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# Capital market liability of foreignness of IPO firms

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# ABSTRACT

This study contributes to the capital market liability of foreignness (CMLOF) literature. Utilizing the context of foreign IPO firms, we investigate how long CMLOF lasts, if CMLOF turns into capital market advantage of foreignness (CMAOF) over time, if the global financial crisis influences CMLOF, and how some firms mitigate CMLOF after IPO. Utilizing an explanatory sequential mixed methods design, we quantitatively analyze 549 foreign IPO firms and qualitatively analyze 1233 units of data and show quantitatively that CMLOF *does* diminish after one year and turns into CMAOF after 3 years for IPO firms and qualitatively reveal strategies to mitigate CMLOF.

## 1. Introduction

With a first day volume of over 25 billion USD, the initial public offering (IPO) of Alibaba became the biggest IPO ever worldwide (Wall Street Journal, 2014). The e-commerce giant decided to list its shares on the New York Stock Exchange (NYSE) rather than in its home country China. This example is not an isolated case. In fact, foreign IPOs account for around 25 percent of total IPO proceeds (Caglio, Hanley, & Marietta-Westberg, 2012).

The integration of the global capital market - that became particularly visible during the global financial crisis - has enabled firms to more easily access foreign capital markets by listing on foreign stock exchanges (Bell, Filatotchev, & Rasheed, 2012; Kadiyala & Subrahmanyam, 2002). There are considerable benefits to listing abroad, including access to a larger breadth of resources such as more equity and savvier investors and to improve the visibility and transparency of the company and their governance (Bancel & Mittoo, 2001; Blass & Yafeh, 2001; Pagano, Randl, Roell, & Zechner, 2001; Hursti & Maula, 2007; Dodd, 2013). Most notably, firms originating from countries with weak institutions are able to "escape" these institutional weaknesses and tap into a stronger regulatory system by listing on U.S.based stock exchanges (Zhang & King, 2010). However, access to foreign capital markets does not come without costs (Blass & Yafeh, 2001). Companies that want to access capital outside of their home country experience particular challenges such as higher underwriting and professional fees, less analyst coverage, restrictive regulations, and local investors being less familiar with their company (Bell, Filatotchev et al.,

2012). Given the increase in foreign listings and the specific challenges that foreign listings face, management and international business scholars have expanded the liability of foreignness (LOF) literature to include capital market liability of foreignness (CMLOF).

LOF is the additional costs that companies have operating abroad that local firms do not experience (Zaheer, 1995). CMLOF, in turn, focuses specifically on the extra costs firms experience when accessing a foreign capital market (Bell, Filatotchev et al., 2012). CMLOF includes costs companies incur in equity, debt, and venture capital markets (Bell, Filatotchev et al., 2012). As such, this study joins the relatively recent strand of research on CMLOF. Even though the literature on liability of foreignness can be traced back to the early work of Hymer (1976) and was later popularized by Zaheer (1995), the literature on CMLOF as a particular case of LOF is relatively new. Specifically, by relying on international finance studies (e.g., French & Poterba, 1991; Tesar & Werner, 1995), the series of studies by Greg Bell and colleagues (e.g., Bell, Moore, & Al-Shammari, 2008; Bell, Filatotchev et al., 2012; Moore, Bell, & Filatotchev, 2010) introduced CMLOF to the international business and international management literatures. These studies indeed document the many unique challenges foreign IPO companies are facing when listing on foreign stock exchanges, thereby providing important insights to the growing CMLOF literature (e.g., Bell et al., 2008; Moore et al., 2010). However, prior studies have paid limited attention to the CMLOF of foreign IPO firms beyond the first day of trading.

The focus of the literature on short-term performance implications of foreign IPOs is problematic because it has resulted in an incomplete picture of the phenomenon. Specifically, while existing work offers rich

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insights into the challenges – and potential coping strategies – foreign IPO firms are confronted with at the time of listing, this literature neglects the potential long-term benefits firms can experience by listing on foreign capital markets. This omission is noteworthy given that potential benefits of listing on foreign stock exchanges such as tapping into a stronger regulatory system are only expected to accrue over time (Zhang & King, 2010) and may therefore not materialize on the first day of trading. Therefore, there may be a trade-off between the additional costs as reflected in CMLOF that are incurred in the short-term and the benefits of listing abroad that the foreign IPO firm may only enjoy in the longer-term. In other words, just as there is a growing stream of research on advantages of foreignness in product markets (e.g., Un, 2011; Regnér & Zander, 2014), there are potentially also longer-term advantages to being foreign on capital markets. Yet, previous studies did not shed light on this issue (Bell, Filatotchev et al., 2012).

Moreover, we also know little about whether and under what conditions CMLOF changes over time and what foreign IPO firms can do after listing on the foreign stock exchange to reduce CMLOF, leaving us with an incomplete understanding of the long-term effects of CMLOF on IPO firms. This limitation is equally problematic. Even though there are some spillover effects between factor and capital markets (Lindorfer, d'Arcy, & Puck, 2016), capital markets are different from product markets in the sense that once a transaction is completed, buyers in product markets tend to turn their attention away from the seller and focus on the product, whereas in capital markets "the connections that buyers of capital market securities have with issuers continue long after the sale, whether in primary or in secondary markets." (Bell, Filatotchev et al., 2012: 110). Hence, buyers in capital markets are not only sensitive to short-term agency costs of a seller in the form of adverse selection but also long-term agency costs (e.g., moral hazard) to protect their investments (Bell, Filatotchev et al., 2012). Given that CMLOF may be less transaction-specific but dependent on the continual interaction between the seller and buyer, there is a need to understand the long-term challenges associated with CMLOF. Furthermore, firms that are making a public offering are typically doing so to fund growth and other long-term projects (Certo, Holcomb, & Holmes, 2009) that will be more impacted by what happens to the company on the market over the matter of years. Foreign IPO companies can better assess how reasonable it is to go public in a foreign market if they understand how CMLOF impacts them, whether they can strategize to mitigate CMLOF and potentially realize CMAOF, and how macro environmental factors (such as crisis conditions) impact them. The objective of this study is therefore to offer a longer-term perspective on the effect of CMLOF and potentially discover a capital market advantage of foreignness (CMAOF).

In summary, this paper examines the following interrelated four research questions: (1) how long does CMLOF lasts for foreign IPO firms?; (2) Does CMLOF turn into capital market advantage of foreignness (CMAOF) for IPOs over time?; (3) Does the global financial crisis of 2008 influence CMLOF of IPO firms?; and (4) How do some foreign IPO firms mitigate CMLOF after they list in the U.S.? We empirically test our theoretical framework in two studies using an explanatory sequential mixed methods design, which involves first collecting and analyzing quantitative data and then following up with a qualitative analysis (Creswell, 2003). Specifically, we first quantitatively analyze 549 foreign IPO firms that were listed on the NYSE and NASDAQ from 2005 to 2010 to address our first three research questions. Second, we qualitatively analyze 1233 hand-collected units of data (paragraphs from business media) from a matched pair subsample of 42 firms from the dataset to answer our fourth research question.

