

Corporate Governance and Delisting: Evidence from Emerging Markets

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The purpose of this study is to examine the delisting behavior of firms from emerging markets and how corporate governance is associated with delisting in these economies. The literature of equity delisting has been scarce and has focused mainly on firms from developed countries such as the U.S. and U.K. Using data from 23 emerging markets, I find that there is a delisting wave during the period 2008-2014. The incidence of delisting varies by type, year, and country. I also find that country-level corporate governance measured by the rule of law index and the investor protection index is inversely related to the incidence of overall delisting. This indicates that firms from countries with better rule of law or investor protection are less likely to delist their shares. I also find that governance is inversely related to involuntary delisting triggered by M&As or bankruptcy and liquidation, while governance is positively associated with the incidence of voluntary delisting via going private transactions.

Keywords: equity delisting, corporate governance, emerging markets

INTRODUCTION

While the literature has largely focused on equity listings such as Initial Public Offerings (IPOs) or cross-listings, there is lack of studies on equity delisting. Given the increasing number of firms delisted from stock exchanges in the U.S. and Europe since 1996 (Gao et al., 2013; Thomsen and Vinten, 2014; Grullon et al., 2015), understanding the factors associated with this phenomenon becomes an important issue.

Delisting is defined as the removal of a listed company from trading on a stock exchange. In recent years, delisting has become a phenomenon in developed countries. Martinez and Serve (2017) show that more than 6,000 delistings occurred in 42 countries over the period 2008-2012, and 75% of these delistings were concentrated in the U.S., U.K., and continental Europe. In general, delistings are categorized as involuntary or voluntary. In an involuntary delisting, on the one hand, the firm is obliged to delist by the stock exchange because it has breached regulations. Another cause for involuntary delisting is bankruptcy or liquidation of the firm (Macey et al. 2008). A voluntary delisting, on the other hand, is initiated by the firm and is referred to as the natural consequence of a merger or acquisition, a decision to take the firm private, a voluntary liquidation, or a company's decision to list only in its home market (Macey et al. 2008). Both involuntary and voluntary delisting are responsible for the number of firms delisted from stock exchanges in the U.S. and Europe since 1996.

Delisting is, however, far less studied compared to discussions about equity listings (see Martinez and Serve (2017) for a review of the delisting literature). Moreover, the delisting literature focuses mainly on firms from the U.S.A (Kim and Lyn, 1991; Opler and Titman, 1993; Kieschnick, 1998; Leuz et al., 2008; Bartlett, 2009; Bharath and Dittmar, 2010), U.K. (Weir et al., 2005a; Weir et al., 2005b; Weir and Wright,

2006; Renneboog et al., 2007; Weir et al., 2008), and continental Europe (Achleitner et al., 2013; Croci and Giudice, 2014; Thomsen and Vinten, 2014).

Although the literature on delisting is scarce, studies have shown that delisting is motivated by several reasons such as poor performance (Leuz et al. 2008; Martinez and Serve, 2011; Thomsen and Vinten, 2014), financial distress (Opler and Titman, 1993, Mehran and Peristiani, 2009), and undervaluation (Kim and Lyn, 1991; Weir et al., 2005b; Renneboog et al., 2007). Additionally, even though regulation or corporate governance are often cited as another cause for delisting, their effects on delisting are unclear. On the one hand, regulatory changes or corporate governance standards increase compliance costs. For example, the passage of Sarbanes-Oxley (SOX) in 2002 has been cited as a major cause of delisting from U.S. exchanges (Engel et al., 2007; Leuz, 2007). Chaplinsky and Ramchand (2012) also suggest a negative association between SOX and the benefits of U.S. listing. On the other hand, Doidge et al. (2017) find that the drop in the number of IPOs began long before the passage of SOX, and thus cannot be an explanation for the U.S. listing gap defined as the difference between new listings and delistings. They also find that the high delisting rate in the U.S. is explained by the increase in mergers. Furthermore, Leuz (2007) argues that SOX has produced some benefits, such as increasing scrutiny of listing firms. Coates and Srinivasan (2014) also show that costs of SOX have fallen over time, and certain benefits have emerged. To sum up, the effect of governance in general, and SOX in particular, on delisting is an ongoing debate in the literature.

