008; Bruno & Claessens, 2007). In contrast, foreign IPOs originating from countries with weak investor protection must deploy both monitoring and incentive-related governance to bolster US investor confidence in their governance quality and their potential to achieve high levels of valuations.

By using fuzzy set qualitative comparative analysis (fs/QCA), we also make a methodological contribution that, in turn, helps our theoretical understanding of the legitimation process associated with firm-level governance in general, and IPO valuation in particular. We utilized fs/QCA because its intent is not to isolate the net, independent effects of single factors on a particular outcome, but to identify the combinations of factors that bring

about the outcome (Ragin, 2008). By leveraging fs/QCA's configurational approach, we relax some of the assumptions typically associated with the quantitative techniques inherent to most IPO research, such as permanent causality, additivity, and causal symmetry, and make three important methodological contributions. First, we demonstrate that investors take into account institutional factors, firm-level governance mechanisms, and contextual factors simultaneously when evaluating IPO firms. Second, more than one bundle of governance practices can lead to high investor perceptions. Finally, we provide evidence that high investor perceptions can result from the presence of a condition (e.g., high levels of monitoring) or the absence of a condition (e.g., absence of incentive alignment).

More importantly, fs/QCA enabled us to explore the nature of equifinality (Fiss, 2011; Ragin, 2008) in terms of the impact of different configurations of firm-level characteristics and mechanisms jointly with institutional factors on the overall process of legitimation. In our context, *equifinality* means that the process of legitimation of foreign IPOs may be based on different constellations of governance mechanisms and other organizational contingencies, such as a firm's technological orientation, or its age, or the presence of prestigious third parties. For example, finance researchers indicate that technology-intensive firms prefer to go public in developed Western capital markets rather than in their home markets because the prevalence of knowledgeable analysts and investors offers a more efficient flow of information and a deeper understanding of the nuances of technology and innovation (Blass & Yafeh, 2001; Hursti & Maula, 2007). Our results suggest that being a high-tech firm might be another legitimation driver for a foreign IPO in the US that works in conjunction with governance mechanisms when affecting investor perceptions. In addition, the presence of prestigious underwriters and firm age also appear to work alongside governance bundles when affecting investor valuations.

A configurational perspective can also explain why specific governance practices are part of some solutions and absent in others. For example, our analysis shows that CEO stock ownership adds value, but only in high-tech companies originating from countries with strong investor protection. This may stem from the belief that incentive alignment is more efficient than monitoring-related governance mechanisms, especially in IPO firms competing globally in the technology sector (Carpenter,

Pollock, & Leary, 2003). On the other hand, investors seem to consider monitoring by independent boards a critical governance mechanism for mature IPO firms competing outside the technology sector. These findings are consistent with those of previous research suggesting that incentive alignment may be a more potent governance mechanism than board monitoring when uncertainty surrounding an IPO firm is particularly high (Beatty & Zajac, 1994). Interestingly, young technology IPOs from strong investor protection countries seem to be able to achieve high premiums with VC backing rather than with independent boards or incentive alignment mechanisms. In light of their strong home country legal environment, it is likely that investors believe that VCs will deliver a sufficient balance for these firms by providing both the strategic guidance a young technology venture needs to flourish as a public firm (Hellmann & Puri, 2002) and effective, highly engaged external monitoring (Barry, Muscarella, Peavy, & Vetsuypens, 1990).

In terms of prestigious underwriters, their importance seems to be somewhat lower for technology IPOs, perhaps, because media and analyst coverage tends to be generally high for technology firms listing in the US (Francis, Hasan, & Zhou, 2005). This extensive coverage may reduce the importance of third-party endorsement within the stock market legitimation process. Indeed, our results are in line with the growing body of research demonstrating how the presence of reputable underwriters does not necessarily equate to better IPO valuation (Gulati & Higgins, 2003; Pollock, 2004). Finally, nontechnology IPOs from countries with weak investor protection need *all* governance mechanisms as well as support of prestigious underwriters to obtain a high level of legitimacy.

