LEGAL PERCEPTION AND FINANCE: THE CASE OF IPO FIRM VALUE

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Abstract

In this paper, we contribute to the literature on institutional determinants of IPO valuation. We introduce the concept of 'legal signaling,' which focuses on the perception of the quality of law and thus complements the existing institutional approaches to IPO valuation which consider the quality of the positive law ('standard view') and firm-level corporate governance practices ('firm signaling view'). Our approach explicitly models the difference between the effect of the positive law and the effect of the *perception* of law on IPO value. Based on a worldwide longitudinal dataset of IPO performance across a large number of countries, we find strong support for the claim that the perception of the quality of law is more important than its actual quality to explain post-IPO firm value. This effect holds regardless of whether the law's quality is correctly perceived or misperceived. Overall, our findings underscore the need for a more sophisticated theorization of the ways in which law affects entrepreneurial finance.

Keywords: law and finance, entrepreneurial finance, Initial Public Offerings (IPOs), corporate governance, perception, shareholder protection

JEL Codes: C23, G32, G34, G38, K22, K42, L26

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1. Introduction

A large literature on Initial Public Offerings (IPOs) has focused on the way governance mechanisms influence IPO performance. For example, it has been found that venture capital (VC) syndicates, the presence of foreign venture capitalists or prestigious investment bankers as underwriters and private equity (PE) owners of the IPO firm can constitute firm-level signals that have a positive impact on IPO value (Brav and Gompers, 2003; Chahine, Goergen and Saade, *this issue*; Coakley, Hadass and Wood, 2007; Jelic, Saadouni and Wright, 2005). Extant studies have also noted that firm valuation at IPO cannot be considered in isolation of institutional factors at the country level (Bell, Filatotchev and Aguilera, 2014; Filatotchev, Jona and Livne, 2020; Gu *et al.*, 2019).

Only for the specific case of foreign IPOs, some of the existing literature hints at the possibility that the misperception of a country's institutions may also matter. Filatotchev and colleagues (2020) show that IPO companies from home countries with purportedly strong institutions engage more in earnings management than IPO companies from countries with weak institutions. We also know that the latter seek to compensate for weak country-level institutions by building reputational capital through good governance practices. This 'reputational bonding' or *firm-level signaling* effect through firm-level practices and strategies involving reputational intermediaries such as banks, institutional investors and boards of directors is well studied (Siegel, 2005). Conversely, firms from countries with purportedly strong legal and regulatory institutions such as the US may hide behind the good reputation of the country's institutions independently of their actual impact on earnings management (Filatotchev *et al.,* 2020). This suggests that a country's strong institutional reputation may mask the fact that these institutions do not deter firms from engaging in earnings management. This, in turn, implies that the reputation of a country's law may be overly positive compared to its actual effect on firm-level practices.

Yet, while the link between the 'positive law,' i.e., the *actual* quality of country-level legal institutions, its perception, and firm practices is key to this literature, existing studies do not explicitly conceptualize or measure the key distinction between the *actual* law and its *perception*. Rather, they implicitly assume a close fit between the quality of the actual law and its perception. This is the case even when the importance of perception (Bell *et al.,* 2014) and deviation of firm corporate governance practices from legal rules are acknowledged (Filatotchev *et al.*, 2020; Gu *et al.*, 2019). This neglect, in turn, blurs the lines between two different institutional effects linking laws and IPO valuation, namely, the *signaling effect* and the *actual effect* of law on shareholder protection and hence on firm valuation. Indeed, Aguilera and Cuervo-Cazurra (2004) show that regulations – and by extension laws – can have two distinct effects: they can

increase the actual efficiency of the corporate governance system (which we label the '*efficiency effect*') or increase a country's reputation by *signaling* the presence of best practices.

In this paper, we seek to fill a gap in the corporate finance literature by more clearly distinguishing the efficiency and the signaling effects of law and thereby explicitly conceptualizing the relationship between the actual quality of the law, its perception, and firm practices. We apply this insight to all IPOs that take place in a particular jurisdiction (i.e., in contrast to the previous literature, we do not limit our analysis to foreign IPOs). Specifically, we focus on IPO value, which has proven to be a fruitful empirical terrain to study perception (Filatotchev *et al.,* 2020; Bell, Filatotchev and Aguilera, 2014). For this purpose, we are interested in the general perception of a country's shareholder protection laws – which we call 'legal perception' – rather than in the perception of these laws by investors. Our concept of 'legal perception' thus seeks to capture a country's 'legal reputation' in terms of shareholder protection, which is a broader phenomenon than the assessment of the legal quality of the law by investors.

In sum, we explicitly distinguish two different effects of the law on IPO value and investigate how they interact with corporate governance practice. Specifically, we seek to answer three interrelated research questions: Does the law or its perception matter more for IPO firm value? How does misperception of law affect IPO value? How do corporate governance practices impact the relationship between the perception of law and IPO value?

We thus contribute to the Law and Finance literature, which recognizes the importance of law, but often adopts an undertheorized and superficial conceptualization of its impact on economic outcomes (reviewing this literature: Deakin *et al.,* 2017; Schnyder, Siems and Aguilera, 2018). This literature generally assumes a close alignment between law and its perception, and therefore only includes measures of actual law in the analysis. Yet, legal scholarship highlights that there are often misconceptions about basic legal rules, for example, creditor rights (Colby and Ryznar, 2019) or the applicable rules of criminal procedure (Nelken, 2016). In the commercial sphere too, legal misperception is a widespread phenomenon. With respect to corporate and labor law, legal scholars show that the effects of the law are often difficult to predict and particularly to quantify (Petrin, 2016) and that firms misperceive or ignore legal factors such as legal labor protection (Pierre and Scarpetta, 2006). Other studies uncover that firms can strategically use the discrepancy between law and its perception. For example, studies of the Canadian market for incorporation reveal that to benefit from a positive perception effect of federal law, firms reincorporate under federal law even when the provincial law is not substantively

different (Cumming and MacIntosh, 2000; 2002). These findings underscore that positive law and its perception often diverge.

We also go beyond prior IPO literature by examining the relevance of perception of the quality of law for both domestic and foreign IPOs using a world-wide longitudinal dataset of IPO performance across a large number of countries. Our novel conceptualization of the legal signaling effect thus allows us to contribute both to the comparative IPO literature (Akyol *et al.*, 2014; Engelen and van Essen, 2010) and the still ill-understood question of the role of law in financial markets (Licht and Adams, 2019; Schnyder, Siems and Aguilera, 2018; Cumming, Schmidt, and Walz, 2010) by providing a more fine-grained understanding of how the law affects economic outcomes in a comparative context. It also extends Mike Wright's research on entrepreneurial finance in the international context (Cumming *et al.*, 2019; Estrin *et al.*, 2019; Meuleman *et al.*, 2017), institutional theory development (Wood, Phan and Wright, 2018; Fini *et al.*, 2017; Hoskisson *et al.*, 2013), IPOs and corporate governance (Chahine *et al.*, 2019; Fattoum *et al.*, 2018; Filatotchev, Wright and Bruton, 2017), and the increasing internationalization of financial markets (Wood and Wright, 2013; Wood and Wright, 2015), to whom the special section on entrepreneurial finance in which this article features is dedicated.

2. Theoretical Background and Hypotheses

2.1 IPOs and Institutions

The IPO literature has focused much attention on the factors that determine IPO (under)pricing (Bhagat, Lu and Rangan, 2019). Firm-level factors and managerial motivations (Kim and Weissbach, 2008) have been identified as driving the decision to go public and affecting offering price and valuation (Bhagat, Lu and Rangan, 2019). In addition, country-level institutional factors have increasingly been included as determinants of IPO performance to these firm-level factors (Engelen and van Essen, 2010). In the context of the increasing internationalization of capital markets (Wood and Wright, 2013; 2015), cross-national institutional differences have become an important research focus. Thus, compared to the US market, different national institutions provide different price setting mechanisms (Derrien and Cormack, 2003) and impact the number and type of shares sold (Chahine, 2008).

For our purpose, particularly important are the debates around the so-called 'bonding hypothesis' – which holds that by listing in a country with stronger shareholder protection rights, firms can bind themselves to higher governance standards. Proponents of the bonding hypothesis (Coffee, 1999; Stulz, 1999; Karolyi, 2012) would expect a company's home country to weigh a lot less once

a company lists in a country with strong legal shareholder protection. Yet, recent studies challenge 'this hypothesis' and sustain that, even in a global economy, home country institutions continue to dominate the perception of the firm in the host market (cf. Karolyi, 2012).

The debate around the bonding hypothesis – while specific to the question of foreign listings – is revealing regarding the broader question of the impact of legal factors on financial outcomes. The initial formulations of the bonding hypothesis suggested that exposure to stronger legal rules account for a positive impact on firm valuation (Coffee 1999, Stultz, 1999). This mechanism crucially hinges on the assumption that legal rules are fully enforced. Yet, enforcement of laws against foreign issuers is not always as strong as assumed. Enforcement action by public regulators such as the US SEC against foreign issuers is lower than against comparable domestic firms (Licht, 2003; also Pinegar and Ravichandra, 2010). Therefore, listing on a foreign stock exchange can also be a way to circumvent home country legal requirements while benefitting from reduced enforcement overseas.

Consequently, the attention has shifted to measuring the enforcement of legal rules by regulators (Coffee, 2007) and through private litigation (Gande and Miller, 2012). This literature acknowledges possible discrepancies between the 'law in the books' and the 'law in action,' i.e. their enforcement. Yet, even this line of research is still based on the standard assumption of the Law and Finance literature that for any given level of enforcement there is no discrepancy between the perception of laws and the actual quality of the law. That is, it is assumed that the level of enforcement is known and accounted for when law is perceived. In this paper, we question this assumption and seek to explicitly distinguish the perception of law and positive law as two distinct constructs. The following section discusses how this distinction is theoretically justified by a more nuanced view of the role of law for economic outcomes than the standard view acknowledges.

2.2 Law and Finance

A large literature in the area of Law and Finance contents that firm-level governance – and hence financial outcomes – may depend on the legal environment in which the firm is embedded (La Porta et al., 1998; Djankov et al. 2003; La Porta, Lopez-de-Silanes and Shleifer, 2008; Deakin, Sarkar and Siems, 2018). The importance of law has also been acknowledged in studies on IPOs (Akyol et al., 2014; Engelen and van Essen, 2010).

The Law and Finance literature is dominated by a rational approach to the effect of law, which draws on the classical theory of legal positivism as well as Transaction Cost Economics theory (for critical views see Deakin et al., 2017; Milhaupt and Pistor, 2008; Schnyder, Siems and Aguilera, 2018). The rational paradigm suggests that law's role in the economy is essentially a functional one – mostly one of reducing opportunism and securing property rights – and institutions (including laws) are seen as consciously designed problem-solving devices (Chisholm, 1995). This suggests a specific mechanism by which law deploys its effect on economic actors, namely, the law creates incentives for actors to comply with it based on efficiency considerations related to cost-benefit analysis of compliance *versus* non-compliance (Becker, 1968).

Following Milhaupt and Pistor (2008), we call this rational perspective the '*standard view*.' It implies, that corporate practice closely matches legal rules, i.e., that corporate governance 'deviance' (Aguilera, Judge and Terjesen, 2016) is low, at least when controlling for the strength of law enforcement and for the relationship between punishment and rewards for breaking the law. Rational actors will follow legal prescriptions if and only if the punishment for not doing so outweighs the expected benefits from infringing the law. The accuracy of this assumption has been extensively discussed in previous studies (Milhaupt and Pistor, 2008; Aguilera and Williams, 2009; Schnyder, Siems and Aguilera, 2018). Another implication of the standard view has received much less attention, namely the assumption that, as rational actors, economic actors will correctly assess the actual quality of a country's law. Even research acknowledging the importance of perception, implicitly adhere to the positivist view by using measures of the actual content of the positive law as a proxy for perception (Bell *et al.,* 2014).

We move away from a legal positivist view and explicitly introduce the distinction between the positive law (or 'actual law') and its perception. Such a distinction is particularly important concerning certain measures of firm performance. Thus, while rational accounts of the law certainly capture part of the reality, because certain firm-level outcomes may mainly be affected by the impact of law on efficiency – e.g., measures of output –, others may more depend on subjective factors. In particular, firm valuation is by its very nature a subjective factor that depends more on actors' perception than any objective reality of the law.