To extend the literature of delisting, this study aims to examine delisting behavior of firms from emerging markets and investigate how corporate governance is associated with delisting in these economies. Emerging markets have drawn substantial attention among researchers and investors. Although there is a growing body of literature on emerging markets, there is little, if any, evidence on the delisting patterns of firms from emerging markets, or the association between governance and delisting in these economies. Yet, there are reasons to believe that understanding the delisting activities in emerging markets is important. The first and foremost reason is the deviation in the corporate governance across countries. Unlike developed economies, such as the U.S. and U.K., emerging markets have institutional background characterized by concentrated ownership and control, poor institutional protection of minority shareholders, and indicators of weak governance such as fewer publicly traded firms (La Porta et al., 1997), lower firm valuations (Claessens et al., 2002; La Porta et al., 2002; Lins, 2003), less information contained in stock prices (Morck et al., 2000), inefficient strategy (Filatotchev et al., 2003; Wurgler, 2000), less investment in innovation (Edwards et al., 2005), and, in many cases, expropriation of minority shareholders (Claessens et al., 2002; Faccio et al., 2001; Johnson et al., 2000; Mitton, 2002). The divergence of governance between developed and emerging economies may result in different determinants of the delisting phenomenon.

Moreover, equities in emerging markets have very different characteristics than equities in developed capital markets. Specifically, emerging stock markets tend to have higher and more predictable average returns, low correlations with developed market returns, and higher volatility (Bekaert and Harvey, 1997). In addition, emerging markets experience greater barriers to global equity market integration due to poor credit ratings, high and variable inflation, exchange rate controls, and lack of a high-quality regulatory and accounting frameworks (Bekaert, 1995). These capital market characteristics may provide different motivations for firms from emerging markets to delist.

To understand the new wave of corporate delisting due to the financial crisis started in 2008, this study focuses on delisting in emerging markets from 2008 to 2014. I find that there is a delisting wave during the period 2008-2014, and the incidence of delisting varies by type, year, and country. I also find that country corporate governance, measured by the rule of law index and the investor protection index, is inversely related to the incidence of overall delisting. This indicates that firms from countries with better rule of law or investor protection are less likely to delist their shares. Furthermore, when I investigate the relationship between governance and delisting by delisting type, I find that governance is inversely related to involuntary delisting triggered by M&As or bankruptcy and liquidation, while governance is positively associated with the incidence of voluntary delisting via going private transactions.

This study contributes to the literature in two ways. First, this study extends the literature of delisting and examines the delisting pattern of firms from emerging markets during the post-crisis period. The literature has largely focused on delisting in developed countries such as the U.S. and U.K. It is, however, important to understand how firms in emerging markets choose to exit the capital market through delisting. Second, this study contributes to the debate on the association between corporate governance and delisting. On the one hand, firms from countries with more stringent governance standards may face higher compliance costs, which increases the probability of delisting (Engel et al., 2007; Leuz, 2007). On the other hand, delisting can be used as a means to mitigate agency problems caused by weak governance, which suggests that firms faced with weaker governance are more likely to delist (Weir et al., 2005a; Weir and Wright, 2006). Due to the ambiguous results presented in the literature, this study attempts to solve this debate using data from emerging markets.

I organize the remainder of the study as follows. Section 2 discusses related literature. Section 3 describes the collection and construction process of the sample. Section 4 contains the methodology used for the analysis. Section 5 provides empirical results examining the relationship between corporate governance and delisting, and Section 6 provides a brief summary of the findings and a discussion of their importance to the literature.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Jensen (1986) suggests that agency costs are part of indirect listing costs, and delisting can be used to mitigate agency conflicts between the principal and the agent. The relationship between agency costs and delisting is, however, mixed in the literature. The divergence of interests between managers and shareholders increases when managers of public firms have more incentive to extract private benefits (Jensen and Meckling 1976). The incentive to consume private benefits of control is even stronger with weak corporate governance. Therefore, the incentive realignment hypothesis suggests that delisting can bring the incentive of managers and shareholders back in line with each other (Kaplan 1989). A going private transaction can thus help mitigate agency problems. There are studies that find empirical evidence supporting this view. For example, Weir et al. (2005a) and Weir and Wright (2006) find that delisted firms have a higher incidence of CEO duality than listed firms. Leuz et al. (2008) find that firms with fewer independent directors, or firms that exhibit CEO duality are more likely to delist via going private transactions. Hostak et al. (2013) find that foreign firms that delist from U.S. exchanges have weaker board governance. A general conclusion from these studies is that delisting serves as a corporate governance mechanism that is expected to reduce agency conflicts, and that firms with weaker governance are more likely to delist in order to mitigate agency problems.