Our findings, therefore, echo a number of studies that advocate viewing corporate governance as part of a broader system of interrelated elements, wherein firm-level governance interacts with other organizational contingencies and country-level institutions in determining organizational outcomes (Aguilera et al., 2008; Bell, Moore, & Al-Shammari, 2008). Our analysis indicates that there is a need of a more holistic approach to studying links between governance factors and investor perceptions of firm value within a broader model of *nested* legitimacy.

Like other studies, our research suffers from a number of limitations. First, fs/QCA is constrained by the number of variables researchers can include in models, and our analysis does not utilize all possible controls typically used in IPO research.

However, this apparent methodological constraint is not a theoretical limitation, since the governance mechanisms that we consider are the most salient ones in IPO governance research. Second, in our analysis of institutional effects, we draw on investor protection as a proxy for institutional differences between foreign IPOs' home countries. Institutional research differentiates between formal (e.g., laws, regulation) and informal (e.g., networks, trust relationships) institutions. US investors may also take into account informal institutional characteristics of an IPO firm's home country when evaluating the effectiveness of the firm's governance bundle that are not captured by our operationalization. Third, the perceived value we are capturing through the price premium measure reflects the commingling of the value perceived by institutional investors as well as underwriters. While we do not attempt to tease out how different groups of investors perceive foreign IPO quality, we recognize that underwriters, and in particular prestigious underwriters, offer a key point of reference for investors, which encompasses informal institutions. Finally, normative legitimacy is a higher level of legitimacy and is derived when the values and norms of a new venture are congruent with that of the wider society and industry (Scott, 1998). One important source of normative legitimacy is endorsement (Zimmerman & Zeitz, 2002). Pollock (2004) reports that, at the time of their IPO, firms having the endorsement of reputable underwriters obtain higher legitimacy. Future research should isolate what governance bundles are associated with prestigious underwriters and auditors, what governance bundles attract "dedicated" institutional investors (Higgins & Gulati, 2006), and whether institutional factors affect these bundles.

Our discussion indicates that the configurational approach is currently underutilized and that it can be usefully applied in other research designs related to IPOs. For example, our conceptual framework could be valuable in an IPO survival study, since the longer a foreign IPO survives, the more institutionally embedded and legitimate it may become in the eyes of investors. Further, the institutional environments of other host capital markets are often significantly different from that of the US. Hence, it would be logical to suggest that host country institutions may also have an impact on legitimacy through firm-level governance. Finally, a growing number of firms opt to list on two or more national capital markets. Does this specific context of multiple listings change the process of



legitimation through governance practices? And what effect would investor concern with institutional pluralism (Kraatz & Block, 2008) have on the menu of governance practices in this subsample of firms with international sources of equity finance?

Finally, our study points to opportunities to develop a broader theoretical approach to nested legitimacy, including its formative and boundary conditions. This is in line with recent theoretical research on legitimacy judgments (e.g., Bitektine, 2011; Tost, 2011). Indeed, in addition to cognitive and regulatory factors, normative and other institutional aspects of legitimation are also relevant, and “researchers might do well to attend more closely to the workings of various *sources* of legitimacy” (Deephouse & Suchman, 2008: 68; emphasis in original).

## Conclusion

Although considerable empirical attention has been paid to the study of domestic IPO firms, to date little research has addressed foreign IPOs and the factors impacting the benefits of international listings. We adopt a configurational perspective to consider the valuation outcomes associated with governance practices of foreign IPO firms going public on US exchanges. Overall, our study provides a more comprehensive picture of the governance-performance relationship than traditional agency-grounded research. We demonstrate that foreign IPO firms may achieve legitimacy with regard to US investors by utilizing different combinations of governance practices. However, this process of legitimation is nested within a broader institutional framework that takes into account a firm’s home country institutional environment, contingent on firm characteristics.

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