To account for this, rational accounts of institutional factors have been complemented by more sociological views, which stress that organizations and countries (through their governments/lawmakers) may adopt certain rules, not for reasons of technical efficiency (in our case to protect shareholder rights), but rather to comply with social expectations and needs for social legitimation by

following a 'logic of appropriateness' (Aguilera and Cuervo-Cazurra, 2004; DiMaggio and Powell, 1983). A large literature has investigated the symbolic adoption of expected norms and rules by economic actors, which can widely differ from actual practices (e.g., Westphal and Zajac, 1994). Applied to country-level law, such instances of 'decoupling' (Bromely and Powell, 2012) imply that the laws on the books and the laws in practice may be very different. Conversely, this view also suggests that the impact of the law on behaviors may not depend on enforcement alone. In many cases, laws can have an effect even when they are not enforced, because they signal appropriate behavior and actors follow them due to norm-driven behavior (Deakin *et al.*, 2017; Schnyder, Siems and Aguilera, 2018).

This perspective is supported by a growing sociological and behavioral literature in legal studies. We call the latter view the '*legal signaling view*,' where laws deploy their effect on behaviors and economic outcomes through normative signals of appropriate behavior. Such signals, of course, are subjective in the sense that each addressee of the law may perceive the legal signals in different ways. A further important empirical implication of the legal signaling view is therefore that the perception of the law is as important as its actual content. While the actual content can explain the 'efficiency effect' of law on economic activity (e.g. minority shareholder protection reducing transaction costs), perception may explain outcomes that are determined by subjective positions. Firm valuation is one such outcome. Consequently, the alignment of the objective quality of shareholder protection in the law and its perception by economic actors cannot be taken for granted but may be an empirical question.

The importance of perception and signaling is also acknowledged by a third view, the '*firm signaling view,*' which holds that firms can compensate for weak legal shareholder protection by adopting corporate governance practices that go beyond the legal requirements (e.g., Bell, Filatotchev and Aguilera, 2014; Khanna and Palepu, 2004).

The so-called 'nested legitimacy' perspective combines these two signaling approaches. It holds that firm-level signals aiming to increase firm legitimacy in the host country through good corporate governance practices overlap with signals emanating from the home regulatory environment (Bell et al., 2014). Yet, while the nested legitimacy approach accounts for the role of perception and signals for IPO performance, existing studies do not distinguish – either conceptually or empirically – the perception of law from the positive law. In other words, it is assumed that it is the actual content of the law – not its perception – that will impact IPO valuation. This assumption is in turn based on the above-mentioned standard view of the law that assumes that the actual quality of legal shareholder protection does not differ from its perception. By contrast, we apply

the sociological view not only to firm-level signals but also to 'legal signals.' Therefore, we expect the quality of law to be less important for firm valuation than its perception. Indeed, economic actors may misperceive the law in any given country and base their decisions on their perception and not necessarily a correct assessment of the content of that law. Therefore, we argue that regardless of the actual quality of a country's law, the value of IPOs will be driven – *ceteris paribus* – by the perception of legal shareholder rights protection. Thus, our first hypothesis is:

H1: The value of IPOs is positively associated with the perception of legal shareholder protection, such that the more positive the perception the higher the value of IPOs.

However, beyond this proposed direct effect of perception on IPO value, our approach raises the important question of the underlying relationship between the impact of the positive law and the perception of the law on IPO value. In other words, we seek to uncover whether the 'efficiency effect' or the 'signaling effect' dominates. Both the 'standard view' and the 'legal signaling' view may capture part of the effect of the law on economic outcomes. Whether positive perception outweighs low legal quality and whether negative perception outweighs high legal quality (or vice versa) may ultimately be an empirical question. This can be investigated in cases where the quality of the law and the perception of the law are not aligned, i.e., where strong legal shareholder protection is perceived as weak and vice-versa. Indeed, as explained above, the legal signaling view acknowledges that there can be discrepancies between the actual quality of law and its perception. Based on the sociological approach that underscores the importance of social valuation, we hypothesize that it is the perception rather than the positive law that dominates IPO value in cases of misperception of the law:

H2a: When the quality of law is high but misperceived, the positive impact of perception of law on the value of IPOs is attenuated compared to when it is correctly perceived.

H2b: When the quality of law is low but misperceived, the positive impact of perception of law on the value of IPOs is enhanced compared to when it is correctly perceived.

Finding support for these hypotheses would imply that the signaling effect dominates the efficiency effect of law.

Challenging the strong link between law and practices that underpins the standard view also means that firm-level practices under any given law become an important topic for empirical investigation, as they can 'deviate' from legal rules (Aguilera, Judge, and Terjesen, 2016) either by falling short of legal standards or going beyond them. The 'firm signaling view' suggests that in countries with negatively perceived law, firm-level corporate governance practices can compensate for the negative perception of the law – independently of the quality of the positive law (Bell, Filatotchev and Aguilera, 2014; Khanna and Palepu, 2004). Yet, for firms from countries where the law is *positively perceived*, adopting corporate governance mechanisms may have less impact on their value. [1] In such environments, firms can be more selective in adopting corporate governance mechanisms, without a negative impact on their valuation (e.g., Filatotchev, Jona and Livne, 2020). The market may even punish firms that adopt too many corporate governance practices for 'over-governing' (Aguilera, Filatotchev, Gospel, and Jackson, 2008; Bell et al., 2014). The impact of firm-level signals on IPO value can therefore be expected to be more indeterminate in positively perceived countries than in negatively perceived ones and we would therefore expect a differential impact of firm-level corporate governance practices depending on the perception of the country's legal shareholder protection. We hypothesize:

H3: Firm-level corporate governance practices will affect the impact of the perception of country-level law on the value of IPOs, such that the impact will be different for IPOs in countries where the law is negatively perceived than where it is positively perceived.

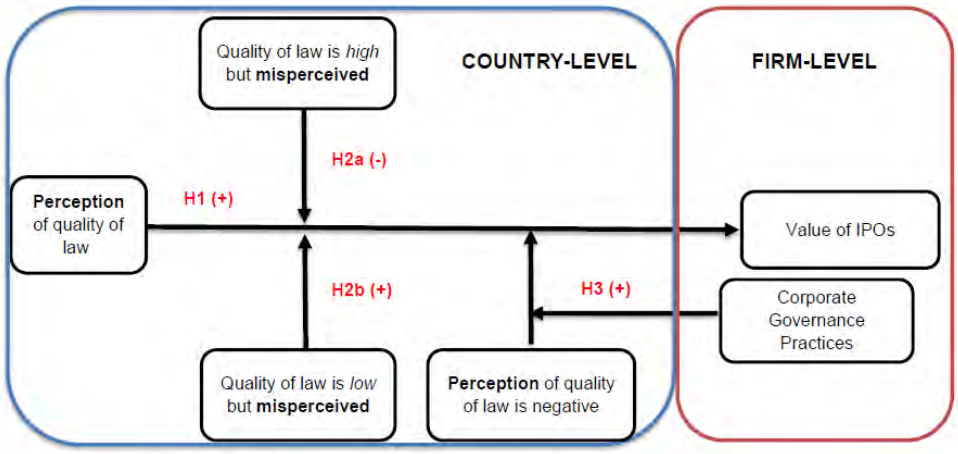

Figure 1: Research model and hypotheses

In short, all of the hypotheses address the underdeveloped role of legal perception in IPOs, be it on its own (H1) or in combination with the actual quality of the law (H2a and H2b) and with firm-level corporate governance (H3). Figure 1 illustrates these hypotheses and their relationship to the country and the firm level[2].

3. Data and Methods

3.1 Sample Description

We focus on the value of IPOs over the period 2011-2017. Our dataset is taken from five different sources: World Economic Forum, World Bank, Thomson One, Orbis, and Refinitiv Eikon. The World Economic Forum (WEF Executive Opinion Surveys) database supplies us with the perception of the quality of legal protection of minority shareholders' interests, with respondents asked to evaluate this aspect of their country's business environment on a scale of 1 (i.e., interests of minority shareholders are not protected by law and seldom recognized by majority shareholders) to 7 (i.e., interests of minority shareholders are protected by law and actively enforced) (WEF, 2018). These data were collected by the WEF from 2007 to 2017 from 'business executives from companies of various sizes and from the various sectors of activity' in 140 countries.

The World Bank (Ease of Doing Business) database provides us with the quality of positive law, namely the 'strength of minority investor protection index', scaled 0 to 100 (best) for 212 countries. The Doing Business Reports' index on minority investor protection has not been without its critics (Deakin, Sarkar and Siems, 2018); yet, it has remained the most widely accepted globally available dataset on shareholder protection law. Both legal and perception indicators are country-level, while the remaining sources provide us with firm-level indicators.

We search for all the IPOs globally from the Thomson One database. We match the firm-level data on the IPOs' pricing and offering to their firm-level financial, accounting, and corporate governance data from the Orbis database (Bureau van Dijk) by the firm's unique ISIN (International Securities Identification Number). Corporate governance indicators included board size, board composition, board roles, controlling owners' characteristics, and their ownership stakes (Moore and Petrin, 2017). Orbis defines ultimate controlling ownership as the minimum percentage of control in the path from a subject company to its ultimate owner of at least 50.01%. We complement controlling ownership data with ownership data from Refinitiv Eikon database for specific investor types: venture capital (defined as firms providing money to startup firms and small businesses with exceptional growth potential) and private equity funds (defined as providing equity financing to small and middle-market companies). As we merge different data sources, the resulting panel dataset is composed of 2,741 firms that have undergone an IPO in any given year of the 2011-2017 period, of which 40% are foreign IPOs.

We use two dependent variables for our analysis of firm value. The first one is market return, measured as the first day's closing share price of an issuer's stock divided by the offer price, minus one (Akyol *et al.*, 2014; Judge *et al*., 2015). The second one is measured by Tobin's Q (ratio of the market value of assets to their book value), as per prior literature (Cremers, Lauterbach and Pajuste, 2018). This measure is longitudinal. The main explanatory variables for our analysis are 1) country-level perception of the quality of legal protection of minority shareholders' interests, and 2) the actual quality of positive law related to the protection of minority shareholders' interests. Both measures are country-level and longitudinal.

A set of corporate governance variables moderate the relation between country-level perception of legal shareholder protection and firm value. We compute board size, which is defined as the natural logarithm of the number of directors and managers for whom the type of role description contains either 'Board of Directors' or 'Senior Management'. The independent directors' ratio is computed as a percentage of independent directors relative to board size. The number of women directors is computed as a natural logarithm of the number of directors for whom gender is indicated as 'Female'. The number of founder-managers is a natural logarithm of the number of directors whose title description contains either 'Founder', 'Shareholder' or 'Owner'. VC/PE ownership is computed as a dummy variable indicating 1 when a firm is owned by either a VC or a PE firm, and 0 otherwise. The committees is a variable equals to 1 when a firm has set up at least one board committee, and 0 otherwise. All measures of corporate governance, except for VC or PE ownership, are cross-sectional.

Finally, we match our set of controls for IPO returns to those defined in the recent literature using cross-country datasets of IPO firms (Akyol *et al*., 2014; Judge *et al*., 2015) and Tobin's Q to those defined in Cremers, Lauterbach and Pajuste (2018) as indicated in Table 1. Furthermore, we control for country-level characteristics, such as inflation and GDP growth.

Detailed definitions of these variables are given in Table 1. Descriptive statistics are given in Table 2, followed by information on the countries represented in our dataset in Table 3 and a correlation table of the variables in Table 5.