Yet, delisting is also likely to result in weaker governance and increase agency conflicts. That is, managers could decide to delist their firms in order to protect their control rents at the expenses of other shareholders. For example, Weir et al. (2005a) find that delisted firms via going private transactions are more likely to have higher CEO ownership. This is because managerial ownership increases entrenchment power. Marosi and Massoud (2007) contend that insiders have incentives to exploit their informational advantage to extract private benefits through the delisting and find that delisted firms exhibit greater insider ownership. Achleitner et al. (2013) also find that high ownership concentration increases the probability of delisting in the European market. Croci and Giudice (2014) further suggest that controlling shareholders can expropriate value from minority shareholders by delisting before an improvement in performance. This is because controlling shareholders can avoid sharing such enhancement with other shareholders. Nevertheless, both the incentive realignment and the managerial entrenchment arguments support the view that firms with weaker governance are more likely to delist. Therefore, I hypothesize that:

H1: Weaker governance is more likely to result in a firm's decision to delist.

There are studies, however, suggesting the opposite contrary to the view that firms with weaker governance are more likely to delist. This is because governance rules and standards increase compliance costs for listed firms. For example, Zhang (2007) finds that the average first year direct costs of complying with Section 404 of SOX is almost \$3 million, plus additional audit fees of \$823,200. These costs associated with SOX have been linked with the rising number of delisted firms (Engel et al., 2007; Leuz, 2007). Although firms can avoid listing costs through voluntary delisting, firms may forego benefits accompanied with staying public (i.e., lower cost of capital). Supporting this view, Thomsen and Vinten (2014) find that better corporate governance regulation measured by investor protection and corporate governance codes is associated with more delisting in European stock exchanges. Consistent with this view, I hypothesize that:

H2: Stronger governance is more likely to result in a firm's decision to delist.

To sum up, the evidence on the relationship between corporate governance and delisting is mixed. On the one hand, firms with weaker governance may be more likely to delist to mitigate agency problems. Firms with weaker governance may also be more likely to delist due to managerial entrenchment. On the other hand, stringent governance standards encourage firms to delist in an attempt to avoid the increasing compliance costs. Additionally, it is also important to note that these studies have mainly focused on developed markets. There are few, if any, studies examining the effect of corporate governance on delisting decisions in emerging markets.

DATA

Data and Sample Construction

To identify emerging markets, I use the Morgan Stanley Capital International (MSCI) market classification. These countries are included in the MSCI Emerging Markets Index that consists of 24 emerging economies: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, South Korea, Taiwan, Thailand, Turkey and the United Arab Emirates.

Listing and delisting data comes from the Morningstar database. Morningstar provides data for all the above emerging markets except Pakistan. Therefore, Pakistan is excluded from the analysis. I begin by obtaining all firms' domestic and foreign listings on all exchanges from emerging markets provided by Morningstar. This includes listings not only on major stock exchanges, but also on smaller or regional stock exchanges around the world. As suggested by Burhop and Lehmann-Hasemeyer (2014), small firms tend to list on regional stock exchanges. Ignoring such regional stock exchanges is likely to create a bias towards larger firms. Then, I obtain information on delisted equities including their listing and delisting dates. The same firm can appear in the data several times because of multiple listings on different exchanges or different share classes. I remove duplicate listings that occur in the same year on the same exchange. I retain the listing of primary shares if multiple share classes are reported. These selection criteria result in a sample of 101,881 listed firms, 4,914 IPOs, and 2,712 delistings.

Morningstar provides reasons of delisting on the removal of a listed security from the exchange on which it was traded. In the context of this study, I focus on voluntary delistings of going private transactions (privatization) and involuntary delistings motivated by mergers and acquisitions or bankruptcy and liquidation.