An examination of these issues makes several contributions to the foreign IPO literature. First, more research attention needs to be devoted to the globalization of capital markets in general (Peng & Su, 2014) and CMLOF of firms listing in foreign capital markets in particular (Li, Bruton, & Filatotchev, 2016). Although existing studies confirm that CMLOF exists for foreign IPO firms (Bell et al., 2008; Bell,

Moore, & Filatotchev, 2012), these studies tend to focus on underpricing, a short-term measure of CMLOF through first day trading of the stock. Accordingly, there is limited research examining how long CMLOF lasts for these firms beyond the first day of trading. In fact, the longest time frame that previous CMLOF studies examined is 180 days (Bell, Moore et al., 2012). As noted above, the envisioned benefits of listing on an U.S.-based stock exchange may only materialize over time and buyers in capital markets base their investment decision on longerterm expectations of the seller's performance. In the context of foreign IPOs, information asymmetries between buyer and seller are therefore particularly problematic given the unfamiliarity of potential buyers with the foreign IPO firm. On the other hand, this information asymmetry is likely to change over time given the influence of external information intermediaries such as analysts and stringent reporting requirements imposed by the SEC. It may even be possible that once the aforementioned information asymmetry between foreign IPO firms and domestic investors is reduced, CMLOF may turn into a CMAOF because once investors learn more about the foreign IPO firm they may purposefully invest in these in order to diversity their investment portfolio (Bell, Filatotchev et al., 2012). Our focus on CMLOF for foreign IPO firms over three years therefore complements existing research by demonstrating how - and under what conditions - CMLOF evolves over time.

Second, and related to the point noted above, little is known on how foreign IPO firms can alleviate CMLOF (e.g., Bell et al., 2008; Li et al., 2016). The few studies that examine possible remedies that foreign IPO firms can use to decrease CMLOF focus on what these firms can do to decrease CMLOF before listing on a foreign exchange. For instance, insiders that maintain higher levels of ownership in their company prior to an IPO can reduce the amount of CMLOF (Bell et al., 2008). As another example, Bell, Filatotchev and Aguilera (2014) suggest that foreign firms listing on the NYSE can increase their legitimacy by adopting US-centric corporate governance mechanisms. Bell et al.'s (2014) study exemplifies the bonding hypothesis (Coffee, 1999) that shows that firms incorporated in countries with poor investor protection can decide to offer shares in stock exchanges of countries whose investor protection is higher than the home country. Listing on a stricter market signals that these firms are able to handle such an environment and could potentially attract more investor dollars. As such, these studies overlook the possibility that IPO firms could also take actions to decrease CMLOF after listing on a foreign exchange. Our study thus attempts to shed light on what foreign IPO firms can do after listing on a US stock exchange.

Third, although the literature on CMLOF acknowledges that "foreignness may actually prove beneficial" for foreign IPO firms (Bell, Filatotchev et al., 2012: 119), there is a paucity of research examining the factors that can explain what factors can change CMLOF into capital market advantage of foreignness (CMAOF). We propose that the role of external environment such as market conditions could play a role in changing CMLOF into CMAOF. Specifically, we suggest that global financial crisis created an environment in which foreignness can become an advantage in capital markets since US investors will be motivated to further internationally diversify their portfolios. By doing so, we also respond to calls in the literature to use the global financial crisis of 2008 as context in international business and LOF research (Ma, Yiu, & Zhou, 2014), especially in a capital market where investors are motivated to diversify due to turmoil (Bell, Moore et al., 2012).

# 2. Background

# 2.1. CMLOF

LOF was introduced to the literature by Hymer (1976) and was later popularized by Zaheer (1995). Zaheer broadly defines LOF as "all additional costs a firm operating in a market overseas incurs that a local firm would not incur" (1995: 109). The institutional distance between home and host countries is seen as a key driver of LOF given foreign

firms' difficulty to establish their "right to do business" in unfamiliar institutional contexts (Eden & Miller, 2004). Indeed, previous research shows that foreign firms face significant challenges when starting to operate abroad due to LOF (e.g., Zaheer & Mosakowski, 1997). For instance, in a sample of nonfinancial Japanese firms, host country experience did not have any positive effect on profitability (Delios & Beamish, 2001). This finding could indicate that market experience is not by itself sufficient to compete well in a foreign market.

Recent studies have also extended the notion of LOF to capital markets. In essence, this emerging stream of research shows that IPO firms listing on foreign capital exchanges have to balance the opportunities associated with raising capital on foreign capital markets and the challenges associated with CMLOF. Most notably, from the study done by Bell, Moore et al. (2012), it is evident that foreign IPOs listing on U.S.-based stock markets underperform compared to their domestic counterparts. CMLOF results from four main sources that include institutional distance, information costs, unfamiliarity costs, and cultural differences (Bell, Filatotchev et al., 2012). That is, the considerable amount of information asymmetry between firms and investors during an IPO event (Cohen & Dean, 2005) is further heightened when a firm is making its capital market debut on a foreign stock exchange. This is also evident from the fact that foreign IPO firms even underperform foreign seasoned equity offerings (SEOs) (Kadiyala & Subrahmanyam, 2002). Foreign companies making SEOs already have a trading history and investors are more familiar with the firms, therefore reducing some of the information asymmetry (Kadiyala & Subrahmanyam, 2002).

Interestingly, while there is some evidence pointing towards the dynamic nature of LOF (e.g., Gray, 1996; Eden & Miller, 2004), research on CMLOF remains relatively silent on this issue. This is notable given that the aforementioned expected changes in the information asymmetry between foreign IPO firms and domestic investors, but also given that the duration of LOF may differ between product and capital markets (Bell, Filatotchev et al., 2012; Bell, Moore et al., 2012; Nachum, 2003), meaning that some benefits of listing abroad may only materialize over time. That is, the theoretical mechanism explaining the duration of CMLOF is likely to be different from the LOF that firms in product markets are facing, considering the important difference in nature and source of CMLOF in capital vs. product/services markets (Bell, Filatotchev et al., 2012). There are numerous objectives for going public on a foreign stock exchange including access resources such as access to foreign equity capital, to reduce the cost of capital, to improve the liquidity of the stock, to gain name recognition, to increase the firm's visibility of its products and services in the host market, to have access to certain type of investors, be closer to one of their consumer markets, access to a larger market to fund growth, or to improve a firm's corporate governance system and transparency (Bancel & Mittoo, 2001; Blass & Yafeh, 2001; Pagano et al., 2001; Hursti & Maula, 2007; Zhang & King, 2010; Dodd, 2013). Given the multitude of motivations to list on a foreign market, an IPO company can list on a foreign market without having any sales in that market. It could sell its products and services locally and just use foreign markets for one of the above reasons. However, the factors influencing investors to buy stock are not the same as those determining consumers' decisions to buy a product or service. Moreover, the relationship between the firm and the shareholders could extend much longer than the purchaser of a product or service given the continual interaction between the company and its shareholders. Therefore, foreignness on a capital market and by extension the duration of CMLOF is likely to be different in capital markets than in product markets.

# 2.2. CMLOF of IPO firms

Even though foreign firms can experience a multitude of benefits from listing abroad, particularly on U.S.-based stock exchanges, they also experience some disadvantages compared to domestic firms. For instance, due to the "home bias", investors often refrain from buying stocks of foreign firms and hold a significant portion of their equities in local firms (French & Poterba, 1991) even in the current more globalized economy (Coeurdacier & Rey, 2013). Similarly, in the context of IPO firms, Bell, Filatotchev et al. (2012) note that IPO investors are initially unlikely to invest in firms that they are not familiar with. However, the literature is unclear on whether foreign firms experience CMLOF beyond the first day of trading.

As noted above, it has been established in the literature that foreign IPO firms are confronted with CMLOF at the time of listing, as these firms listing on the U.S. stock exchanges between 1997 and 2004 experience a larger amount of underpricing than domestic firms (Bell et al., 2008). One of the main reasons why foreign IPO firms are confronted with CMLOF at the time of listing is that foreign IPOs are subject to more information asymmetry compared to domestic IPOs (Chang et al., 2006). Here, we argue that the greater information asymmetry between IPO firm and investors – and subsequently CMLOF – continues to persist for foreign firms vis-à-vis domestic firms following the first day of trading for the following reasons.