Table 1. Variables Description

Variable	Type	Sub-Type	Time	Definition	Source
IPO return	Dep. Variable	IPO value	cross-section	Ratio of share price at closing on the first day of IPO trading to offer price minus 1	Thomson
Tobin's Q	Dep. Variable	IPO value	longitudinal	Market/Book value of assets. Winsorized at 10%	Orbis
Law	Explanatory	Country-level quality of law	longitudinal	Strength of minority investor protection index (0-10) (DB15-19 methodology). Lagged	WB
Perception	Explanatory	Perception of country law	longitudinal	1.20 Protection of minority shareholders' interests, 1-7 (best). Lagged	WEF
Board size	Moderator	Firm Corporate Governance (board)	cross-section	Number of current directors and senior managers (in natural logarithm)	Orbis
Women directors	Moderator	Firm Corporate Governance (board)	cross-section	Number of female directors to board size (in logarithm)	Orbis
Independent directors	Moderator	Firm Corporate Governance (board)	cross-section	Ratio of independent directors to board size	Orbis
Founder-manager	Moderator	Firm Corporate Governance (ownership)	cross-section	Number of founders also directors/ managers (in natural logarithm)	Orbis
VC/PE-backed	Moderator/ Control	Firm Corporate Governance (ownership)	longitudinal	Ownership by either Venture Capital or Private Equity (1/0). Lagged	Eikon
Committees	Moderator	Firm Corporate Governance (board)	cross-section	At least one board committee (1/0)	Orbis
Firm size	Control	Firm characteristics (return/Tobin's Q)	longitudinal	Total Assets, in th. USD (in natural logarithm). Lagged	Orbis
Leverage	Control	Firm characteristics (return/Tobin's Q)	longitudinal	Total Debt/ Total Assets. Lagged. Trimmed for outliers (<18)	Orbis
Firm age	Control	Firm characteristics (return)	longitudinal	Number of years from an issuer's date of incorporation	Orbis
Operating margin	Control	Firm characteristics (return)	longitudinal	Earnings before interest and taxes divided by sales, both the year before the IPO. Lagged	Orbis
Top 10 underwriter	Control	Firm characteristics (return)	cross-section	Equal to 1 when at least one underwriter is in the top 10 according to the amount of fees earned for IPO transactions, and 0 otherwise. Financial Times league tables accessed via https://markets.ft.com/data/league-tables/tables-and-trends/Equity	FT
Book value/ offer price	Control	Firm characteristics (return)	cross-section	Book value of equity per share divided by the offer price, where the book value of equity is the year before the year of IPO	
Offer size	Control	Firm characteristics (return)	cross-section	Number of newly issued shares divided by the number of pre-IPO shares outstanding. Winsorized at 10%	Thomson
Stock market returns	Control	Country characteristics (return)	longitudinal	Total annual general stock market returns for year of IPO by country	Eikon
Stock market volatility	Control	Country characteristics (return)	longitudinal	Standard deviation of total annual general stock market returns for year of IPO by country	Eikon

Return on Assets (ROA)	Control	Firm characteristics (Tobin's Q)	longitudinal	Net income/ Total Assets. Lagged. Winsorized at 10%	Orbis
Property, Plant & Equipment (PP&E)	Control	Firm characteristics (Tobin's Q)	longitudinal	PPE/ Total Assets. Lagged	Orbis
Capital expenditures	Control	Firm characteristics (Tobin's Q)	longitudinal	Capex/Total Assets. Lagged. Winsorized at 10%	Orbis
Research & Development (R&D)	Control	Firm characteristics (Tobin's Q)	longitudinal	R&D/Total Assets. Lagged. Trimmed for outliers (<1)	Orbis
Sector	Control	Firm characteristics (return/ Tobin's Q)	longitudinal	Agriculture, industry and service sectors, based on SIC (2 digits) codes	Orbis
Inflation	Control	Country characteristics (return/ Tobin's Q)	longitudinal	Annual inflation by country. Lagged	WB
GDP growth	Control	Country characteristics (return/ Tobin's Q)	longitudinal	Gross Domestic Product (GDP) yearly growth by country. Lagged	WB

Notes: WB: World Bank; WEF: World Economic Forum; FT: The Financial Times. For control variables, in brackets we indicate for which independent variable they are used, either return and/or Tobin's Q

Table 2 Descriptive Statistics

2A Sample of IPO returns (5,126 observations)

Variable	Observations	Mean	Std. Dev.	Min	Max
Dependent Variables					
IPO return (1 day)	5,156	-0.73	0.44	-1.00	2.21
Explanatory Variables					
Law	5,156	63.41	12.40	30.00	96.67
Perception	5,156	4.56	0.61	3.25	6.21
Control Variables					
Firm age (years)	5,156	13.83	12.39	0.00	100.00
Operating margin	5,156	0.19	1.50	0.00	105.05
VC/PE-backed	5,156	0.27	0.44	0.00	1.00
Top 10 underwriter	5,156	0.15	0.35	0.00	1.00
Book value/offer price	5,156	0.48	0.77	-0.60	28.26
Offer size	5,156	0.25	0.21	0.02	0.75
Stock market returns	5,156	0.34	1.51	-3.41	4.47
Stock market volatility	5,156	5.29	2.00	1.09	12.19
Firm size	5,156	11.85	1.91	0.69	18.95
Leverage	5,156	0.00	0.32	-1.00	1.56
Sector					
Industry	5,156	0.55	0.50	0.00	1.00
Service	5,156	0.44	0.50	0.00	1.00
Inflation	5,156	2.69	2.31	-1.38	13.19
GDP growth	5,156	5.18	3.05	-3.55	25.16
Corporate Governance Moderators					
Founder-manager	5,156	-6.18	2.17	-6.91	1.61
Board size	5,156	0.98	0.76	0.00	2.94
Female directors	5,156	0.13	0.27	0.00	3.00
Independent directors	5,156	0.40	0.38	0.00	1.00
Committees	5,156	0.26	0.44	0.00	1.00

2B Sample of Tobin's Q (15,219 observations)

Variable	Observations	Mean	Std. Dev.	Min	Max
Dependent Variables					
Tobin's Q	15,219	1.33	1.20	0.00	4.00
Explanatory Variables					
Law	15,219	65.07	12.50	30.00	96.67
Perception	15,219	4.66	0.61	3.03	6.22
Control Variables					
ROA	15,219	0.02	0.09	-0.18	0.13
Firm size	15,219	11.71	2.15	0.00	19.12
Leverage	15,219	0.03	0.48	-1.00	17.07
R&D	15,219	0.02	0.08	0.00	0.99
Property, Plant & Equipment	15,219	0.45	0.27	0.00	1.00
Capital expenditures	15,219	0.01	0.00	0.00	0.01
Sector					
Industry	15,219	0.50	0.50	0.00	1.00
Service	15,219	0.49	0.50	0.00	1.00
Inflation	15,219	2.79	2.66	-1.60	20.78
GDP growth	15,219	4.34	2.93	-9.13	25.16
Corporate Governance Moderators					
Founder-manager	15,219	-5.90	2.51	-6.91	2.08
Board size	15,219	1.03	0.75	0.00	2.94
Female directors	15,219	0.14	0.28	0.00	3.00
Independent directors	15,219	0.37	0.37	0.00	1.00
Committees	15,219	0.21	0.41	0.00	1.00

Notes: For each variable, descriptive statistics are computed on the sample of the specification where this variable is used using *e(sample)* command in Stata. For instance, the sample for the specification with *IPO return* (measured as a ratio of share price at closing on the first day of IPO trading to offer price minus 1) as dependent variable contains 5,156 observations and hence descriptive statistics for all the variables used in this empirical specification are computed on this sample. Conversely, the sample using *Tobin's Q* (measured yearly, as a ratio of market value to book value of assets) as dependent variable contains 15,219 observations and descriptive statistics for all the variables used in this empirical specification are computed on this sample.

Table 3: Home, host countries and their distribution

Home Country	Number of Obs.	%	Host Country	Number of Obs.	%
China	3,096	20.34	China	2,995	19.68
European Union	*2,160*	*14.36*	*European Union*	*2,164*	*14.22*
United Kingdom	583	3.83	United Kingdom	609	4
Poland	326	2.14	France	333	2.19
France	314	2.06	Poland	290	1.91
Sweden	280	1.84	Sweden	262	1.72
Germany	148	0.97	Italy	141	0.93
Italy	144	0.95	Germany	140	0.92
Finland	73	0.48	Finland	73	0.48
Spain	69	0.45	Spain	63	0.41
Denmark	54	0.35	Netherlands	50	0.33
Netherlands	47	0.31	Denmark	47	0.31
Belgium	32	0.21	Ireland	34	0.22
Ireland	29	0.19	Belgium	30	0.2
Luxembourg	26	0.17	Greece	22	0.14
Greece	22	0.14	Luxembourg	19	0.12
Bulgaria	18	0.12	Bulgaria	18	0.12
Malta	12	0.08	Cyprus	15	0.1
Cyprus	10	0.07	Malta	12	0.08
United States	1,532	10.07	Estonia	6	0.04
India	1,385	9.1	United States	1,628	10.7
South Korea	1,122	7.37	India	1,367	8.98
Japan	1,069	7.02	South Korea	1,127	7.41
Australia	680	4.47	Japan	1,039	6.83
Hong Kong	662	4.35	Australia	693	4.55
Malaysia	596	3.92	Hong Kong	674	4.43
Thailand	555	3.65	Malaysia	572	3.76
Singapore	487	3.2	Thailand	545	3.58
Indonesia	261	1.71	Singapore	504	3.31
Canada	229	1.5	Indonesia	222	1.46
Philippines	154	1.01	Canada	220	1.45
Saudi Arabia	141	0.93	Philippines	151	0.99
Turkey	133	0.87	Saudi Arabia	134	0.88
Brazil	108	0.71	Turkey	126	0.83
South Africa	85	0.56	Brazil	102	0.67
Norway	76	0.5	Brazil	102	0.67
Egypt	67	0.44	South Africa	92	0.6
Jordan	61	0.4	Israel	79	0.52
Jordan	61	0.4	Norway	75	0.49
Israel	60	0.39	British Virgin	70	0.46
Switzerland	55	0.36	Switzerland	69	0.45
New Zealand	53	0.35	Jordan	61	0.4
Sri Lanka	52	0.34	Egypt	52	0.34
Vietnam	48	0.32	Vietnam	48	0.32
Mexico	43	0.28	New Zealand	46	0.3
Bangladesh	38	0.25	Sri Lanka	45	0.3

Home Country	Number of Obs.	%	Host Country	Number of Obs.	%
Tunisia	29	0.19	Mexico	44	0.29
Kuwait	28	0.18	Bangladesh	33	0.22
Pakistan	27	0.18	Kuwait	28	0.18
Chile	21	0.14	Pakistan	25	0.16
Russian Fed	21	0.14	Jersey	23	0.15
Oman	19	0.12	Tunisia	23	0.15
Kenya	16	0.11	Chile	21	0.14
Argentina	12	0.08	Russian Fed	21	0.14
Nigeria	11	0.07	Taiwan	18	0.12
			Oman	14	0.09
			Cayman Islands	12	0.08
			Nigeria	11	0.07
			Argentina	7	0.05
			Austria	7	0.05
			Bahrain	7	0.05
			Isle of Man	7	0.05
			Macau	7	0.05
			Kenya	5	0.03
			UAE	5	0.03
			Guernsey	1	0.01
Total	**15,219**	**100**	**Total**	**15,219**	**100**

Notes: We have removed the following countries which had fewer than 10 observations from the sample for the analysis: Bahrain, Colombia, Czech Republic, Estonia, Portugal, Hungary, Mongolia, Lithuania, Morocco, Namibia, Peru, Puerto Rico, Qatar, Rwanda, and Myanmar. We include an aggregate number of observations for EU countries (as they were in the period examined in this study; thus, it still includes the UK), given the EU's common market despite remaining differences in company law.

Table 3 shows that about 20% are companies established under Chinese law, while the remainder of the most represented countries belongs to a variety of developed and emerging economies from different parts of the world. Given a large number of Chinese companies, we have also conducted the subsequent analysis without these firms as a robustness check, with our results being largely unchanged. Table 3 shows that, in our dataset, there are 54 home countries where the IPO firms are incorporated and 64 countries where these firms list. For the purposes of our analysis, the home country is the decisive country for the applicable company law; yet, in the subsequent analysis, we also conducted a robustness check distinguishing between domestic and foreign IPOs, here too, with our results being largely unchanged.

The analysis of this paper hinges on a difference between the positive law on shareholder protection and its perception. Figure 2 displays a scatter plot of the average values of law and its perception for the 54 countries of origin in our dataset. It illustrates that many countries are indeed 'misperceived' according to the two measures we use for actual legal quality and its perception. Indeed, the 'standard view' would lead us to expect the two dimensions to coincide, i.e., country's actual law and its perception are aligned. In figure 2, this would mean countries would be placed on the forty-five-degree line. If we defined misperception broadly as above average actual law being perceived as below average and vice versa, all countries in quadrants II and IV are misperceived. But even within quadrants we find clusters of misperception: for instance the group of countries at the bottom of quadrant III – Argentina, Italy, Russia, Bangladesh – have considerably worse perception than the near average actual law scores for these countries would seem to justify. This demonstrates that there is considerable variation in our two measures and therefore discrepancies between positive law and its perception are common in the area of legal shareholder protection.