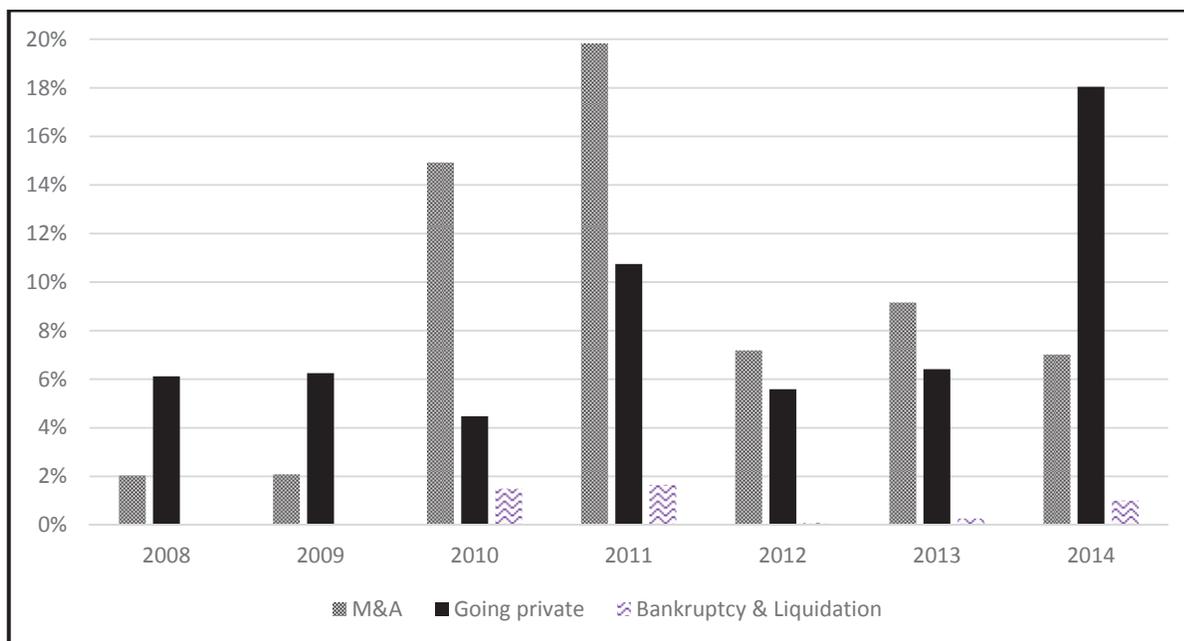
I obtain each firm's financial data from Compustat Global. I also obtain country-level characteristics from the World Bank and corporate governance data from Sheleifer's website. The governance standards are measured using the Rule of Law from the World Bank and the Investor Protection index from La Porta, Lopez-de-Silanes, and Shleifer (2006). This results in a final sample of 81,922 firm-year observations.

Delisting Patterns

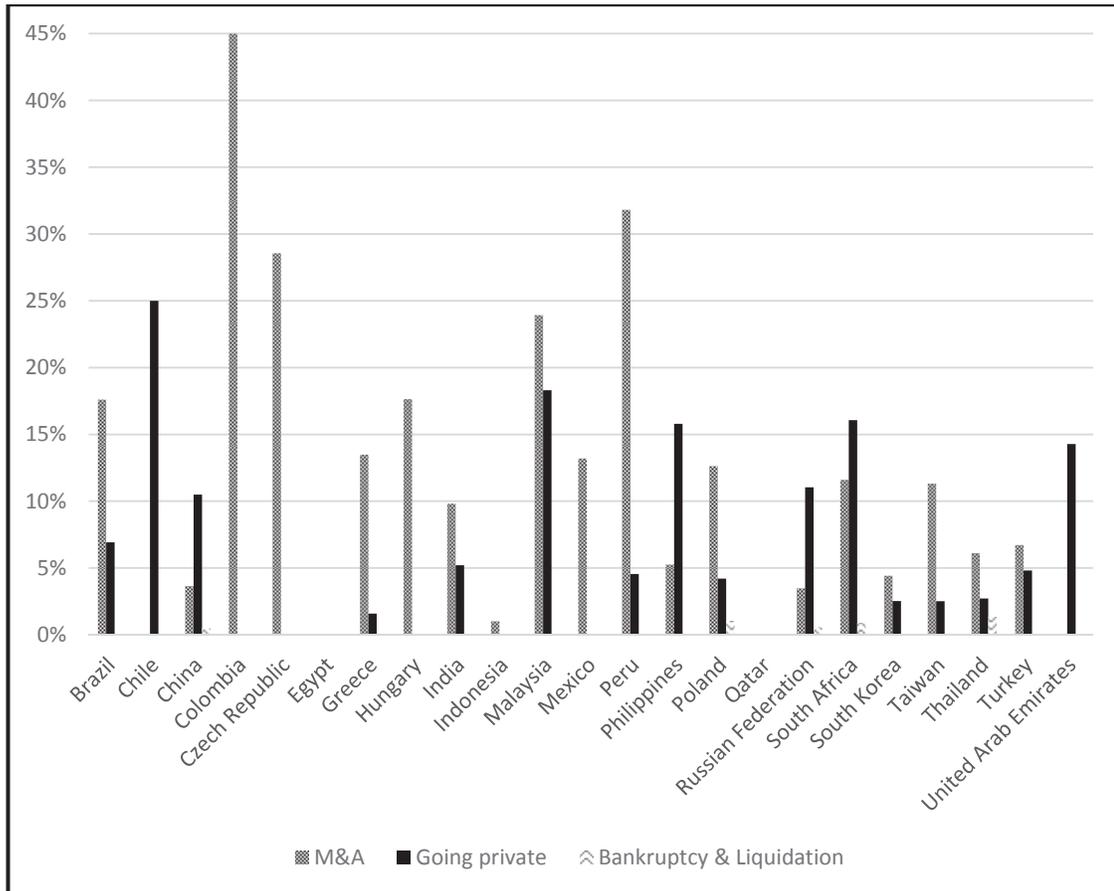
Figure 1 shows the incidence of delisting by delisting type over the period 2008-2014, calculated as the number of each delisting type divided by the number of listed firms each year. Delisting can be voluntary when a firm decides to go private or can be involuntary triggered by M&As or bankruptcy and liquidation. As shown in Figure 1, most of the delistings are motivated by either M&As or going private transactions. There is a wave of M&As during the period 2008-2014, with a high incidence in 2010 and 2011. The frequency of going private transactions has been relatively steady except 2011 and 2014. Bankruptcy and liquidation account for roughly just 2% in some years.