During the first year of listing, informal sources of information including press releases, analysts, and other media coverage play an important role in how investors receive information about IPO firms (Pollock & Rindova, 2003; Guldiken, Tupper, Nair, & Yu, 2017). Thus, investment analysts play a particularly important role in reducing the information asymmetry between IPO firm and investors because investment analysts offer objective information about the current and prospective performance of the firm (Chang et al., 2006). However, foreign firms are generally covered less by security analysts compared to their domestic counterparts and investors thus have access to a lower number of objective sources of information in the case of foreign compared to domestic IPO firms (Blass & Yafeh, 2001). As a result, foreign IPOs continue to be subject to more information asymmetry compared to domestic IPOs following the first day of trading. Said differently, information asymmetry continues to be an important source of CMLOF for foreign IPO firms following the first day of trading (information costs as referred to by Bell, Moore et al., 2012 and host market investors' information costs as referred to by Kang & Stulz, 1997) because IPO investors can value foreign IPO firms only at a discount compared to domestic IPO firms given the lower analyst coverage and associated lack of objective information.

Second, there is evidence suggesting that analysts tend to issue mostly positive coverage about IPO firms, the so-called optimism bias (Mola & Guidolin, 2009), especially within a year of listing on a stock exchange (Michaely & Womack, 1999). This is because, issuing an unfavorable opinion risks jeopardizing an analyst's communication with the IPO firm as well as the analyst's ability to bring in future investment banking business (Das, Guo, & Zhang 2006). Accordingly, domestic IPO firms would initially not only be subject to more coverage by security analysts compared to foreign IPO firms (Blass & Yafeh, 2001) but also their existing coverage is likely to also be mostly positive due to the aforementioned optimism bias (Mola & Guidolin, 2009). Considering that investors tend to avoid investing in firms that they are not familiar with or do so only at a discounted price (Bell, Filatotchev et al., 2012; Bell, Moore et al., 2012), it is therefore likely that foreign IPO firms continue to be confronted with the CMLOF following the initial listing in the sense that they are valued at a discount compared to their domestic counterparts.

Third, investors also tend to form their opinion about an investment opportunity based on information about business practices and corporate cultures, which are difficult to observe prior to the listing (Bell, Moore et al., 2012). Even following the listing, information about business practices and corporate cultures may only emerge unsystematically and it is most likely difficult to observe a pattern over a short period of time. This is more challenging for foreign IPO firms than domestic IPOs because the investors on the market typically have less exposure to the company especially if they do not conduct any business within the exchange's market. Therefore, it is likely that although some

information about business practices and corporate cultures will emerge following the first day of trading, investors will discount the value of foreign IPO firms until they are able to clearly evaluate these factors. Accordingly, we hypothesize the following:

**Hypothesis 1a.** There is CMLOF for foreign-listed IPO firms during the first year of listing.

So far, we have focused on the year immediately following the foreign IPO firm's listing. However, following our logic outlined above, it is important to consider that investors continue to learn about the foreign IPO firm over time. As a result, the aforementioned information asymmetry between foreign IPO firms and domestic investors is most likely reduced, affecting the CMLOF of the foreign IPO firm over time. That is, we argue that as additional information becomes available to investors following the foreign IPO firm's listing that either confirms the information the IPO firm itself has made available to the domestic investors or allows domestic investors to form a more substantiated opinion about the foreign IPO firms and domestic investors will be reduced. As a result, the foreign IPO firm is able to build legitimacy with domestic investors which will in turn reduce their CMLOF.

Specifically, by relying on the above arguments, we expect that CMLOF will start to diminish for foreign IPO firms after the first year of listing. Following the foreign IPO firm's listing, there are sources of new information on which domestic investors can draw. Namely, once the foreign firm is listed on the stock exchange, the firm starts building a market performance history and allows investors to evaluate the market performance history of the firm by benchmarking its performance, for instance against competitors, the industry, or different indexes. This should also reduce information asymmetries because it allows investors to understand how the firm's market performance compares to others (Fu, Kraft, & Zhang, 2012).

Lower levels of information asymmetry, in turn, would decrease the "unfamiliarity costs" (Bell, Filatotchev et al., 2012; Bell, Moore et al., 2012) associated with foreign IPOs, thereby reducing CMLOF experienced by these foreign IPO firms. In support of this logic, Fu et al. (2012) show that firms that reduce information asymmetry by frequently releasing financial reports have a lower cost of equity. Moreover, having issued an annual report will also increase the likelihood that external information intermediaries such as security analysts start covering the foreign IPO firms. This is important because third parties such as securities analysts do not only provide additional information but also legitimize the foreign IPO firm (Bell, Moore et al., 2012). While domestic IPO firms will also publish the annual reports and investors will be able to evaluate and benchmark their market performance, we expect that the magnitude of information asymmetry reduction through these mechanisms will be greater for foreign vis-à-vis domestic IPO firms. This is because, two of the four sources of CMLOF - i.e., institutional and cultural differences - only apply to foreign - not local -IPOs (Bell, Moore et al., 2012). Accordingly, unfamiliarity costs for IPO investors - a third source of CMLOF - are also higher for foreign IPO firms compared to local IPO firms and foreign IPO firms should thus benefit to a greater extent from the aforementioned information asymmetry reduction. We thus predict the following:

**Hypothesis 1b.** CMLOF experienced by foreign-listed IPO firms starts to diminish after one year of listing.

The above section argued that CMLOF will start to decrease for foreign IPO firms after a year. We now take this argument one step further and contend that after a certain time, CMLOF will not only decrease for foreign IPOs but also reverse, meaning that foreignness will become an advantage for foreign IPO firms. The envisioned benefits from listing on an U.S.-based stock exchange will begin to materialize. We assert that it is unlikely for CMLOF to turn into CMAOF for foreign IPO firms during the two years.

Although we expect that foreign IPO firms start to accrue legitimacy

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after their first annual report is released, their trading history grows, and security analysts start to cover these firms, IPO investors are likely to expect the foreign IPO firms to operate *consistently* well beyond the first year of trading. For instance, in the context of IPO firms, evidence shows that investors take into account flow signals (at least two observations), not point signals (one observation), when evaluating IPO firms (DeKinder & Kohli, 2008). In a non-IPO context, this has also been shown by Fu et al. (2012) suggesting that financial report frequency influences information asymmetry between investors and the firm. These findings imply that unless a foreign IPO firm signals its quality through at least two consecutive annual reports, IPO investors may still operate under the home bias explained above, i.e., they could still be reluctant to invest in foreign IPO firms, even after the first year of listing on the U.S. stock exchange.

Given the importance of at least two consecutive flow signals to reduce information asymmetries between the IPO firm and investors (DeKinder & Kohli, 2008), after the second annual report is available, the foreign IPO firm may start to reap the benefits of successfully listing and continue to operate in a highly regulated stock exchange (Coffee, 1999; Stulz, 1999). Said differently, these flow signals can help foreign IPO firms to accrue legitimacy with local investors allowing them to access resources in the local market (Lindorfer et al., 2016).

The aforementioned flow signals are therefore particularly beneficial for foreign IPO firms because it allows these firms to reap the benefits of listing on a foreign stock exchange. For instance, local investors frequently seek to diversify their portfolio by adding securities issued by foreign firms (Karolyi, 1998). In this regard, foreign IPO firms that have been listed for a longer period of time on U.S. stock exchanges are especially attractive because these firms have demonstrated their willingness and ability to conform to the strict regulations imposed by the SEC. In support of this argument, Hail and Leuz (2009) show that foreign IPO firms can accrue lower cost of capital than their domestic counterparts because these firms have a larger investor base. As such, these studies echo Bell, Filatotchev et al. (2012) suggesting that CMLOF can turn into CMAOF over time because foreign IPO firms can become sought-after investments by individual and institutional investors seeking to diversity their investment portfolio. Considered in their entirety, these arguments suggest that after the second year, IPO investors may not only stop valuing foreign IPO firms at a discount but also value them more than domestic IPO firms.