Table 4 further explains how the law in each country is perceived. There are slightly more cases where a low-quality law is correctly perceived (35.2% of the sample or 19 of the 54 home countries, with 16 countries being emerging economies); followed by countries where high-quality law is correctly perceived (31.5% or 17 of the 54 home countries); then countries with misperceived low-quality law (18.5% or 10 of the 54 home countries), and countries with misperceived high-quality law (14.8% or 8 of the 54 home countries).

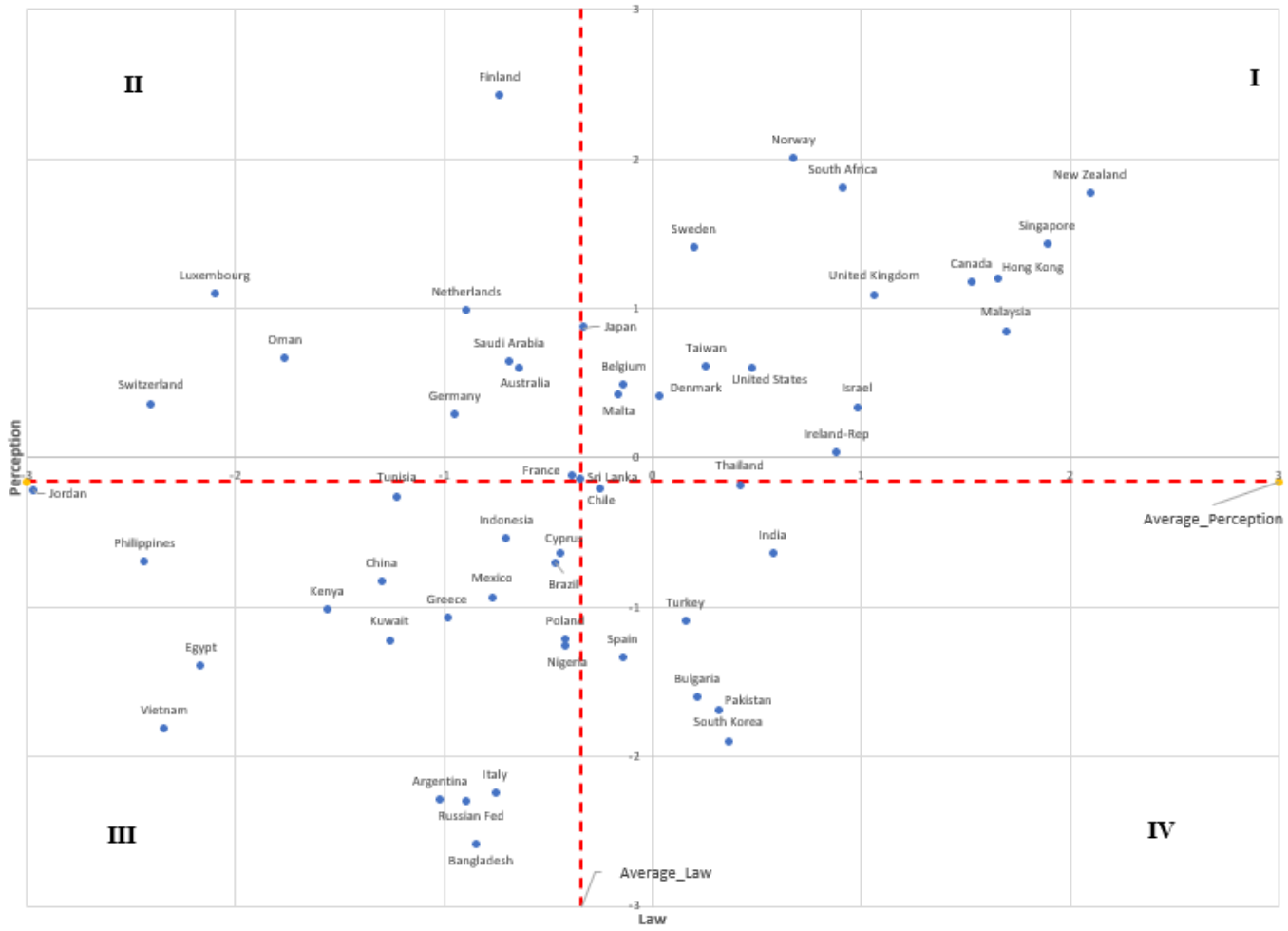

Figure 2: Relationship between law and perception across countries

Table 4. Perception of law in 66 home countries where IPO firms are domiciled

Correctly perceived low-quality law (III)	Correctly perceived high-quality law (I)	Misperceived low-quality law (II)	Misperceived high-quality law (IV)
Argentina*	Belgium	Australia	Bulgaria*
Bangladesh*	Canada	Finland	Chile*
Brazil*	Denmark	France	India*
China*	Hong Kong	Germany	Pakistan*
Cyprus	Ireland-Rep	Luxembourg	South Korea
Egypt*	Israel	Netherlands	Spain
Greece	Japan	Oman*	Thailand*
Indonesia*	Malaysia*	Saudi Arabia*	Turkey*
Italy	Malta	Sri Lanka*	
Jordan*	New Zealand	Switzerland	
Kenya*	Norway		
Kuwait*	Singapore		
Mexico*	South Africa*		
Nigeria*	Sweden		
Philippines*	Taiwan		
Poland*	United Kingdom		
Russian Fed*	United States		
Tunisia*			
Vietnam*			
35.2% (19 of the 54 home countries)	31.5% (17 of the 54 home countries)	18.5% (10 of the 54 home countries)	14.8% (8 of the 54 home countries)

Notes: * denotes emerging economies. The roman numerals in brackets refer to quadrants in Figure 2.

Table 5 Correlations

5A Sample of IPO returns (5,126 observations)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
(1) IPO return	1.00																				
(2) Law	0.23*	1.00																			
(3) Perception	0.38*	0.47*	1.00																		
(4) Firm age	-0.16*	-0.06*	-0.07*	1.00																	
(5) Firm size	0.00	-0.32*	-0.11*	0.06*	1.00																
(6) Op. margin	0.00	-0.01	0.00	-0.02	0.03*	1.00															
(7) Leverage	0.00	0.12*	-0.04*	0.05*	0.16*	0.01	1.00														
(8) VC/PE	0.03	0.23*	0.24*	-0.07*	-0.08*	-0.01	0.05*	1.00													
(9) Top 10 underwr.	0.07*	-0.07*	0.05*	-0.06*	0.44*	0.06*	0.11*	0.12*	1.00												
(10) Book/offer	-0.01	-0.02	-0.03*	0.03*	0.28*	0.01	0.09*	0.00	0.14*	1.00											
(11) Offer size	0.26*	0.13*	0.24*	-0.07*	-0.02	0.01	0.09*	0.12*	0.12*	0.00	1.00										
(12) Mkt returns	-0.10*	0.26*	0.02	-0.01	-0.27*	0.02	0.12*	0.12*	0.00	0.02	0.05*	1.00									
(13) Mkt volatility	-0.09*	-0.30*	-0.42*	-0.01	0.24*	0.02	-0.08*	-0.11*	0.04*	0.12*	-0.07*	-0.20*	1.00								
(14) Sector	0.13*	0.11*	0.28*	-0.08*	-0.04*	0.00	-0.06*	0.11*	0.16*	0.03*	0.10*	0.08*	-0.14*	1.00							
(15) Inflation	-	0.02	-	-	-	0.03	0.08	0.06	0.02	-	0.00	0.10	0.14	-	1.00						

	0.13*		0.19*	0.03*	0.13*	*	*	*		0.03*		*	*	0.03*						
(16) GDP growth	-0.19*	-0.38*	-0.42*	-0.22*	0.13*	0.01	-0.05*	-0.04*	-0.04*	0.04*	-0.15*	-0.11*	0.27*	-0.22*	0.19*	1.00				
(17) Founder-mgr	0.08*	0.05*	0.07*	-0.10*	-0.10*	0.00	-0.07*	0.03*	-0.04*	-0.03*	0.07*	0.00	0.04*	0.04*	0.04*	0.00	1.00			
(18) Board size	0.17*	0.37*	0.31*	-0.15*	-0.02	0.02	0.09*	0.31*	0.26*	0.14*	0.26*	0.22*	-0.05*	0.13*	0.17*	-0.14*	0.29*	1.00		
(19) Female dir.	0.06*	0.01	0.06*	0.00	-0.01	-0.01	-0.02	0.06*	0.06*	-0.01	0.09*	-0.04*	-0.01	0.04*	0.06*	0.05*	0.11*	0.19*	1.00	
(20) Indep.dir.	0.01	0.33*	0.39*	0.02	0.17*	0.00	0.05*	0.29*	0.15*	0.08*	0.15*	0.24*	-0.19*	0.12*	0.16*	-0.16*	0.08*	0.55*	0.08*	
(21) Committees	0.14*	0.22*	0.21*	0.27*	0.10*	0.00	0.03	0.20*	0.24*	0.15*	0.22*	0.08*	0.09*	0.06*	0.03	0.03*	0.06*	0.46*	0.11*	0.35*	1.00

***Notes**: *** p<0.01, ** p<0.05, * p<0.1*

5B Sample of Tobin's Q (15,219 observations)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1) Tobin's Q	1.00																
(2) Law	0.04*	1.00															
(3) Perception	0.12*	0.43*	1.00														
(4) ROA	-0.04*	-0.06*	-0.11*	1.00													
(5) Firm size	-0.26*	-0.16*	-0.12*	0.18*	1.00												
(6) Leverage	-0.26*	0.04*	-0.09*	-0.05*	0.13*	1.00											
(7) R&D	0.24*	0.09*	0.12*	-0.35*	-0.14*	-0.14*	1.00										
(8) PP&E	-0.20*	0.03*	0.01	-0.03*	0.31*	0.39*	-0.21*	1.00									
(9) Capex	0.09*	-0.06*	0.02*	0.07*	0.02*	-0.05*	0.04*	-0.09*	1.00								
(10) Sector	0.03*	0.10*	0.18*	0.04*	0.04*	0.00	-0.08*	0.09*	-0.16*	1.00							
(11) Inflation	-0.12*	-0.08*	-0.27*	0.05*	-0.04*	0.14*	-0.14*	0.04*	-0.02*	0.00	1.00						
(12) GDP growth	-0.13*	-0.27*	-0.37*	0.22*	0.10*	0.00	-0.17*	-0.12*	0.08*	-0.17*	0.26*	1.00					
(13) Founder-manager	0.14*	0.07*	0.07*	-0.12*	-0.02*	-0.10*	0.20*	-0.11*	0.01	0.04*	-0.01	-0.05*	1.00				
(14) Board size	-0.04*	0.26*	0.15*	0.01	0.13*	0.05*	0.02*	0.05*	-0.02*	0.13*	0.19*	0.01	0.29*	1.00			
(15) Female directors	0.02*	0.04*	0.02*	0.01	0.03*	-0.03*	0.05*	-0.02*	0.04*	0.04*	0.03*	0.02*	0.11*	0.19*	1.00		
(16) Indep. Directors	-0.07*	0.17*	0.14*	0.12*	-0.02*	0.05*	-0.08*	-0.03*	0.01	0.11*	0.26*	0.11*	-0.08*	0.55*	0.08*	1.00	
(17) Committees	-0.10*	0.15*	0.09*	0.10*	0.13*	0.04*	-0.09*	0.01	-0.01	0.06*	0.10*	0.14*	0.06*	0.46*	0.11*	0.35*	1.00

Notes: **** p<0.01, ** p<0.05, * p<0.1*

3.2 Methodology

Our dependent variable is measured by either market returns from the first day of trading of the IPO firm, $Returns_i$, or by the ratio of market to book value, $TobinQ_{it}$, jointly denoted in equations below as $DV_{i/it}$. We use the Pooled OLS method where standard errors are computed by clustering at the country level to control for country heterogeneity.[3] Our empirical specification for H1 where we test for the direct effect of the perception of law is defined as follows:

$$DV_{i/it} = \alpha + \beta_1 Law_t + \beta_2 Perception_t + \beta_3 X_{it} + \epsilon_{it} \quad (1)$$

where Law_t is the legal shareholder protection in a given country at time t, $Perception_t$ is the perception of this legal shareholder protection in a given country at time t, vector X_{it} includes all the appropriate firm-level controls, and ϵ_{it} is the error term.