Figure 2 tracks the incidence of delisting type by country. I observe a high incidence of M&As in Colombia, Peru, Czech Republic, Malaysia, and Brazil. In addition, countries like Chile, Malaysia, South Africa, Philippines, and UAE exhibit a high incidence of going private transactions. Figure 2 also shows that there are very few delistings due to bankruptcy or liquidation in Thailand, Poland, South Africa, and Russia.

**FIGURE 1
DELISTING INCIDENCE BY YEAR**



**FIGURE 2
DELISTING INCIDENCE BY COUNTRY**



METHODOLOGY

In this section, I describe the methodology and models employed in the analysis. Due to the availability of firm-specific corporate governance for a set of international firms, I use the rule of law index and the investor protection index as my primary variables of interest to examine the effect of a country’s governance on the determinants of delisting. Specifically, I investigate the relationship between corporate governance and delisting by constructing the dependent variables at both country-level and firm-level.

In my country-level analysis, I construct the dependent variable as the number of delisted firms from country *i* in year *t* divided by the number of listed firms in each country *i* for each year *t*. This ratio captures the proportion of firms in a given country that are delisted in a given year. Since the number of delisting is censored at zero, I estimate a maximum-likelihood Tobit regression. The empirical specification can be summarized as follows:

$$\begin{aligned}
 \% \text{ of delisted firms}_{i,t} = & \beta_0 + \beta_1 \text{Rule of law}_{i,t-1} + \beta_2 \text{Investor protection}_i + \\
 & \beta_3 \text{Market turnover}_{i,t-1} + \beta_4 \text{Market volatility}_{i,t-1} + \beta_5 \text{Market return}_{i,t-1} + \beta_6 \text{Inflation}_{i,t-1} + \\
 & \beta_7 \log(\text{Market cap/GDP})_{i,t-1} + \beta_8 \text{GDP per capita growth}_{i,t-1} + e_{i,t}
 \end{aligned}
 \tag{1}$$

Because the investor protection index from La Porta, Lopez-de-Silanes, and Shleifer (2006) is time-invariant, it is constant for all years in a given country i . I also control for other economic and financial market indicators such as market turnover, market return, market volatility, market capitalization scaled by GDP, and the growth of GDP per capita. These variables capture the liquidity, performance, size, and growth of the country, and may determine the choice made by a firm when it delists its shares. I also include inflation because monetary and exchange rate policies can affect market returns and market volatility (Mullin, 1993).

In addition to the relationship between corporate governance and overall delisting, I also investigate this relationship by delisting type. Specifically, I divide the number of delisted firms due to M&A, going private transactions, or bankruptcy and liquidations, respectively, by the number of listed firms in each country i for each year t as alternative dependent variables. These ratios capture the incidence of delisting by type. That is:

$$\begin{aligned} \% \text{ of delisting by type}_{i,t} &= \beta_0 + \beta_1 \text{Rule of law}_{i,t-1} + \beta_2 \text{Investor protection}_i + \beta_3 \text{Market turnover}_{i,t-1} \\ &+ \beta_4 \text{Market volatility}_{i,t-1} + \beta_5 \text{Market return}_{i,t-1} + \beta_6 \text{Inflation}_{i,t-1} \\ &+ \beta_7 \log(\text{Market cap/GDP})_{i,t-1} + \beta_8 \text{GDP per capita growth}_{i,t-1} \\ &+ e_{i,t} \end{aligned} \quad (2)$$