**Hypothesis 2.** The CMLOF experienced by foreign-listed IPO firms turns into CMAOF within three years of listing.

# 2.3. Global financial crisis and CMLOF of IPO firms

Another unanswered question is related to the effect of market conditions – that is, factors that are external to the foreign IPO firm – on CMLOF of IPO firms. To begin answering this question, we examine how the financial crisis of 2007–2008 influences the relative CMLOF experienced by foreign vis-à-vis domestic IPO firms. The global financial crisis was a major source of environmental turbulence that constrained firms' access to external sources of credit (e.g., Ma et al., 2014). We suggest that during the financial crisis of 2008, the relative CMLOF of foreign vis-à-vis domestic IPO firms will be reduced.

The main causes of the financial crisis can be traced back to the business practices of several US banks and associated companies (Crotty, 2009) and although the crisis subsequently spilled over into almost all parts of the world, the crisis 'epicenter' remained firmly located in the United States (Rose & Spiegel, 2010). It soon became clear that imprudent and excessive risk taking behavior by senior managers of numerous US banks including Lehman Brothers and Merrill Lynch was a key driver of the recession (Basel Committee on Banking Supervision, 2009; Geithner, 2009; USGAO, 2013). This was seen as even more problematic because these managers received large bonuses prior to the crisis (Crotty, 2009). The global financial crisis, however, was not

confined to the financial markets but affected the world economy. For instance, the global financial crisis was largely responsible for the automotive industry crisis during which General Motors and Chrysler had to be bailed out by the government (USGAO, 2013). In fact, a report by the United States Government Accountability Office estimates that the total economic losses resulting from the 2007–2009 financial crises could exceed \$20 trillion in the US alone (USGAO, 2013).

As a result, there was a loss in confidence in companies that also extended to firms that were not directly involved in the crisis (Afonso, Kovner, & Schoar, 2011; Armantier, Ghysels, Sarkar, & Shrader, 2011; Claessens, Tong, & Wei, 2012). In the finance literature, this is commonly described as a "contagion effect" whereby an event results in a share price reaction for the firms directly involved and its peers (e.g., Lang & Stulz, 1992; Laux, Starks, & Yoon, 1998). The contagion effect can be explained by the fact that a firm-specific event not only conveys information regarding that firm but regarding its peers as well (Lang & Stulz, 1992; Laux et al., 1988), leading to an overall loss in confidence in the economy. Empirical evidence shows that investors responded - at least initially - to the crisis by entering the market as reflected in an increased buy-sell ratio during September and October 2008 (Hoffmann, Post, & Pennings, 2013). US investors in particular sought to exploit international diversification benefits by rebalancing their investment portfolios towards markets that are less correlated to their home - the US - market (Vermeulen, 2013). This is because foreign firms in general and those originating from markets that are less dependent on the U.S. market such as China tend to have less visible relationships with local stakeholders (Georg, 2013; Uzzi, 1997) and may therefore be possible investments for domestic investors seeking to diversity their portfolio.

In contrast, unlike local firms that are deeply embedded in home country networks, foreign firms are often less embedded in their host country (Siegel, Pyun, & Cheon, 2014). Therefore, it may have been more difficult to establish a cognitive connection between foreign firms and local firms that were involved or affected by the financial crisis. In fact, being overembedded can hurt even MNCs. For instance, a study of Japanese multinationals during the Asian financial crisis in the 1990s revealed that the multinationals that had more accumulated experience in the host country performed poorly during the economic crisis (Wang, Huang, & Bansal, 2005). Although it is important to note that the historical context and situation were different compared to the global financial crisis, the study by Wang et al. (2005) points towards potential negative effects of overembeddedness during a crisis, meaning that firms that are perceived to be less embedded in the host country such as foreign IPO firms may become more attractive investments for those seeking to internationally diversity their portfolio.

Applied to our context, our arguments suggest that during the financial crisis of 2008, US investors may have actively sought to diversity their investment portfolios to experience international diversification benefits. Hence, we believe that the "home bias" of US investors – that is, the preference for domestic over foreign stock, everything else being equal (French & Poterba, 1991) – was less pronounced during the financial crisis. Specifically, foreign IPO firms could have become a relatively more attractive investment for local investors seeking to diversify their investment portfolio (Karolyi, 1998), meaning that the relevant advantage enjoyed by U.S. IPOs may have decreased during that time period. We therefore hypothesize the following:

**Hypothesis 3.** The presence of the 2008 financial crisis moderates the relationship between foreignness and stock market performance in such a way that it reduces the advantage of U.S. relative to foreign IPO firms.

#### 3. Study 1

3.1. Methods

## 3.1.1. Data

Our sample consists of 549 firms that announced and completed an

IPO between 2005 and 2010 on the NYSE and the NASDAQ. Data was included for each full year a company was listed on its respective market. To mitigate concerns relating to attrition biases, we also include firms in our data that ceased to exist after listing in the U.S. That is, we include these firms until they were acquired, delisted, or went bankrupt. Data on the IPO was obtained from a Bloomberg Terminal. Following prior studies (i.e., Nelson, 2003), we defined an IPO as any firm that is issuing primary stock for the first time; therefore, any observations not meeting this requirement were excluded from the sample (i.e., secondary offerings, trusts). Of the total sample, 140 firms (25%) were of foreign origin. Foreign IPOs in this context are companies outside the U.S. that make their first public offering in the U.S. (as opposed to their home country or another market) (Moore et al., 2010). Most the foreign IPOs were Chinese firms (75 companies). The next most common countries of origin for the foreign IPO firms include Greece (8), Israel (6), and Canada (6). In addition to making an IPO in the U.S., 96% of the firms cross-listed on another exchange after making their IPO in the U.S. and 92% are cross-listed on a German exchange (Berlin, Munich, Stuttgart, and/or Frankfurt). Other exchanges the foreign firms chose to cross-list after their IPO include Mexico, Switzerland, Singapore, Tel Aviv, and Hong Kong. Most firms that are making a new offering in the United States choose to also list on another exchange after their U.S. IPO to widen their investor base, improve liquidity, and allow a better flow of information between the firm and investors (Chemmanur & Fulghieri, 2006). Once a firm has made a public offering in the United States it is easy for it to list on German exchanges, frequently getting approval in less than a week, given the legitimacy associated with making an American IPO (Artfield Investments, 2017). To assure the small group of non-cross-listed firms is not statistically different from the majority of the foreign firms, we performed a one-way ANOVA test and found that there was no statistically significant difference between these two groups. There was also a small group of foreign IPO firms in our sample (6%) that had made an IPO on another exchange outside the United States. We also ran a oneway ANOVA and found that this group was not statistically different from firms that had not made an IPO outside the United States.

### 3.1.2. Dependent variable

Shareholder returns are one of the most popular measures of IPO market performance (e.g., Certo et al., 2009). We elected to use the buy-and-hold returns (BHARs) common in finance and management studies (e.g., Jaskiewicz, González, Menédez, & Schiereck, 2005) to measure long-run returns. BHARs are advantageous to use because they reveal actual investor experience in the stock market (see Lee, 2001; Mouri, Sarkar, & Frye, 2012). Following Lyon, Barber, and Tsai (1999), buy-and-hold returns are calculated by the following equation:

$$AR_{iT} = R_{iT} - E(R_{iT})$$

 $AR_{iT}$  represents the buy-and-hold abnormal return for the security *i* for the time period *T*.  $R_{iT}$  is the buy-and-hold return for period *T* calculated as [(closing price<sub>i,t</sub> – closing price<sub>i,t</sub>)/(closing price<sub>i,t</sub>)]. E( $R_{iT}$ ) represents the expected return for security *i* for the time period *T* calculated as [(market index<sub>i,t</sub> – market index<sub>i,t</sub>)/(market index<sub>i,t</sub>)]. The market index used in this study is the Standard and Poor's MidCap Index.<sup>1</sup> A midcap index is an appropriate benchmark for IPO firms because a midcap index represents companies that are more similar in size and basic characteristics to IPO firms (Jaskiewicz et al., 2005). In our sample, the average firm size is around 2000 employees and the median firm size is around 450 employees. The average market capitalization of an IPO at time of listing in the U.S. is \$1.54 billion (Perritt

<sup>&</sup>lt;sup>1</sup> As a robustness test, we also utilized the Standard and Poor's SmallCap 600 Index given that it is debated whether a SmallCap or MidCap index is more appropriate for benchmarking IPO performance. Using the SmallCap index did not produce a significant change in our results (results are available upon request).