For H2, where we compare the effect of perception where it is misaligned with the positive law relative to where it is in line with the positive law, our empirical specification is as follows:

$$DV_i = \alpha + \beta_1 Law_t + \beta_2[Perception_t * (L_h P_l)] + \beta_3[Perception_t * (L_l P_h)] + \beta_4[Perception_t * (L_h P_h)] + \beta_5[Perception_t * (L_l P_l)] + \beta_6 X_{it} + \epsilon_{it} \quad (2)$$

We create four mutually exclusive binary variables of perception and law combinations as per Grosman and Leiponen (2018) methodology, which we then interact with our continuous measure of perception, $Perception_t$. $L_h P_l$ takes 1 when the law is high, perception is low, and 0 otherwise (misperception); $L_l P_h$ takes 1 when the law is low, perception is high, and 0 otherwise (misperception); $L_h P_h$ takes 1 when the law is high, perception is high, and 0 otherwise (correctly perceived: law and perception are aligned positively); and $L_l P_l$ takes 1 when the law is low, perception is low, and 0 otherwise (correctly perceived: law and perception are aligned negatively). This leads to four interactions.

In H3, we test the moderating effect of firm-level corporate governance practices in two subsamples, where we divide the full sample into two groups depending on whether their country law is perceived positively (e.g., perception above average) or negatively (e.g., perception below average). Our empirical specification for each sub-sample is as follows:

$$DV_{i/it} = \alpha + \beta_1 Law_t + \beta_2 Perception_t + \beta_3[Perception_t * CG_i] + \beta_4 X_{it} + \epsilon_{it} \quad (3)$$

where we interact the perception of law with each corporate governance indicator CG_i (board size, independent directors' ratio, number of women directors, number of founder-managers, board committees or VC/PE ownership). In all specifications, we lag by one period the longitudinal variables to avoid simultaneity bias.

4. Results

We first tested our basic claim based on the *legal signaling view* that perception of law impacts IPO valuation. We estimated this main effect for two different measures of firm valuation: One day returns on offer day and Tobin's Q – as a measure of long-term valuation. Results for one-day returns are reported in Table 6. They support our first hypothesis, showing that legal perception has a significant (at the 0.05 level) positive effect on 1-day returns (model 1). The effect remains significant (at the 0.05 level) when controlling for total annual stock market returns by country in the year of IPO (model 2). Conversely, the impact of positive law on returns is positive, but non-significant in all models.

TABLE 6 The Effects of Law Perception on IPO Returns (Hypothesis 1)

	Model (1)	Model (2)
Independent Variables	Dependent variable: 1-day return	Dependent variable: 1-day return
Law, lagged	0.108	0.130
	(0.141)	(0.144)
Perception, lagged	0.307**	0.283**
	(0.130)	(0.128)
Firm age	-0.123*	-0.124*
	(0.069)	(0.068)
Firm size, lagged	0.025	-0.006
	(0.072)	(0.069)
Operating margin, lagged	-0.001	0.002
	(0.007)	(0.007)
Leverage, lagged	-0.000	0.010
	(0.037)	(0.038)
VCPE-backed, lagged	-0.091**	-0.082*
	(0.044)	(0.043)
Top 10 Underwriter	0.031	0.042
	(0.039)	(0.038)
Book value/offer price	-0.018	-0.008
	(0.021)	(0.017)
Offer size	0.167	0.169*
	(0.100)	(0.099)
Stock market volatility	0.081	0.063
	(0.059)	(0.061)
Stock market returns		-0.121*
		(0.061)
Industry sector	-0.166	-0.149
	(0.224)	(0.239)
Service sector	-0.109	-0.080
	(0.227)	(0.246)
Inflation, lagged	-0.111	-0.104
	(0.068)	(0.066)
GDP Growth, lagged	-0.011	-0.014
	(0.134)	(0.129)
Constant	-0.016	-0.046
	(0.322)	(0.334)
Year dummies	Yes	Yes
Observations	5,156	5,156
R-squared	0.220	0.231

Notes: In this table, we report results from pooled OLS regressions that we use to examine the effects of *Perception* of home-country legal shareholder protection on IPO stock *returns* from the first day of trading. Heteroscedasticity robust standard errors in parentheses, clustered by country. All dynamic variables are lagged by one period to address endogeneity concerns related to simultaneity bias. All variables are standardized using the z-score formula for comparability of coefficients. We winsorized observations of O*ffer size* by replacing all values lower than the 10% percentile and higher than the 90% percentile with the respective values of the two boundaries. Each regression controls for time effects (2012-2017) and industry effects.
*** p<0.01, ** p<0.05, * p<0.10.

We conducted further (untabulated) tests on H1 on sub-samples of domestic and foreign IPOs, where our results for the overall sample were confirmed: perception was positive and significant for the IPO returns for both domestic IPOs and foreign IPOs. We have also conducted tests on a sub-sample of advanced markets, where H1 was strongly supported.

Using Tobin's Q as an alternative DV (Table 7) lends further support to H1. Legal perception has a positive and significant effect (at the 0.05 level) on IPO valuation measured as Tobin's Q (model 1). Controlling for GDP growth, the results remain positive and significant (at the 0.1 level, model 2). The impact of actual legal shareholder protection has – contrary to the standard view – a negative sign although it is only significant for model 2 (at 0.1 level).

Table 7 The Effects of Law Perception on Value of IPOs (Hypothesis 1)

	Model (1)	Model (2)
Independent Variables	Dependent variable: Tobin's Q	Dependent variable: Tobin's Q
Law, lagged	-0.041	-0.047*
	(0.029)	(0.028)
Perception, lagged	0.061**	0.050*
	(0.027)	(0.029)
ROA, lagged	0.083*	0.088**
	(0.041)	(0.040)
Firm size, lagged	-0.230***	-0.225***
	(0.036)	(0.034)
Leverage, lagged	-0.166***	-0.166***
	(0.060)	(0.060)
R&D, lagged	0.186***	0.181***
	(0.025)	(0.025)
Property, Plant & Equipment, lagged	-0.025	-0.032
	(0.044)	(0.044)
Capital expenditures, lagged	0.083***	0.085***
	(0.016)	(0.016)
Industry sector	0.148	0.143
	(0.174)	(0.176)
Service sector	0.211	0.197
	(0.152)	(0.155)
Inflation, lagged	-0.101***	-0.089***
	(0.031)	(0.028)
GDP growth, lagged		-0.056*
		(0.030)
Year dummies	Yes	Yes
Constant	-0.407*	-0.348
	(0.211)	(0.216)
Observations	15,219	15,219
R-squared	0.182	0.184

Notes: In this table, we report results from pooled OLS regressions that we use to examine the effects of *Perception* of home-country legal shareholder protection on IPO's firm *Tobin's Q*. Heteroscedasticity robust standard errors in parentheses, clustered by country. All dynamic variables are lagged by one period to address endogeneity concerns related to simultaneity bias. All variables are standardized using the z-score formula for comparability of coefficients. We winsorized observations of *Tobin's Q*, *ROA*, and *Capital expenditures* by replacing all values lower than the 10% percentile and higher than the 90% percentile with the respective values of the two boundaries. *Leverage* and *R&D* variables are trimmed for excessive values (<18 and <1 respectively). Each regression controls for time effects (2012-2017) and industry effects. We have removed countries with only a small number of observations (<10): Bahrain, Botswana, Colombia, Czech Republic, Estonia, Portugal, Hungary, Mongolia, Lithuania, Morocco, Namibia, Peru, Puerto Rico, Qatar, Rwanda, and Myanmar.
*** p<0.01, ** p<0.05, * p<0.10.

Taken together these results provide strong support for H1 and therefore for the basic insight of the legal signaling view that what drives IPO valuation is not so much the actual quality of legal shareholder protection (positive law) in a country, but rather the perception of its law.

To test H2a and H2b, we further investigated the role of legal perception by focussing on the issue of correct perception vs. misperception of law. We created four mutually exclusive dummy variables to capture each combination of the strength of actual legal shareholder protection and its perception (strong law, but negative misperception; strong law, correct positive perception; weak law, positive misperception; and weak law, correct negative perception) which we interacted with the continuous measure of perception.

Table 8 reports the findings for IPO returns on the first day of trading. We first note that the main effect of the impact of positive law on IPO value is insignificant, suggesting that law *per se* does not impact valuation.

Comparing the coefficients for the case of strong legal shareholder protection, first, we find that the coefficient for misperception (law high, perception low) is non-significant in all four models. However, for perception correctly assessing the quality of positive law (law high, perception high), we find a positive and significant effect at the 0.05 level (Model 1). Controlling for total annual stock market returns by country during the IPO year, the significance remains at the 0.05 level (Model 2). In other words, in the case of strong legal shareholder protection, the effect of legal perception on IPO valuation is stronger if the perception is aligned with positive law than when the quality of law is misperceived. This is consistent with H2a and confirms that the perception of law plays an important role, independently of the actual quality of the law.

Comparing the coefficients of the weak legal shareholder protection cases, we find that when weak legal shareholder protection is correctly perceived as weak, the effect of perception on IPO value is non-significant. Conversely, when weak legal shareholder protection is misperceived as strong, the impact on returns is positive and significant (at the 0.05 level), confirming H2b which posited that the positive relationship between legal perception and IPO value is enhanced if low shareholder protection law is incorrectly positively perceived.

These findings are confirmed when using Tobin's Q as an alternative DV (Table 9). In model 2, the positive perception cases show a significant and positive coefficient, independently of whether the actual law offers high levels of shareholder protection or not. Conversely, when the law is – correctly or incorrectly – negatively perceived the effect is non-significant.

Taken together, these findings lend strong support to our hypotheses 2a and 2b, in the sense that high-quality law that is misperceived does not impact valuation, while misperceived low-quality law has a positive effect. These findings corroborate the view that the signaling effect dominates the efficiency effect of law and that perception is quite independent of the actual quality of the law.

Table 8 The Effects of Perception on IPO Returns when the Law is Misperceived (H2)

	Model (1)	Model (2)
Independent Variables	DV: 1-day return	DV: 1-day return
Law, lagged	0.181	0.192
	(0.214)	(0.213)
Perception x (Law High, Perception Low), lagged	0.687	0.631
	(0.503)	(0.494)
Perception x (Law Low, Perception High), lagged	0.264**	0.252**
	(0.121)	(0.121)
Perception x (Law High, Perception High), lagged	1.003*	0.923*
	(0.531)	(0.525)
Perception x (Law Low, Perception Low), lagged	0.849	0.771
	(0.545)	(0.530)
Firm age	-0.110*	-0.113*
	(0.063)	(0.062)
Firm size, lagged	0.005	-0.022
	(0.063)	(0.063)
Operating margin, lagged	0.001	0.003
	(0.006)	(0.007)
Leverage, lagged	0.003	0.012
	(0.034)	(0.035)
VCPE-backed, lagged	-0.089**	-0.080*
	(0.043)	(0.042)
Top 10 Underwriter	0.032	0.042
	(0.038)	(0.037)
Book value/offer price	-0.016	-0.006
	(0.019)	(0.016)
Offer size	0.165	0.167*
	(0.100)	(0.099)
Stock market volatility	0.079	0.062
	(0.058)	(0.060)
Stock market returns		-0.116**
		(0.056)
Industry sector	-0.199	-0.181
	(0.212)	(0.220)
Service sector	-0.133	-0.105
	(0.198)	(0.214)
Inflation, lagged	-0.079	-0.076
	(0.079)	(0.079)
GDP Growth, lagged	-0.045	-0.039
	(0.143)	(0.139)
Year dummies	Yes	Yes
Constant	0.049	0.012
	(0.324)	(0.329)
Observations	5,156	5,156
R-squared	0.237	0.248

Notes: Heteroscedasticity robust standard errors in parentheses, clustered by country. The type of level of *Law* and *Perception* is determined by their mean (e.g. *High* above the mean and *Low* below the mean, such that the variable (*Law High, Perception Low*) takes 1 if the law is above the mean AND perception is below the mean, and 0 otherwise). All variables are standardized using the z-score formula for comparability of coefficients. All dynamic variables are lagged by one period to address endogeneity concerns related to simultaneity bias. We winsorized observations of *Offer size* by replacing all values lower than the 10% percentile and higher than the

90% percentile with the respective values of the two boundaries. Each regression controls for time effects (2012-2017) and industry effects. *** p<0.01, ** p<0.05, * p<0.10.