In addition to using country-level data, I also conduct firm-level analysis. This is because firm specific characteristics may also shape a firm's delisting decision. In my firm-level analysis, I use logistic regression and create the dependent variable as an indicator variable that equals one if a firm j from country i is delisted in that year t , and zero otherwise. Along with country characteristics, I include firm characteristics as additional control variables. The model used is described as follows:

$$\begin{aligned} \text{Delisting}_{j,i,t} &= \beta_0 + \beta_1 \text{Rule of law}_{i,t-1} + \beta_2 \text{Investor protection}_i + \beta_3 \text{Market turnover}_{i,t-1} \\ &+ \beta_4 \text{Market volatility}_{i,t-1} + \beta_5 \text{Market return}_{i,t-1} + \beta_6 \text{Inflation}_{i,t-1} \\ &+ \beta_7 \log(\text{Market cap/GDP})_{i,t-1} + \beta_8 \text{GDP per capita growth}_{i,t-1} \\ &+ \beta_9 \log(\text{total sales})_{j,t-1} + \beta_{10} \text{Market to book}_{j,t-1} + \beta_{11} \text{ROA}_{j,t-1} \\ &+ \beta_{12} \text{Firm age}_{j,t-1} + \beta_{13} \text{Sales growth}_{j,t-1} + e_{j,i,t} \end{aligned} \quad (3)$$

While Equation (3) examines the likelihood of a firm choosing to delist, I also examine the likelihood of a firm choosing to delist via M&A, going private transactions, or bankruptcy and liquidations, respectively. To do so, I estimate a multinomial logistic regression for all three delisting types.

RESULTS

Country-Level Analysis

In this section, I show results from the country-level analysis in Table 1. I begin by investigating the relationship between corporate governance and overall delisting using Equation (1), and the results are reported in Column 1. As shown in Column 1, country corporate governance, measured by the rule of law index and the investor protection index, is inversely related to the incidence of delisting. This indicates that firms from countries with weaker rule of law or investor protection are more likely to delist their shares. This can be interpreted as that governance standards are valuable to shareholders and issuers, which, in turn, may encourage firms to stay publicly listed. This is also consistent with Hypothesis 1 that firms from countries with weaker governance are more likely to delist in order to mitigate agency problems.

Interestingly, the relationship between corporate governance and the incidence of delisting varies depending on delisting type. The results using Equation (2) are reported in Columns (2) – (4). As shown in Columns (2) – (4), country-level corporate governance is inversely related to involuntary delisting

triggered by M&As or bankruptcy and liquidation, while governance is positively associated with the incidence of voluntary delisting via going private transactions.

I propose two possible reasons that can help explain these findings. First, from a cost-benefit perspective, firms choose to voluntarily delist when the costs of staying public exceed the benefits. Although governance standards and rules provide benefits such as reduced costs of capital to firms, they come at a cost such as listing fees, fees for auditors and lawyers, and compliance costs associated with listing requirements. In general, emerging markets are less developed economies with low savings but high growth opportunities (Giannetti and Ongena, 2009). Firms listed in emerging countries may face greater trade-offs between listing costs and benefits due to the constraints of market development, operating efficiency, or economic stability. When an emerging country provides better shareholder protection or law enforcement, such a country is also likely to exert burdens on its firms which, in turn, may result in firms trying to avoid listing costs by going private. This view is consistent with my second hypothesis.

Meanwhile, as suggested by Jensen (1986), both takeover markets and debt may serve as corporate governance mechanisms that motivate managers to perform diligently. Firms from countries with better corporate governance may face less challenges from other governance mechanism such as takeover market or bankruptcy. This is in line with the “substitute hypothesis” proposed by Williamson (1983), and can be a possible reason explaining the negative association between country governance standards and involuntary delisting via M&A or bankruptcy and liquidation. That is, strong country-level governance standards can substitute the need for other governance mechanism such as mergers or bankruptcies.

In addition to the rule of law index and the investor protection index, the next set of regressors are country characteristics including economic and financial market indicators. As shown in Column (1) of Table 1, firms from countries with higher market turnover, higher market volatility, and lower growth in GDP per capita are more likely to delist. However, these market characteristics have mixed results in terms of their effects on the delisting choice by type. I should also note that, while inflation has a negative effect on involuntary delisting through M&A (Column 2) or bankruptcy and liquidation (Column 4), inflation has a significantly positive effect on a firm’s choice to go private (Column 3). In addition, while market capitalization scaled by GDP has a positive effect on all delistings in general, this positive effect of market capitalization on delisting is driven by M&As. That is, there are more mergers and acquisitions taking place in larger capital markets. Larger markets are also associated with a lower incidence of going private transactions, which suggests that firms from countries with smaller capital market are more likely to delist through going private transactions.