#### Table 1

Descriptive statistics and correlation matrix

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1.NYSE/NASDAQ	0.59	0.53															
2. Founder CEO	0.33	0.47	0.01														
3. IPO Firm Age	9.12	15.48	-0.03	-0.13													
4. IPO Firm Size	6.02	2.02	-0.24	0.02	0.24												
5. CEO Tenure	5.05	5.16	0.10	0.35	0.11	0.14											
6. Board Size	6.88	2.12	-0.14	-0.07	0.05	0.19	0.04										
7. VC/PE	0.44	0.50	-0.05	0.20	0.05	0.31	0.15	0.06									
8. US/Foreign	0.25	0.44	-0.11	0.23	-0.15	0.20	0.09	-0.04	0.19								
9. Prior Perf Y1	0.95	1.08	0.01	0.09	0.01	0.07	0.07	0.08	0.15	0.02							
10. Prior Perf Y2	1.25	0.97	0.09	0.16	-0.02	0.14	0.08	0.04	0.12	0.11	0.55						
11. Prior Perf Y3	1.39	0.85	0.11	0.16	-0.08	-0.06	0.01	-0.02	0.13	0.10	0.09	0.49					
12. Y1 BHAR	2.42	63.54	-0.02	0.01	0.05	0.05	-0.01	-0.04	0.08	-0.15	0.14	0.04	0.11				
13. Y2 BHAR	-1.13	79.48	-0.03	-0.04	-0.04	0.01	-0.03	-0.02	-0.01	-0.04	-0.04	0.05	0.04	-0.11			
14. Y3 BHAR	14.20	158.44	-0.05	0.00	-0.02	0.03	-0.02	0.01	0.03	0.11	-0.02	0.03	0.02	-0.09	-0.06		
15. US Exp	2.97	14.16	-0.04	0.03	-0.06	0.01	-0.01	-0.03	0.02	0.38	-0.05	-0.08	-0.06	-0.03	-0.03	-0.02	
16. Foreign Exp	4.03	15.91	-0.02	0.03	-0.06	0.16	-0.02	-0.01	0.10	0.45	0.05	0.07	0.06	0.09	-0.02	0.02	0.21

N = 549; bolded values are significant at p < .05 level. Standard errors are shown in parentheses; industry was controlled for but the coefficients of SIC codes are not reported (He, 2008).

Capital Management, 2016) which does grow over time. This is comparable to the size of midcap company which has around 250–300 employees (Carpenter & Fredrickson, 2001) and a market capitalization between \$1 billion and \$4.5 billion.

## 3.1.3. Independent and moderating variable

Given that CMLOF is LOF in a different context, CMLOF is measured the same way as LOF. CMLOF is measured as the difference in performance between domestic and foreign firms (Zaheer, 1995; Elango, 2009). A dummy variable was created where a domestic firm was recorded as 0 and foreign firm was recorded as 1. Therefore, a foreign IPO is a company that is headquartered outside the United States that is listing on NASDAQ or NYSE. The presence of the financial crisis was also recorded as a dummy variable. A time period was given a value of 1 if the year was entirely or partially (at least one full quarter) within the financial crisis. In the finance literature, the financial crisis of 2008 is considered to last approximately two years and began in the second quarter of 2007 and ended before the start of the second quarter of 2009 (Didier, Love, & Peria, 2012; Pais & Stork, 2013). The dummy variables are recorded using the aforementioned dates.

## 3.1.4. Control variables

Variables that have been found to impact IPO market performance in previous studies were added as controls. Specifically, we controlled for industry, measured through the first digit of the SIC code of each firm (Filatotchev & Bishop, 2002), year of issue, a dummy indicating whether the IPO firm is listed on the NYSE (coded as 0) or NASDAQ (coded as 1) (Loughran, 1993), IPO firm age and size (measured as the natural log of the number of employees) (Bell et al., 2008), whether the IPO firm is backed by a venture capitalist (VC) and/or private equity (PE) (Brav & Gompers, 1997), CEO tenure (Adams, Almeida, & Ferreira, 2009), whether the CEO is the founder (Adams et al., 2009), the number of individuals serving on the board of directors - board size (Larmou & Vafeas, 2010), and prior performance, measured as the log of sales growth for the previous two years (Kroll, Walter, & Le, 2007). Factors specifically impacting foreign listings were controlled for including the institutional distance between the U.S. and the country of origin of each IPO firm (Bell, Moore et al., 2012) calculated using the Euclidean Distance Index between the Worldwide Governance Indicators of the U.S. and the foreign IPO's home country. Also, the U.S. and international experience of IPO firms prior to listing were controlled for (Hursti & Maula, 2007). U.S. and international experience were measured by including the percentage of revenue from the U.S. and the percentage of revenue from countries outside the IPO firm's home country, excluding the U.S.

# 3.2. Results

We used pooled hierarchical OLS regression to analyze the data. Pooled OLS regression is a common analytic method that allows for testing of the marginal effects of individual variables on a particular outcome (e.g., Koerniadi, Krishnamurti, & Tourani-Rad, 2014). Specifically, this study is testing how being a foreign company on a U.S. exchange as well as the moderating factor of the global financial crisis effects IPO performance over three years. Hierarchical regression utilizes multiple models. The first model includes control variables and shows how much variance control variables have on the dependent variable. The subsequent models include how much independent variables account above and beyond the variance accounted for by the control variables. The next models display the variance accounted for by the interaction term- through the role of a moderating variablebeyond the independent and control variables. After ensuring that the multicollinearity was not an issue in the models (VIFs below the commonly accepted threshold of 10), control variables were entered into the model and followed by the independent variables, and the interaction terms. The descriptive statistics as well as the correlation matrix are presented in Table 1.

Table 2 presents the results of the pooled hierarchical regression analyses. Models 1–3 represent the results of the buy-and-hold returns (BHARs) of IPO firms one year after their listing, whereas models 4–6 (7–9) represent the results of BHARs of IPO firms two (three) years after their listing. As you can see from Model 1, the control variables of foreign experience, institutional distance, and prior performance are significant. This shows that foreign IPOs that have experience outside of their home countries experience better performance on U.S. stock markets than those that do not. Also, it is beneficial for a firm to be closer in institutional distance to the U.S. when listing in the U.S., as previously found by Bell, Moore et al., (2012). As could be expected, prior performance of the company positively impacted market performance and venture capitalist or private equity backing was moderately significant.