Table 9 The Effects of Perception on Value of IPOs when the Law is Misperceived (H2)

	Model (1)	Model (2)
Independent Variables	Dependent variable: Tobin's Q	Dependent variable: Tobin's Q
Law, lagged	-0.023	-0.051
	(0.029)	(0.038)
Perception x (Law High, Perception Low), lagged		0.025
		(0.028)
Perception x (Law Low, Perception High), lagged		0.107***
		(0.011)
Perception x (Law High, Perception High), lagged		0.126***
		(0.042)
Perception x (Law Low, Perception Low), lagged		0.068
		(0.042)
ROA, lagged	0.066*	0.084**
	(0.038)	(0.036)
Firm size, lagged	-0.228***	-0.237***
	(0.035)	(0.036)
Leverage, lagged	-0.184***	-0.179***
	(0.064)	(0.064)
R&D, lagged	0.194***	0.196***
	(0.024)	(0.028)
Property, Plant & Equipment, lagged	-0.007	-0.014
	(0.044)	(0.045)
Capital expenditures, lagged	0.078***	0.080***
	(0.016)	(0.014)
Industry sector	0.121	0.137
	(0.175)	(0.178)
Service sector	0.239	0.203
	(0.150)	(0.157)
Inflation, lagged	-0.091**	-0.083***
	(0.036)	(0.030)
Year dummies	Yes	Yes
Constant	-0.431**	-0.432**
	(0.194)	(0.212)
Observations	17,061	17,061
R-squared	0.179	0.187

Notes: Heteroscedasticity robust standard errors in parentheses, clustered by country. All variables are standardized using the z-score formula for comparability of coefficients. All dynamic variables are lagged by one period to address endogeneity concerns related to simultaneity bias. We winsorized observations of *Tobin's Q*, *ROA*, and *Capital expenditures* by replacing all values lower than the 10% percentile and higher than the 90% percentile with the respective values of the two boundaries. *Leverage* and *R&D* variables are trimmed for excessive values (<18 and <1 respectively). Each regression controls for time effects (2012-2017) and industry effects. We have removed countries with only a small number of observations (<10): Bahrain, Botswana, Colombia, Czech Republic, Estonia, Portugal, Hungary, Mongolia, Lithuania, Morocco, Namibia, Peru, Puerto Rico, Qatar, Rwanda, and Myanmar.
*** p<0.01, ** p<0.05, * p<0.10.

To test hypothesis 3, we collected data on a series of important firm-level corporate governance practices considered in the literature to impact firm performance including valuation (Bhagat, Bolton and Romano, 2008). In particular, we included important corporate governance mechanisms regarding ownership (involvement of founder in firm management; the presence of venture capitalist or private equity firm amongst owners), board size, board composition (percentage of independent directors), board diversity (number of female directors), and board structure (presence of committees). For each one of these variables, we split our sample into two sub-samples based on whether the company is based in a country with negative (below average) legal perception or positive (above average) legal perception.

Table 10 presents the results for testing H3 based on these variables.[4] The results provide strong evidence in support of H3, which hypothesized that the impact of firm-level corporate governance on the relationships between perception and IPO value differs depending on legal perception. The total effect of perception on IPO returns for firms with each corporate governance mechanism (as measured by the sum of the coefficients on perception and on the interaction between perception and a corporate governance mechanism) is consistently significant and negative for the negative perception sub-sample (each reported Wald test for joint significance of coefficients is significant at 0.1 or 0.05 levels) and positive but insignificant for the positive perception sub-sample. The only exception of this consistent pattern is founder involvement in management, which is negative and significant for both sub-samples.

In other words, in negatively perceived countries higher levels of firm-level corporate governance reduce the positive impact of legal perception on firms' IPO value. In positively perceived countries, firm-level corporate governance mechanisms do not affect the relationship between perception and valuation.
Figures A1-A6 in the appendix further illustrate these moderating effects for each corporate governance indicator. Taking Figure A1 as an example, where we evaluate the impact of law perception on the valuation of IPO firms at two different levels of founder-managers (one standard deviation above and below the mean of the founder-managers variable). The slopes for the quadrant with negative perception are of opposite coefficient, confirming the negative moderating effect of founder-managers in the relationship between law perception and firms' IPO return. As we can see from the quadrant with negative perception, when the number of founder-managers is high, higher legal perception is negatively associated with firms' IPO returns (downward slope); while when the number of founder-managers is low, increases in the law perception would lead to higher IPO returns (upward slope). Given that founder-manager involvement is usually considered a desirable corporate governance feature, this can be interpreted as support for the firm signaling view. The slopes

in the quadrant with positive perception are both upward, and the slope of lower numbers of founder-managers is steeper than the slope of higher numbers of founder-managers which means that there is a negative impact of numbers of founder-managers on the relationship between law perception and IPO returns. Similar explanations apply to the other corporate governance mechanisms we tested (fig. A2-A6). The analysis of the interaction effects reveals that for all our corporate governance practices, firms with higher levels of corporate governance are more highly valued than firms with lower levels of corporate governance the more legal perception is negative. As the legal perception becomes less negative, the positive effect of corporate governance declines and ultimately becomes negative, while the effect of low levels of corporate governance becomes positive as legal perception improves. In sum, these figures provide support for the 'firm signaling view' for the negative perception sub-sample.

Taken together, these results lend strong support to H3 by clearly showing that the effect of firm-level corporate governance mechanisms on the relationship between perception and IPO value is different for the two sub-samples.

Table 10 The Moderating Effects of Corporate Governance Practice on the Relationship between Law Perception and Returns (H3)

Independent Variables	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b	Model 7a	Model 7b
	Dependent variable: IPO returns on first day of trading											
	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception
Law, lagged	-0.196*	0.116	-0.163	0.026	-0.189	0.109	-0.125	0.151	-0.189	0.119	-0.167	0.161
	(0.111)	(0.301)	(0.108)	(0.309)	(0.110)	(0.303)	(0.104)	(0.309)	(0.113)	(0.305)	(0.105)	(0.308)
Perception, lagged	-0.293	-0.162	0.479**	0.126	0.226	0.350	0.424*	0.019	0.242	0.239	0.233	0.365
	(0.355)	(0.417)	(0.192)	(0.407)	(0.193)	(0.320)	(0.226)	(0.470)	(0.217)	(0.408)	(0.190)	(0.362)
Founder-manager	1.027*	1.547*										
	(0.493)	(0.864)										
Perception x Founder-manager	-1.178*	-1.432*										
	(0.579)	(0.789)										
Board size			1.798**	-1.080								
			(0.783)	(1.318)								
Perception x Board size			-2.131**	1.169								
			(0.903)	(1.276)								
Female directors					1.469*	0.231						
					(0.733)	(0.502)						
Perception x Female directors					-1.593*	-0.134						
					(0.786)	(0.455)						
Independent directors							2.572**	-2.026				
							(0.945)	(1.838)				
Perception x Indep. directors							-2.962**	1.629				
							(1.083)	(1.792)				
VC/PE-backed, lagged									3.187**	-1.878		
									(1.275)	(2.321)		
Perception x VC/PE-backed									-0.778**	0.308		
									(0.309)	(0.443)		
Committees											4.976**	1.805
											(2.110)	(2.488)

Independent Variables	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b	Model 7a	Model 7b
	Dependent variable: IPO returns on first day of trading											
	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception
Perception x Committees											-1.173**	-0.375
											(0.485)	(0.494)
Firm age	0.047	-0.202***	0.023	-0.200***	0.040	-0.208***	0.037	-0.178***	0.052	-0.207***	0.032	-0.213***
	(0.058)	(0.061)	(0.051)	(0.059)	(0.046)	(0.062)	(0.053)	(0.059)	(0.064)	(0.061)	(0.040)	(0.063)
Firm size, lagged	-0.046	-0.055	-0.055	-0.080	-0.054	-0.051	-0.049	-0.065	-0.050	-0.050	-0.044	-0.045
	(0.049)	(0.080)	(0.049)	(0.079)	(0.050)	(0.079)	(0.045)	(0.078)	(0.052)	(0.078)	(0.048)	(0.074)
Operating margin, lagged	-0.006**	0.298	-0.006**	0.308	-0.006**	0.308	-0.007**	0.272	-0.007**	0.285	-0.006**	0.307
	(0.003)	(0.202)	(0.002)	(0.203)	(0.002)	(0.206)	(0.003)	(0.195)	(0.003)	(0.206)	(0.002)	(0.209)
Leverage, lagged	-0.010	0.044	-0.009	0.053	-0.011	0.049	-0.008	0.043	-0.010	0.046	-0.009	0.046
	(0.018)	(0.070)	(0.015)	(0.068)	(0.017)	(0.068)	(0.015)	(0.063)	(0.017)	(0.068)	(0.016)	(0.069)
VC/PE-backed	-0.049	-0.123	-0.036	-0.111	-0.052	-0.124	-0.050	-0.109			-0.045	-0.125
	(0.034)	(0.092)	(0.031)	(0.088)	(0.035)	(0.092)	(0.031)	(0.085)			(0.036)	(0.087)
Top 10 underwriter	0.041	0.052	0.046	0.047	0.034	0.044	0.027	0.059	0.038	0.051	0.028	0.059
	(0.050)	(0.047)	(0.047)	(0.047)	(0.040)	(0.046)	(0.035)	(0.044)	(0.047)	(0.044)	(0.033)	(0.048)
Book value/offer price	-0.018	0.048	-0.008	0.057	-0.015	0.039	-0.015	0.062	-0.017	0.046	-0.017	0.045
	(0.015)	(0.114)	(0.011)	(0.120)	(0.012)	(0.113)	(0.014)	(0.105)	(0.015)	(0.114)	(0.013)	(0.110)
Offer size	0.058	0.256	0.062	0.250	0.059	0.251	0.053	0.233	0.060	0.255	0.052	0.263*
	(0.051)	(0.155)	(0.048)	(0.160)	(0.050)	(0.156)	(0.044)	(0.143)	(0.051)	(0.156)	(0.042)	(0.152)
Industry sector	-0.127	-0.226	-0.147	-0.202	-0.127	-0.226	-0.116	-0.110	-0.142	-0.216	-0.129	-0.171
	(0.091)	(0.775)	(0.090)	(0.747)	(0.088)	(0.752)	(0.083)	(0.613)	(0.091)	(0.743)	(0.091)	(0.747)
Service sector	-0.083	-0.129	-0.075	-0.085	-0.069	-0.131	-0.064	0.038	-0.092	-0.098	-0.078	-0.066
	(0.085)	(0.794)	(0.071)	(0.755)	(0.086)	(0.762)	(0.081)	(0.624)	(0.082)	(0.747)	(0.087)	(0.751)
Inflation, lagged	-0.052	-0.152	-0.059	-0.178	-0.060	-0.153	-0.081*	-0.106	-0.061	-0.146	-0.064	-0.133
	(0.043)	(0.148)	(0.044)	(0.161)	(0.043)	(0.153)	(0.045)	(0.149)	(0.043)	(0.146)	(0.042)	(0.136)
GDP growth, lagged	-0.126	0.230	-0.170	0.208	-0.145	0.213	-0.195*	0.216	-0.152	0.214	-0.148	0.218
	(0.100)	(0.265)	(0.101)	(0.263)	(0.103)	(0.264)	(0.102)	(0.256)	(0.102)	(0.264)	(0.099)	(0.260)
Stock market returns	-0.033	-0.231*	-0.022	-0.236*	-0.033	-0.234*	-0.029	-0.232*	-0.033	-0.236*	-0.036	-0.234*
	(0.024)	(0.132)	(0.024)	(0.136)	(0.023)	(0.132)	(0.025)	(0.127)	(0.025)	(0.132)	(0.024)	(0.129)
Stock market volatility	0.042	0.007	0.047*	-0.015	0.045*	-0.006	0.046*	-0.037	0.047*	-0.009	0.039	0.012
	(0.025)	(0.170)	(0.023)	(0.169)	(0.023)	(0.170)	(0.023)	(0.162)	(0.024)	(0.167)	(0.024)	(0.162)