TABLE 1
COUNTRY-LEVEL TOBIT REGRESSION ANALYSIS OF CORPORATE GOVERNANCE AND DELISTING

	(1)	(2)	(3)	(4)
	Delisting type			
	All delisting	M&A	Going private	Bankruptcy and liquidation
Intercept	0.054	0.264	0.057	0.001
Rule of Law t_{-1}	-0.011** (0.017)	-0.041** (0.016)	0.073*** (<.0001)	-0.018*** (<.0001)
Investor protection index	-0.002* (0.066)	-0.010** (0.044)	0.012*** (<.0001)	-0.003*** (<.0001)
Market turnover t_{-1}	0.000*** (<.0001)	-0.001** (0.024)	0.000 (0.801)	0.000*** (0.008)
Market volatility t_{-1}	0.001*** (0.001)	-0.004*** (0.001)	-0.001 (0.406)	0.000 (0.356)
Market return t_{-1}	0.000 (0.113)	-0.001 (0.240)	0.000 (0.248)	0.000*** (0.000)
Inflation t_{-1}	-0.001 (0.330)	-0.006* (0.080)	0.004* (0.063)	-0.004*** (<.0001)
log (Market cap/GDP) t_{-1}	0.000*** (0.000)	0.001* (0.081)	-0.001*** (0.002)	0.000 (0.521)
GDP per capita growth t_{-1}	-0.004*** (<.0001)	0.001 (0.765)	0.007*** (0.000)	0.000 (0.245)
R-Square	0.5811	0.3058	0.2925	0.2351
N	207	207	207	207

Note: Variable definitions are provided in Appendix. P-values are provided in parentheses. *, **, *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Firm-Level Analysis

In this section, I show results from the firm-level analysis using Equation (3), and the results are reported in Table 2. As shown in Column (1), corporate governance, measured by the rule of law index and the investor protection index, is inversely related to a firm's decision to delist. This is consistent with the findings shown in Table 1. Furthermore, the results of multinomial logistic regressions reported in Columns (2) – (4) continue to show that the relationship between corporate governance and a firm's decision to delist varies depending on delisting type. Consistent with Table 1, I find that corporate governance is inversely related to involuntary delisting triggered by M&As or bankruptcy and liquidation, while governance is positively associated with the incidence of voluntary delisting via going private transactions.

I control for several firm characteristics in addition to economic and financial market indicators. This is because firm specific characteristics may be important determinants of delisting decisions. I control market-to-book ratio and sales growth as they capture a firm's growth potential. I include ROA to capture a firm's operating performance. Firm age is also controlled because it signals a firm's youth or maturity. As shown in Table 2, larger firms measured by total sales or older firms are more likely to delist through M&As but are less likely to experience bankruptcy or liquidation. Firms with greater growth opportunities captured by the market-to-book ratios are also more likely to delist through M&As. Last but not least, firms with poorer operating performance measured by ROA are more likely to experience bankruptcy and liquidation.

TABLE 2
FIRM-LEVEL LOGISTIC REGRESSION ANALYSIS OF CORPORATE GOVERNANCE AND DELISTING

	(1)	(2)	(3)	(4)
		Delisting type		
	All delisting	M&A	Going private	Bankruptcy and liquidation
Intercept	-3.149	-7.077	-6.670	-22.588
Rule of Law t_{-1}	-0.611** (0.019)	-0.158 (0.509)	0.281 (0.416)	-1.375* (0.060)
Investor protection index	-0.100*** ($<.0001$)	-0.127* (0.057)	0.204** (0.022)	-0.014 (0.921)
Market turnover t_{-1}	-0.001 (0.607)	-0.006*** (0.009)	-0.011*** (0.005)	0.007 (0.475)
Market volatility t_{-1}	0.009 (0.324)	0.020 (0.389)	0.045* (0.060)	0.058 (0.129)
Market return t_{-1}	0.016*** ($<.0001$)	-0.004 (0.442)	0.014*** (0.003)	0.024 (0.529)
Inflation t_{-1}	-0.021 (0.262)	-0.010 (0.756)	-0.004 (0.923)	0.236*** (0.008)
log (Market cap/GDP) t_{-1}	-0.002 (0.562)	0.012*** ($<.0001$)	0.020*** ($<.0001$)	0.053*** ($<.0001$)
GDP per capita growth t_{-1}	-0.113*** ($<.0001$)	-0.070*** (0.008)	-0.099*** (0.005)	-0.310*** ($<.0001$)
log (sales) t_{-1}	0.112*** ($<.0001$)	0.085** (0.045)	-0.005 (0.916)	-0.223*** (0.002)
Market-to-book t_{-1}	0.000*** (0.001)	0.000* (0.068)	0.000 (0.253)	0.000 (0.946)
ROA t_{-1}	-0.217 (0.406)	-0.255 (0.452)	0.006* (0.052)	-1.537*** ($<.0001$)
Firm age	0.018** (0.019)	0.059*** (0.007)	-0.034 (0.173)	-0.136*** (0.001)
Sales growth t_{-1}	-0.001 (0.154)	0.000 (0.140)	0.000 (0.577)	-0.001 (0.420)
R-Square	0.2232	0.1377	0.1377	0.1377
N	81,922	81,922	81,922	81,922