Hypothesis 1a predicted that IPO firms outside of the U.S. would experience CMLOF in their first year of being traded on the U.S. stock markets. Hypothesis 1a is empirically supported, since CMLOF *does* exist during the first year of trading for foreign IPOs ( $\beta = -20.35$ ; p < .01; shown in Model 2). Hypothesis 1b predicts that CMLOF experienced by foreign IPOs will diminish after the first year. This result is supported. Specifically, in the first year, there is a strong negative and statistically significant relationship ( $\beta = -20.35$ ; p < .01; shown in Model 2) between being foreign and stock market performance. However, the relationship begins to diminish after the second year foreign

#### Table 2

Pooled hierarchical regression results.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
Control variables									
NYSE/NASDAQ	-0.15	-0.78	-0.83	-5.71	-4.40	-4.42	-22.91*	-23.44*	-23.35*
Founder CEO	4.14	6.45	4.90	-4.79	-6.18	-6.19	-13.94	-13.42	-13.27
Firm Age	0.03	0.01	0.01	-0.25	-0.26	-0.27	-0.02	0.06	0.06
Firm Size	0.92	0.82	0.83	3.05	3.68*	3.67*	-0.58	-1.39	-1.36
CEO Tenure	-0.16	-0.23	-0.17	-0.19	-0.02	0.04	-0.28	-0.41	-0.59
Board Size	-1.40	-1.32	-1.32	-1.75	-2.21	-2.21	-0.10	0.63	0.61
VC/PE	10.67*	9.78*	9.52	-0.67	0.49	0.22	0.70	0.90	1.61
Prior Performance	6.39**	6.61**	6.54**	3.75	3.28	2.93	3.59	2.95	3.75
U.S. Experience	-0.37	10.36	-0.32	-0.43	-0.36	-0.31	-1.45	-1.57	-1.70
Foreign Experience	53.00****	54.06****	54.30****	2.79	2.27	2.52	-39.34	-40.85	-41.50
Institutional Distance	-15.34****	-6.05	-6.41	-10.60**	-10.71	-11.06	19.46**	0.56	1.61
Independent variables US/Foreign (Y1) Crisis (Y1) US/Foreign (Y2) Crisis (Y2) Crisis x US/Foreign (Y2) US/Foreign (Y3) Crisis (Y3) Crisis (Y3)		-20.35*** -8.54	-24.40** -12.68* 16.40		-2.28** 24.00	- 6.78 19.42** 18.19		45.37* - 18.46	57.41** - 6.03 - 48.84
<b>R</b> <sup>2</sup>	0.09	0.32	0.32	0.03	0.22	0.05	0.16	0.04	0.04
Delta B <sup>2</sup>	_	0.01	0.00	-	0.02	0.00	-	0.01	0.00
Model F	0.88	1.92	1.85	0.88	1.02	1.01	0.47	0.83	0.86

N = 549, \*\*\*\*p < .001, \*\*\*p < .01, \*\*p < .05, \*p < .10. Standard errors are shown in parentheses; industry was controlled for but the coefficients of SIC codes are not reported (He, 2008).

IPOs are on the market, given the smaller coefficient and the significantly smaller  $\beta$  ( $\beta = -2.28$ ; p < .05; shown in Model 5). In marginal support of Hypothesis 2, after year three, CMLOF for IPO firms reverses ( $\beta = 45.37$ ; p < .10; shown in Model 8). That is, at the p < .10 level, foreignness positively influences performance of foreign IPO firms, supporting our hypothesis that three years after the listing, CMLOF indeed turns into CMAOF for foreign IPO firms.

# 4. Study 2

#### 4.1. Methods

The results of Study 1 showed that there is CMLOF for IPO firms in the first year of listing and that CMLOF *does* diminish over time. However, what is not explained quantitatively is how certain foreign IPO firms mitigate CMLOF better than others. How do above average foreign IPOs behave in order to limit their exposure to CMLOF? Investigating this issue both quantitatively and qualitatively can allow us to achieve a more useful level of knowledge breadth (Green, Caracelli, & Graham, 1989). As previously mentioned, scholars and managers alike are interested in investigating how IPO firms reduce capital market performance risks (Ritter, 1991), a concern that is even more relevant for foreign IPO firms (Bell, Moore et al., 2012). Therefore, a qualitative content analysis using grounded theory is utilized to analyze how foreign IPO firms can mitigate CMLOF when listing on the U.S. stock market.

The objective of qualitative content analysis is to "capture the meanings, emphasis, and themes of messages and to understand the organization and process of how they are presented" (Altheide, 1996: 33). Qualitative content analysis allows for themes and concepts to arise from close reading that may not emerge from a more systematic approach (White & Marsh, 2006). The purpose of grounded theory is to move beyond merely describing a situation and begin to generate explanations of why certain events occur (Creswell, 2012). As such, grounded theory focuses on a particular process that occurs over time (listing as a publicly traded company for the first time) and seeks to

explain a particular phenomenon (how some foreign IPO firms mitigate CMLOF better than others) (Creswell, 2012). This study seeks to identify the factors explaining why a group of firms (high performing foreign IPO firms) is different from another group (low performing foreign IPO firms) in a particular context (one year after listing on an American exchange). Accordingly, a qualitative content analysis will capture the different actions of the two groups that could influence the performance differentials between these two groups by identifying a "composite picture of the phenomenon being studied" (White & Marsh, 2006: 39). Grounded theory is what helps uncover the "composite picture" of what makes these two groups different. The selection of data and how qualitative content analysis and grounded theory were executed is described below.

#### 4.1.1. Firm selection

The starting point were the 140 foreign listings that were used in Study 1. From these 140 listings we created a set of matched pairs allowing us to compare high versus low performing foreign IPO firms. To create pairs of firms that are comparable, we matched the foreign IPO firms on industry and firm size characteristics. First, industry was matched based on the 3-digit SIC code of the foreign IPO firms (Fulmer, Gerhart, & Scott, 2003). Second, number of employees was used to match on firm size (Jorissen, Laveren, Martens, & Reheual, 2005). Number of employees had to be within 20 percent of the matching firm (Allouche, Amann, Jaussaud, & Kurashina, 2008). Third, each pair had a high-performing and low-performing firm indicated by their BHAR for the first year on the market. As shown in Study 1, year 1 is when foreign IPOs experience the most CMLOF. For firms to qualify as a high and low-performing pair, their performance difference had to be statistically significant. A t-test was performed to ensure that there was a statistically significant difference. The matching procedure yielded 21 matched pairs (42 IPO firms). This represents 30 percent of foreign IPO firms in our dataset.

# 4.1.2. Media articles

Given the limited amount of publicly available information on IPO

firms, the media becomes an important information source for investors. As such, information conveyed in the media can influence IPO performance (e.g., Pollock & Rindova, 2003). This may be particularly true for foreign listings. Given that CMLOF is partly due to the information asymmetry between foreign IPO companies and IPO investors (Bell, Moore et al., 2012), managing media and public relations could be seen as one way to alleviate CMLOF. However, media can serve as a doubled-edge sword and could either work for or against the foreign IPO firm. For instance, the media may release information about the foreign IPO firm that either reduces or increases information asymmetry. Therefore, analyzing the content of media about new foreign listings is one way to understand how foreign IPO firms can mitigate CMLOF. Consistent with previous studies (e.g., Bednar, 2012). news articles about the IPO firms were retrieved from Factiva database. Factiva offers content from news media (i.e., newspapers, newswires, trade presses), social media (i.e., social networks, newsgroups, blogs), and multimedia (i.e., digital videos and TV transcripts) (Factiva, 2015). The media articles covered by Factiva represents U.S. publications as well as major publications of international markets. Overall, for all of the 42 firms in our matched-pair sample, over 9000 articles were retrieved from Factiva.

# 4.2. Analysis

# 4.2.1. Segmentation and coding strategy

Having retrieved over 9000 articles for our high- and low-performing foreign IPOs, we segmented the data in order to facilitate our in-depth analysis with the objective to identify differences between high and low-performing foreign IPO firms. This is referred to as a contrasting strategy to data coding. A contrasting strategy seeks to identify similarities between one group (high-performing foreign IPO firms), identify similarities within another group (low-performing foreign IPO firms), and then identify the differences between these two groups (Schreier, 2012). In order to identify the differences between high- and low-performing IPO firms we analyzed which subjects were covered within one group disproportionately to the other. The 'subject' function of Factiva tags the main subjects of each article (for example, "corporate crime" or "joint ventures") and was used to extract what subject matter was covered by each media article. After downloading the subjects covered by each article for each firm, the subject areas were aggregated across each group. Subsequently, we calculated the total number of each subject for low-performing and for high-performing respectively. This number captures, for example, how many articles had "joint ventures" as one of the main subjects for each group (i.e., the low-performing or high-performing group).