Independent Variables	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b	Model 4a	Model 4b	Model 5a	Model 5b	Model 7a	Model 7b
	Dependent variable: IPO returns on first day of trading											
	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception	Neg. Perception	Pos. Perception
Year dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.193	-0.161	-0.198	-0.108	-0.165	-0.147	-0.239	0.038	-0.027	0.027	-0.071	-0.235
	(0.257)	(0.961)	(0.223)	(0.975)	(0.251)	(0.950)	(0.227)	(0.831)	(0.279)	(1.054)	(0.256)	(1.010)
Observations	3,101	2,055	3,101	2,055	3,101	2,055	3,101	2,055	3,101	2,055	3,101	2,055
R-squared	0.200	0.200	0.231	0.205	0.210	0.198	0.243	0.230	0.206	0.196	0.222	0.198
Total effect of perception (joint significance of coef., Wald test)	-1.471*	-1.594	-1.652**	1.295	-1.367*	0.216	-2.538**	1.648	-0.536*	0.547	-0.940*	-0.010

Notes: Heteroscedasticity robust standard errors in parentheses, clustered by country. All variables are standardized using the z-score formula for comparability of coefficients. All dynamic variables are lagged by one period to address endogeneity concerns related to simultaneity bias. We winsorized observations of Offer size by replacing all values lower than the 10% percentile and higher than the 90% percentile with the respective values of the two boundaries. Negative perception represents a sub-sample where the perception of law is below the mean; positive perception represents a sub-sample where perception is above the mean. Each regression controls for time effects (2012-2017) and industry effects. *** p<0.01, ** p<0.05, * p<0.10.

5. Robustness Checks

We ran a series of robustness checks for all three hypotheses. Firstly, we followed Katelouzou and Siems (2015) approach to check for structural breaks in our time-series data by performing a series of yearly Chow tests (results available upon request). We did not detect any structural breaks that would imply that the relationship we observe between legal perception, positive law, and IPO value change over time.

Secondly, we ran the same specifications as above including business group affiliation as an additional control variable (not tabulated), to test for the reputational effect of being part of a larger business group. Our results remain substantively unchanged.

Finally, to check for various types of endogeneity concerns (i.e. omitted variable bias, simultaneous and dynamic endogeneity), we ran a series of estimations using Blundell and Bond (1998) Generalized Methods of Moments (GMM) as a system, following the methodological toolkit produced by Abdallah, Goergen and O'Sullivan (2015). Table 11 reports the results from a GMM estimation testing our first hypothesis using Tobin's Q as the dependent variable. We use Tobin's Q because this variable is dynamic and allows us to use its lags as instruments. The results confirm our findings from the OLS showing a significant (0.05 level) positive effect of legal perception on firm valuation, while actual law is moderately significant (0.10 level), but negative. Untabled robustness checks for hypotheses 2a and 2b using a similar GMM estimation with Tobin's Q largely support our findings as well, except for hypothesis 2b.

Table 11 The Effects of Law Perception on Value of IPOs (System GMM)

Independent Variables	System GMM Dependent Variable – Tobin's Q
Law	-0.053*
	(0.029)
Perception	0.412**
	(0.195)
ROA	1.189**
	(0.604)
Firm size	-0.155***
	(0.035)
Leverage	-0.341***
	(0.099)
R&D	0.975***
	(0.253)
PPE	-0.287
	(0.243)
Capex	30.334*
	(17.289)
GDP growth	-0.069**
	(0.030)
Inflation	0.005
	(0.023)
Sector dummies	Yes
Time dummies	Yes
Observations	14,981
Number of firms	3,054
Number of instruments	23
AR(1)	-6.632
AR(1) (p value)	0.000
AR(2)	-1.574
AR(2) (p value)	0.115
AR(3)	-0.876
AR(3) (p value)	0.381
Sargan test	198.1
Sargan (p value)	0.000
Hansen test	8.576
Hansen (p value)	0.036

Difference-in-Hansen tests of exogeneity of instrument subsets:
GMM instruments for levels
Hansen test excluding group: χ^2 (1) = 5.40. Prob > χ^2 = 0.020
Difference (null H = exogenous): χ^2 (2) = 3.18. Prob > χ^2 = 0.204
GMM (Tobin's Q, collapse eq(diff) lag(6 6))
Hansen test excluding group: χ^2 (2) = 7.77. Prob > χ^2 = 0.021
Difference (null H = exogenous): χ^2 (1) = 0.81. Prob > χ^2 = 0.370
GMM (Tobin's Q, collapse eq(level) lag(5 5))
Hansen test excluding group: χ^2 (2) = 6.40. Prob > χ^2 = 0.041
Difference (null H = exogenous): χ^2 (1) = 2.17. Prob > χ^2 = 0.141
GMM (Law, eq(diff) lag(8 8))
Hansen test excluding group: χ^2 (0) = 1.02. Prob > χ^2 = .
Difference (null H = exogenous): χ^2 (3) = 7.56. Prob > χ^2 = 0.056
GMM(Law, collapse eq(level) lag(6 6))
Hansen test excluding group: χ^2 (2) = 7.82. Prob > χ^2 = 0.020

Difference (null H = exogenous): χ^2 (1) = 0.76. Prob > χ^2 = 0.383

Notes: Heteroscedasticity robust standard errors in parentheses, clustered by country. We use *xtabond2* command developed by Roodman (2009). We use instruments in levels dated *t-8* (Law) and *t-6* (Tobin's Q) for the equations in first differences and first-differenced instruments dated *t-5* (Tobin's Q) and *t-6* (Law) for the equations in levels. We use the *collapse* option to limit instrument proliferation. AR(1), AR(2) and AR(3) are tests for the absence of first-, second- and third- order serial correlations in the residuals, asymptotically distributed as N(0,1) under the null of no serial correlation. The Sargan test is for the over-identifying restrictions, it is not robust to heteroscedasticity and autocorrelation, but it is not weakened by many instruments. Hence, we also report the Hansen *J* test which is robust but weakened by many instruments. We also report Difference-in-Hansen tests for exogeneity of the sub-sets of instruments. Number of instruments does not exceed the number of firms. The Hansen's J statistic of instrument exogeneity is low, robust, but may be weakened by many instruments. Arellano-Bond test statistic indicative of no second or higher order auto-correlation of residuals AR(2) is not significant, consistent with Arellano-Bond approach, and does not provide evidence of misspecification. The difference-in-Hansen tests of exogeneity of instrument subsets show that the selection of instruments is appropriate (we cannot reject the null hypothesis that the instruments are valid).
*** p<0.01, ** p<0.05, * p<0.10

6. Discussion and Conclusion

This paper seeks to contribute to the corporate finance and Law and Finance literatures by introducing a new concept that we label 'legal signaling' and which explicitly distinguishes the *actual* (or *positive*) law and the perception of law as two distinct concepts. This view constitutes an alternative approach to what we called the 'standard view' of the role of law in finance, which is inspired by classical legal positivism. The 'standard view' assumes that law's role is to reduce transaction costs, increasing certainty, and protecting property rights, which can be summarized as law's 'efficiency effect.' We enhance the concept of law in law and finance by adding the 'legal signaling' effect, which is based on the insight that the actual law and how law is perceived at the country level may be two different things. Taking into account 'legal perception' at the country level allows us to capture the complexity of the relationship between the positive law, its perception, firm-level corporate governance practices, and IPO valuation. Table 12 presents an overview of the eight possible combinations of these three factors: quality of law, perception of law, and firm corporate governance practices.

Table 12 Three views on law, perception, and governance practice interaction

Combi-nations	**Possible determinants**			**Expected impact on performance and firm valuation according to different views**		
	Quality of positive law	Perception of law	Firm corporate governance practices	Standard view ('Law and Finance' studies)	Firm signaling view	Legal signaling view
1	High	Positive (correct perception)	Good (aligned with law)	+	+	+
2	High	*Negative (misper-ception)*	Good (aligned with law)	+	+	-
3	High	Positive (correct perception)	*Bad (deviating from law)*	+	+/-	+
4	High	*Negative (misper-ception)*	*Bad (deviating from law)*	+	+/-	-
5	*Low*	Positive (misper-ception)	Good (deviating from law)	-	+	+
6	*Low*	*Negative (correct perception)*	Good (deviating from law)	-	+	-
7	*Low*	Positive (misper-ception)	*Bad (aligned with law)*	-	+	+
8	*Low*	*Negative (correct perception)*	*Bad (aligned with law)*	-	-	-

Legend: + = positive association hypothesized; - = negative association hypothesized; +/- = direction of association undetermined.

Overall, our results lend strong support to the legal signaling view. Our study is the first one to clearly distinguish and empirically test the differences between the efficiency- and the signaling effects of law. We show that the *perception* of the law matters more than the actual quality of the law for the valuation of IPO firms. Our findings challenge prior literature (notably the 'Law and Finance' studies) that assumes that 'law matters,' but does not consider that the quality of the law and the perception of the quality of the law often diverge.

Our study also contributes to previous studies on perception, by demonstrating the importance of considering the fact that law is often misperceived. We investigate the effect of legal perception, or the general perception of a country's shareholder protection laws as opposed to investor perception of these laws. This insight suggests that studies on the impact of perception on IPO value (Bell *et al.*, 2014; Filatotchev *et al.*, 2020), which have relied on investor perception, may benefit from looking at of the additional effects of how the law is perceived. Our novel conceptualization includes theorizing the interactions of perception of law

with firm-level corporate governance practices, and evidence of the substitution effects of firm-level governance when perception of country law is negative.

Our focus has been to test the *legal signaling view* which takes the perception of the law into account but also conceives the institutional effects on firm-valuation as being the result of the interplay of all three determinants, actual law, its perception, and firm-level governance. We hypothesized that perception would dominate positive law (H1), which is borne out by our empirical analysis (as illustrated by the column 'Legal signaling view' in Table 12: combinations 1, 3, 5, and 7 with positive perception will lead to positive IPO value, while combinations 2, 4, 6, and 8 with negative perception will lead to negative IPO value, irrespective of the quality of law).

To further distinguish the legal signaling from the efficiency effect of law, we investigated the misperception of law (H2a and H2b). We hypothesized that when investors correctly perceived weak law, the value of an IPO would be more negatively affected (combinations 6 and 8 in Table 12) than when the weak law is misperceived (combinations 5 and 7 in Table 12). Our findings support these hypotheses. Indeed, regardless of the actual quality of law, positive perception (e.g., when perception of the law is above average) will lead to a positive effect of perception on IPO value (combinations 1, 3, 5, and 7 in Table 12). This lends strong support to the dominance of the legal signaling effect over the efficiency effect of law.

We find support for H3 predicting that the effect of firm-level corporate governance mechanisms of IPO value will differ between positively and negatively perceived countries. Our findings for H3 also support the idea that corporate governance practices can compensate for negative legal perception (e.g., when perception of the law is below average) in some cases. Indeed, consistent with previous studies, we uncover that an increase in firm-level corporate governance mechanisms in countries with negatively perceived law positively affects valuation when the levels of perception are low (combinations 2 and 6). For the positive perception sub-sample (combinations 1 and 5), firm-level corporate governance does not influence the relationship between law and IPO valuation.

For countries with positive legal perception, our results for H3 can be interpreted as showing that the legal framework may be considered sufficient to guarantee a reasonable level of shareholder protection for investors and any additional firm-level corporate governance mechanism may be seen as 'over-governance' (Aguilera *et al.*, 2008) that constrains managerial leeway, imposes additional firm costs. Therefore, firm-level corporate governance does not have a significant impact on the relationship between perception and IPO value for such countries.

This hints at the contextual nature of the firm-signaling effect, which depends not just on the level of actual legal shareholder protection but also on its perception. Further research is needed to disentangle the precise nature of the perception of firm-level governance and country-level law.