Note: Variable definitions are provided in Appendix. P-values are provided in parentheses. *, **, *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Both Table 1 and Table 2 show that corporate governance has a negative effect on delisting in general. This is consistent with my first hypothesis that firms from countries with weaker governance are more likely to delist in order to mitigate agency problems. However, this effect is not homogeneous across all delisting types. Specifically, I find evidence that better corporate governance standards are associated with more going private transactions. This is consistent with Thomsen and Vinten (2014) who find that better investor protection and corporate governance codes are associated with more going private transactions in European stock exchanges. However, contrary to the findings of Thomsen and Vinten (2014), I find that better corporate governance is associated with fewer delistings by M&As or bankruptcy and liquidation. This could be due to the differences in the market dynamics between emerging markets and developed markets. This could be also due to the substitution hypothesis suggested by Williamson

(1983) that strong country-level governance standards can substitute the need for other governance mechanism such as mergers or bankruptcies.

CONCLUSION

This study extends the literature on delisting and examines the delisting behavior of firms from emerging markets. Using both country-level and firm-level analysis, I find that firms from emerging markets with better rule of law or better investor protection are less likely to delist in general. This could be because governance standards are valuable to shareholders and issuers, which, in turn, encourage firms to stay publicly listed. This also suggests that firms from countries with weaker governance are more likely to delist in order to mitigate agency problems.

I also find that the relationship between corporate governance and a firm's decision to delist varies depending on delisting type. Specifically, I find that corporate governance is inversely related to involuntary delisting triggered by M&As or bankruptcy and liquidation, while governance is positively associated with the incidence of voluntary delisting via going private transactions. These findings suggest that the effect of a country's corporate governance on a firm's decision to delist is not homogenous. In fact, the impact of country-level corporate governance on equity delisting is multi-faceted.

As mentioned in Martinez and Serve (2017), there is a lack of international comparisons among voluntary delistings, especially following the financial crisis of 2007-2008. Although this study attempts to extend the literature on delisting using data from emerging markets for the post-crisis period, there is still great potential in this area of study. I believe that the research presented in this study can be meaningfully extended and generate further insights into the effects of corporate governance on delisting. For instance, one could study the implications of corporate governance on delisting in other countries. Another direction of research could focus on the relationship between delisting and the interplay of governance, culture, and politics across countries. Additionally, one could examine delisting by other reasons, such as freeze-outs. The dynamics of these delisting types differ fundamentally, and this is especially important for international analysis. Finally, one could examine more closely the cost-benefit framework for delisting. These analyses could extend our understanding of the effect of governance on equity delisting.

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APPENDIX

LIST OF VARIABLES AND THEIR DEFINITIONS

Variable	Definition
Market turnover	Total value of shares traded during the period divided by the average market capitalization for the period. <i>Source: the World Bank</i>
Market volatility	The average of the 360-day volatility of the national stock market index. <i>Source: the World Bank</i>
Market return	The growth rate of annual average stock market index. <i>Source: the World Bank</i>
Inflation	Measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly. <i>Source: the World Bank</i>
Market capitalization/GDP	Total value of all listed shares in a stock market as a percentage of GDP. <i>Source: the World Bank</i>
GDP per capita growth	Annual percentage growth rate of GDP per capita based on constant local currency. <i>Source: the World Bank</i>
Investor protection index	Principal component of Private enforcement and Anti-director rights. Scale from 0 to 10. <i>Source: La Porta, Lopez-de-Silanes, and Shleifer (2006)</i>
Rule of Law	Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5. <i>Source: the World Bank</i>
Firm size	Log of total sales in U.S. dollars for a specific firm.
Firm age	A firm's age in years since its listing on a public exchange
Market-to-book ratio	The market value of a firm's equity plus the difference between the book value of its assets and the book value of its equity at the end of the year, divided by the book value of the firm's assets at the end of the year.
ROA	A firm's EBIT divided by its total assets
Sales growth	A firm's total sales in year t minus the sales in year t-1 divided by the sales in year t-1.