Given that we are using a contrasting strategy, we are interested in investigating the subject areas that had the largest difference between high and low-performing groups. Furthermore, we want to utilize information that will offer the most relevant insights as to why highperforming foreign IPO firms avoided CMLOF more than their lowperforming counterparts. To do so, we calculated the percentage difference for each subject matter as follows: (high-performing counts - low-performing subject counts)/low-performing counts. We then ranked all subjects from largest difference to smallest difference. In a qualitative content analysis, it is important that the selected sample for further analysis makes theoretical sense and is purposeful (White & Marsh, 2006). Therefore, we chose the three subject areas that had the largest percentage difference between high and low-performing firms, included at least three or more firms for each group, and are specific in nature. We added the limitation of a subject matter being "specific" in order ensure that it was theoretically sensible to compare the sampled information. This limitation was useful because it caused us, for example, not to investigate "News Agency Materials" as one of our categories because it does not reflect any shared characteristics within the groups or differentiating characteristics across the groups since it is simply an umbrella new category. This procedure revealed that the three categories to be analyzed are 'research and development', 'senior level management', and 'acquisitions, mergers, and shareholdings'.

After arriving at these three subject areas for analysis, all news articles pertaining to each category were downloaded for every firm in the dataset that had media coverage in that subject area. Given the nature of business news, one paragraph was used as one unit of data. All paragraphs about senior level management and research and development were analyzed by a coding frame, using a contrasting strategy (Schreier, 2012) developed by the researchers. For research and development, a total of 462 units of data were coded and for senior level management 189 units of data were coded. Given the large amount of information about acquisitions, mergers, and shareholdings, firms were selected at random to be analyzed. A total of 60 percent of the firms with acquisition, merger, and shareholding data were coded for a total of 582 units of data. In total, 1233 paragraphs were coded.

Two researchers participated in creating the coding frames for each subject area and conducting a pilot study for 15 percent of the data, which is deemed appropriate for a pilot study (Schreier, 2012). Interrater reliability was assured by having both coders jointly code 20 percent of the 1233 units of data. Interrater reliability was over 80 percent, which is classifies the frame as having "good" reliability (George & Mallery, 2003). Any disagreements on how to code a paragraph were discussed and both coders came to an agreement before proceeding. Having a reliable coding frame is essential to ensure that the information recorded is not only from the perspective of one researcher. Upon developing a reliable coding frame from the pilot study, the remaining 85% of the data was coded.

# 4.3. Results

After analyzing the relevant data, five major patterns were found using grounded theory. The patterns are summarized and representative data is presented in Table 3. Each subject area is discussed briefly below.

## 4.3.1. Acquisitions, mergers, and shareholdings

In the media articles about acquisitions, mergers, and shareholdings, two major patterns were revealed by the data. First, the sentiment varied between low-performing and high-performing foreign IPO firms. For the high-performing group, sentiment was mostly (about 70 percent of the time) neutral. The two representative quotes from WNS Holdings in Table 3 exemplify how the information, such as that about acquisitions, for high-performing firms is usually reported in a direct and linear fashion. Low-performing IPO firms also had similarly neutral information reported by the media. However, it was more common of high-performing IPO firms to have neutral sentiment and it was more frequent. In contrast, low-performing IPO firms had any other kind of sentiment including positive, negative, and uncertain sentiment represented in the media. Table 3 includes an example of each type of sentiment. The first quote from China Lodging Group represents uncertainty. The article notes that the firm is 'reportedly' going to work with another, but there is no specific information about the next course of action. Low-performing firms were almost three times more likely to have uncertain sentiment in their news articles in this category. The second quote from Gravity Co Ltd represents negative media coverage in this category. Intuitively, it is not unexpected that negative press would lead to higher CMLOF foreign IPO firms since the media serves as Supplementary information source for investors (Pollock & Rindova, 2003). The third quote from Simcere Pharmaceuticals represents positive sentiment. Interestingly, we identified 90 instances in which we coded lower performing IPO firms to have positive sentiment for this subject area were coded while high-performing firms had only 61 such codes. A word count analysis also revealed that is more likely that firms in the low-performing group had more often firm-specific information presented. This finding, coupled with the result that low-performing foreign IPOs appeared in the media more frequently than their high-

# Table 3

# Qualitative findings and representative data. Table 3: Qualitative Findings and Representative Data

Finding 1: Acquisitions, Mergers, and Shareholdings: Mixed Sentiment versus Neutral Sentiment For high-						
media had more mixed	sentiment (positive, negative, and uncertain).					
Representative Data f	for Finding 1:					
Company	Quote					
WNS Holdings	"WNS (Holdings) Ltd (NYSE: WNS), has acquired its information technology systems supplier, FLOvate Technologies, and now intends to market its claims-related technology platforms with its own business process outsourcing services. FLOvate's customers include Saga and LV, two					
	major UK-based auto insurance providers." "WNS Assistance has long worked with FLOvate Technologies, a privately-owned Ipswich- based company, with approximately three-quarters of its business devoted to developing					
	workflow and claims management systems under exclusive license to WNS. FLOvate employs a total of 70 people, including 25 in Bangalore, India."					
China Lodging Group	"Reportedly, China Lodging Group, the operator of Hanting, is to team up with Hony Capital this time; but the bidder declined to elaborate."					
Gravity Co Ltd	"Kim Jung-Kyool, a successful venture company entrepreneur who sold his company Gravity to Softbank Japan for 400 billion won, was accused of appropriating company money during his tenure as chairman."					
Simcere	"Simcere is one of the fastest growing pharmaceutical manufacturers and suppliers in China.					
Group	consolidation is used part of bineers is pharmaceutical industry. The acquisition of the biotech anti- cancer drug Endu in September 2006 has led Simcere into the oncology therapeutic area and the acquisition of Boda Pharmaceutical in September 2007 has solidified its market leading position in stroke management."					
Finding 2: Acquisition shareholdings in other	ns or No Acquisitions versus Shareholdings Low-performing firms had more reported companies.					
Representative Data f	for Finding 2:					
Company						
Giant Interactive Inc.	"Giant Interactive Group Inc. (NYSE: GA), one of China's leading online game developers and operators, announced today that it has entered into a definitive agreement to acquire redeemable					
	preferred shares, representing a 25% interest in FIVe One Network Development Co., Ltd ('51.com'), a leading Chinese online social networking service provider, for approximately ULSS1 million. The completion of this investment is subject to customary closing conditions."					
Finding 3: Mentionin	<b>g R&amp;D Expenses</b> Low-performing firms reported their R&D expenses more often.					
Representative Data f	for Finding 3:					
Company	Quote					
Suntech Power Holdings Company Ltd	"BEJJING (Dow Jones)China's Suntech Power Holdings Co. (STP), one of the world's largest solar power cell makers, plans to invest \$20 million in research and development as it looks to expand output capacity over the next five years, China Daily reported Tuesday."					
Finding 4: Industry-s into new markets perfo companies, low perform companies, low perform	<b>pecific R&amp;D Approaches</b> For pharmaceutical and communications companies, firms that expand rm better than firms that are developing new products. For pharmaceutical and software ning firms make more partnerships for R&D partnerships. For pharmaceutical and semiconductor ning firms give more specific information about new products and services.					
Representative Data f	for Finding 4:					
Company China TashFaith	Quote "Usua Kang Sama of the world's higgest electronics nexts sumplises and redget melows could					
Wireless Communication	get a boost from an unlikely source: A new industry initiative to sell ultracheap cellphones to people in developing nations [it] could sharply increase revenue for electronics companies that make high-tech parts for the phones, including semiconductors, plastic casing and liquid-crystal display screens, as well as for some mobile-phone service providers in those countries, analysts say. In a report last month, investment bank Lehman Brothers Holdings Inc. said the trend to low-cost phones should benefit companies like Compal, which assembles phones from parts on behalf of other manufacturers; Taiwan Green Point, which makes phone casings; China TechFaith"					
Mitel Networks Corp	""Mitel's continued investments in our IP-based communications solutions and channel and partner development have allowed us to grow market share worldwide,' said Don Smith, chief executive officer, Mitel. 'Mitel remains at the forefront of delivering products that save our customers money and support their rapidly evolving IT strategies. In fiscal 2010, partnerships with VMware and Research In Motion have allowed us to develop solutions aimed at two growing trends - the move toward "virtualized" call control and an increasingly mobile workforce.'"					
Spreadtrum	"Spreadtrum has commenced sampling of the SV6111 and expects deployment through its					
Finding 5: Top Mana	coding-decoding standard independently created by China. For more information on AVS, please go to the Audio and Video Coding Standard Workgroup of China, at <u>http://www.avs.org.cn/en/.</u> "					
Representative Data f	for Finding 5:					
Company	Quote					
ChinaCache International	"ChinaCache International Holdings Ltd, a provider of Internet content in China, said its Chief Operating Officer Richard Xu resigned for personal reasons, sending its shares down 28 percent"					
Charm Communications	"Charm Communications Inc. (Nasdaq: CHRM), a leading advertising agency in China, today announced that it has appointed May Zhang as vice president of Integrated Communication Solutions starting from July 1, 2010, according to a press release issued here Ms. Zhang's rich industry knowledge will help further develop Charm's integrated advertising service capabilities while strengthening internal coordination with Charm's other business segments."					
<ul> <li>TShaded rows represent</li> </ul>	it data from high-performing tirms and non-shaded rows represents data low-performing firms					