A limitation of our study is that our findings may be influenced by the selection of corporate governance mechanisms we tested. It may often not be clear *a priori* what type of firm-level corporate governance investors prefer. For example, there is a large literature on many of these governance practices with conflicting findings of whether independent directors and board diversity have a positive impact on firm valuation (Bhagat and Black, 2001; Knyazeva, Knyazeva and Masulis, 2013; Duchin, Matsusaka, and Ozbas, 2010; Adams and Ferreira, 2009; Ahern and Dittmar, 2012; Moore and Petrin, 2017). Further studies could investigate in more detail how legal signaling and firm-level corporate governance practices interact in order to gain a fuller picture of perception effects and their relationship to the positive law.

To conclude, this study has shown that research on Law and Finance can benefit from further re-conceptualization of the role of law. Clearly, it is not just the positive law, but the perception of that law that matters. This supports a more sociological or behavioral view of law and suggests the need for further studies to examine the role of law in the economy. The boundary effects of firm-level corporate governance on country-level perception should also be acknowledged. Our approach complicates the picture of the institutional determinants of IPO value but also opens new avenues for future research that can draw on the recent insights on subjective perception from fields such as behavioral law and economics.

Our findings also hint at limitations to firms' abilities to signal good practice to investors and market participants. While we find support that such effects exist in countries whose laws are negatively perceived – thus confirming existing studies (Khanna & Palepu, 2004) – the fact that firm signals do not have an effect in cases where the law is positively perceived shows that in some contexts firm have relatively little control over their 'reputation.' Conversely, this finding also suggests that in some circumstances investors seem to be driven by broader contextual factors beyond the firm-level – which we call 'legal signals' –, which underscores the importance of contextual approaches to studying corporate governance and finance phenomena.

The findings about the relationship between positive law and its perception also have implications for a broad range of fields beyond corporate governance and finance where economic activity is driven by legal rules. Our approach is an important step towards a better understanding of internationalized and cross-

border financial markets to which Professor Mike Wright's work has made a lasting contribution.

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Notes

[1] We define 'positive and negative perception' of a given legal environment as the assessment of a given group of actors of the quality of that legal environment compared to a given reference point. An intuitive way of conceiving of negative (positive) perception of a legal system would be that its quality is perceived as below (above) the sample average. Yet, there is also a possibility of threshold effects above which a country's legal system may be considered 'good enough' to warrant investment and below which investment is considered risky. Which reference point is appropriate may depend on the precise empirical setting, see further discussion in the section on methodology.

[2] The positive sign for H3 denotes the existence of a significant effect for countries with negatively perceived law, which we expect to be different for countries with positively perceived law.

[3] The results remain robust to alternative specification using random-effects GLS regression with robust standard errors.

[4] In the interest of space, we only report results for one DV, namely IPO returns. We carried out robustness checks with the alternative DV Tobin's Q. Results are available upon request. We have also run similar tests for additional corporate governance mechanisms, which are available upon request.

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Appendix

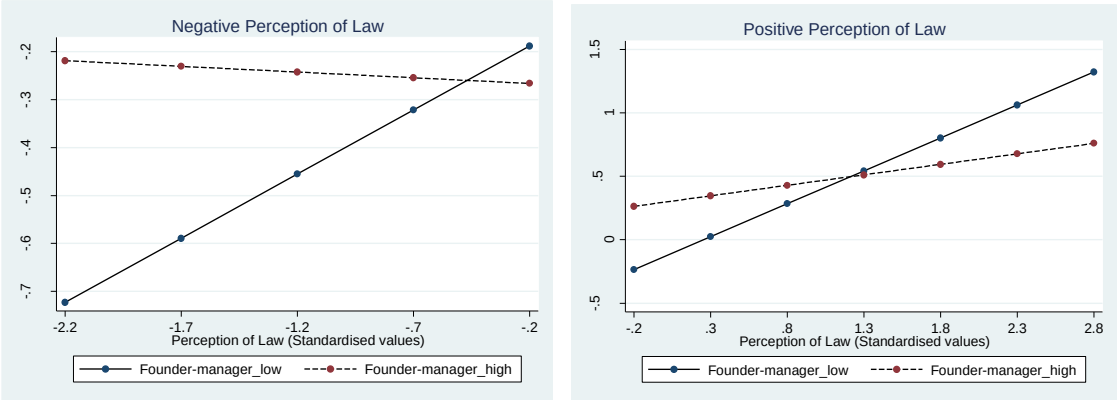

Figure A1 The Moderating Effects of Founder-Manager on IPO Return when Legal Perception is Negative and Positive

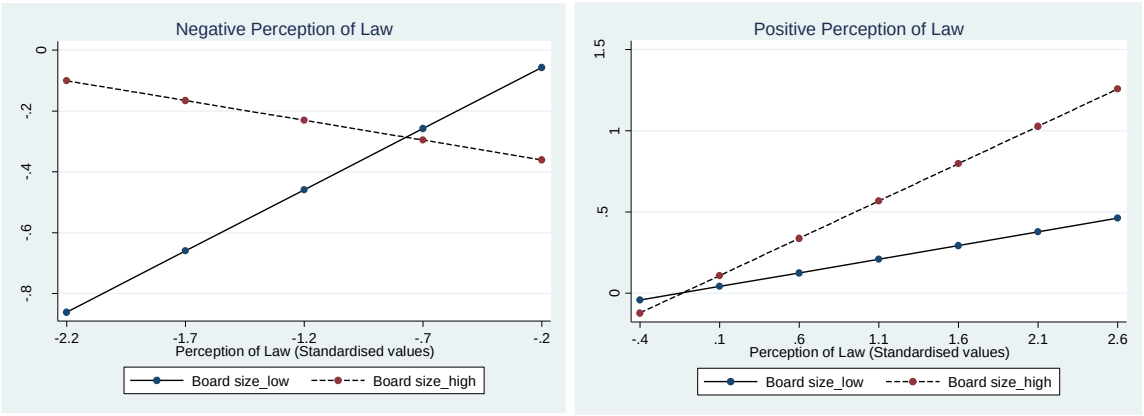

Figure A2 The Moderating Effects of Board Size on IPO Return when Legal Perception is Negative and Positive

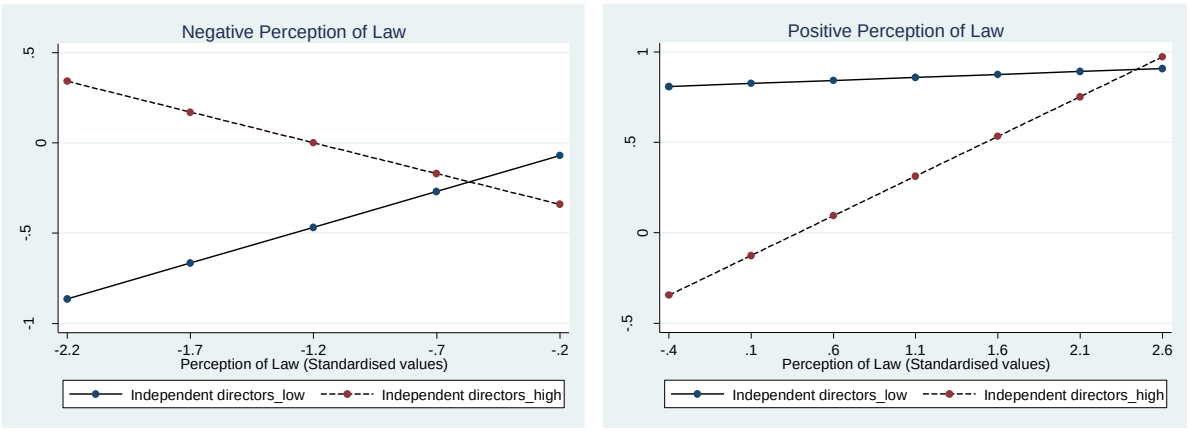

Figure A3 The Moderating Effects of Independent Director on IPO Return when Legal Perception is Negative and Positive

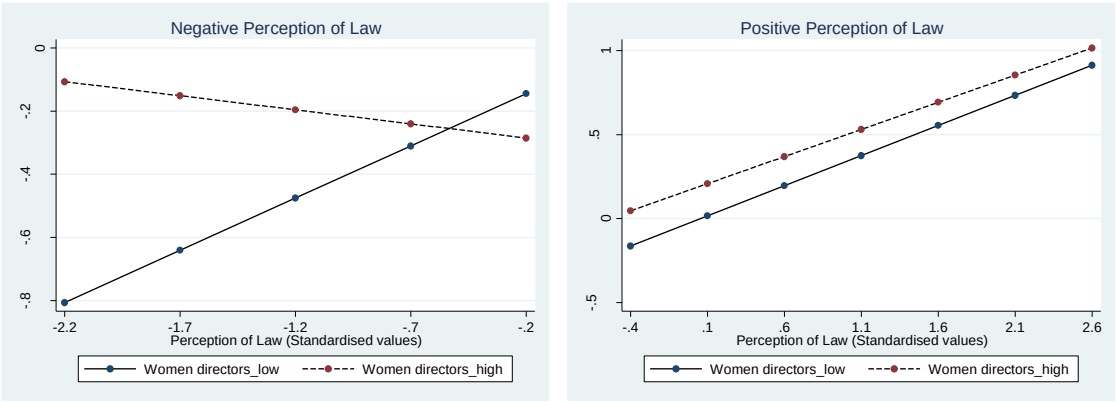

Figure A4 The Moderating Effects of Women Director on IPO Return when legal Perception is Negative and Positive

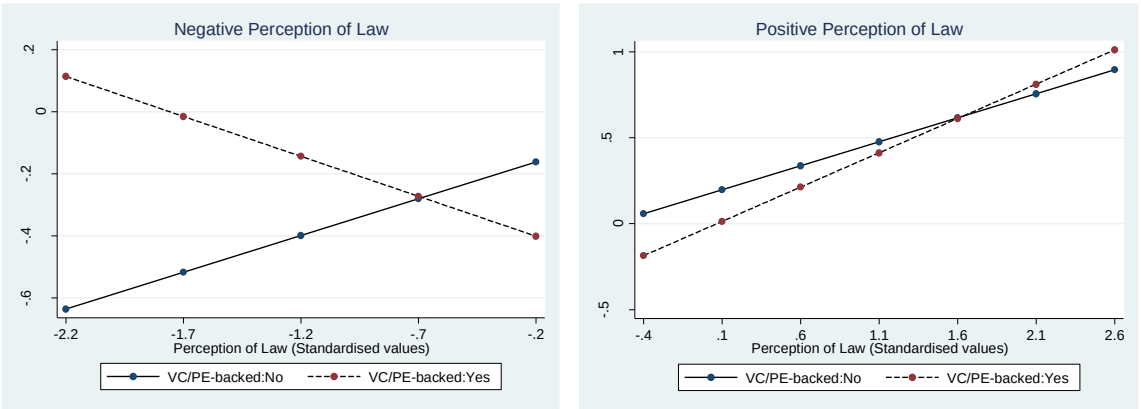

Figure A5 The Moderating Effects of VC/PE Ownership on IPO Return when Legal Perception is Negative and Positive

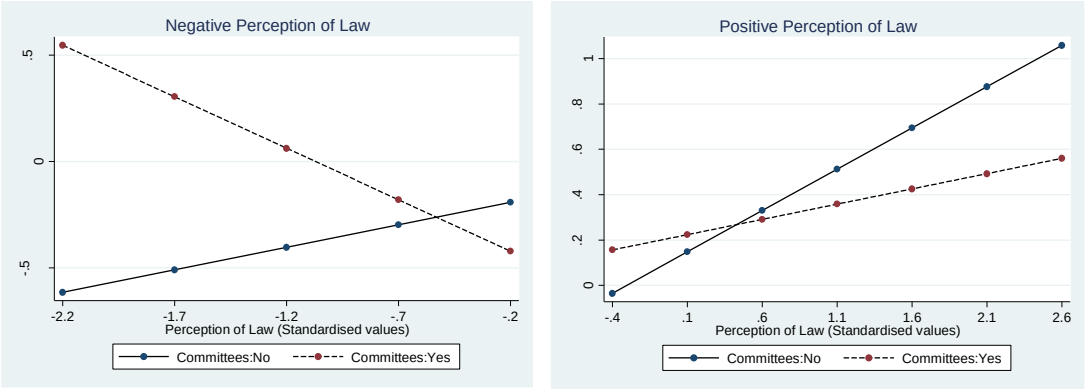

Figure A6 The Moderating Effects of Committees on IPO Return when Legal Perception is Negative and Positive