\*Shaded rows represent data from high-performing firms and non-shaded rows represents data low-performing firms.

performing counterparts, implies that no news, or neutral news, is good news.

The second pattern that is revealed from the media articles on acquisitions, mergers, and shareholdings was that low-performing IPOs had more shareholdings in other companies. There were 66 paragraphs that mentioned an IPO firm's shareholdings in other firms for lowperforming firms and only 15 for high-performing firms. Shareholdings were considered any stake a company was reported to hold that was less than 51 percent. Anything over 51 percent stake is considered an acquisition. An example which is included in Table 3 relates to Giant Interactive Group's purchased of a 25 percent stake in an online social networking site in China. High-performing IPO firms had slightly more mentions about acquisitions. Prior research has explored how IPO firms raise capital for the purpose of making acquisitions (Celikyurt, Sevilir, & Shivdasani, 2010). In fact, over 30 percent of IPOs have been reported to start engaging in mergers and acquisition within the first year of listing (Celikyurt et al., 2010). However, the performance implications of shareholdings in other firms following the IPO event are not well understood. Therefore, the data reveals that having too many shareholdings could potentially have an adverse impact on foreign IPO firms listed on U.S.-based capital markets.

## 4.3.2. Research and development

Two major patterns were discovered in the media articles relating to R&D. First, low-performing foreign IPO firms had generally more mentions about their R&D expenses in the media. Given the crucial role of R&D investments for IPO firms – especially those that operate abroad (Filatotchev & Piesse, 2009) –, investors may prefer to see reports about ongoing or finished R&D projects rather than merely the intention or plans to engage in R&D projects during the first year following the IPO. One example of vague R&D intentions is that of Suntech Power which is included in Table 3. Here, the news article only reports on the firm's intention to spend resources on future R&D projects and expansions.

The second pattern relates to industry-specific information. The nature of the industry and the products and services produced by IPO firms firm greatly influences how much they spend on R&D and what type of R&D they undertake. Pharmaceuticals and different types of technology companies were represented most frequently in the media articles about R&D. Three patterns were identified in the data. First, foreign IPO firms in the pharmaceutical and communications industries that were expanding into new markets were more likely to be in the high-performing group than those that were developing new products and services. This is exemplified by the quote from China TechFaith Wireless in Table 3. There were reports in the media about how China TechFaith was poised to benefit from the expansion of selling reducedcost cellphones to developing countries. Additionally, a word count analysis revealed that the media for roughly half of the foreign IPOs in the high-performing group mentioned different countries, cities, regions, or frequently used the word 'international' compared to only 22 percent of the firms in the low-performing group. It is possible that investors prefer foreign IPO firms in pharmaceuticals and communications that seek to exploit their core competencies in other markets.

In contrast, for both pharmaceutical companies and software companies, low-performing foreign IPO firms made more R&D-related partnerships. The relationship between partnerships and performance here could potentially be related to the finding with acquisitions, mergers, and shareholdings about low-performing IPO firms holding more shares (but not controlling interest) than high-performing foreign IPO firms. Partnerships represent a limited relationship with another company. For instance, Jazz Pharmaceuticals formed a partnership with U.S.-based Antares Pharma Inc to perform a drug trial. However, Jazz Pharmaceuticals was a low-performing company. On the contrary, WuXi Pharmatech was actually recorded acquiring a U.S. company, AppTec Laboratory Services. Perhaps, appropriate acquisitions of home and U.S. companies send stronger signals to investors about the firm's position than partnerships and holding shares. Lastly, more specifics about products and services being developed were included by low-performing foreign IPO firms than high-performing firms. More specific information includes why the product or service is new and interesting and how it adds to the company's current portfolio of products and services. In general, given the information asymmetry between IPO firms and investors mentioned throughout this study, IPO firms that provide more specifics are received positively (e.g., Boulton, Smart, & Zutter, 2011). What type of information that is typically included is shown by the Spreadtrum Communications Inc example in Table 3.

# 4.3.3. Senior level management

The one prevalent pattern in the senior level management data was that foreign IPO firms that changed the 'core' of their top management team were always included in the low-performing group. There were a handful of firms that experienced a change of their CEO, COO, or CFO. The TMT changes in our sample included resignations, retirements, and appointments and there were no clear incidences of forced turnover or "removal" of TMT members using a test proposed by Huson, Malatesta, and Parrino (2004). Specifically, there were no incidents in which a TMT member left for reasons other than death, poor health, the acceptance of another position, or retired without notice. The executives in our sample left to join other organizations, pursued other entrepreneurial ventures of their own, changed positions within the firm, or announced their retirement with enough time to find a replacement. When a top management team member was announced to be leaving, the media frequently reported a decline in market performance. This is illustrated by the example of ChinaCache International in Table 3. The COO of the company resigned for personal reasons and the company's shares immediately declined following the announcement.

Interestingly, according to the independent media reports of each TMT change, share prices dropped after TMT changes and not the other way around meaning that declining share prices were not the reason for TMT turnover. A clear example of this is TAL Educations' CEO resignation. After TAL Education Group presented strong third quarter earnings (an increase in revenue by 48%) the CEO announced his resignation and shares subsequently declined by 14 percent. The press reports speculate that the stock market is reacting negatively to the resignation due to the CEO's high level of involvement in the IPO process and "road show" (Wire, 2011). It is possible that with all the challenges that foreign listed firms experience when listing on the U.S. stock market, changing key members of the TMT adds an extra dimension of uncertainty (Browning, 2013). For firms in the high-performing group, they only made changes at the Vice President level or appointed new board members if they made any management changes at all. In fact, of all the foreign IPO firms that performed above average only one firm (JinkoSolar Holding) experienced a significant management change. Most frequently, high-performing firms made no management changes within the first year of trading and avoided 'rocking the boat.' After all, top managers' departure can hurt the organizational dynamics (Tushman & Rosenkopf, 1996) and it looks like our findings show that this is also the case for foreign IPO firms.

### 5. Discussion

The purpose of the study was to examine CMLOF that IPO firms experience in the capital market of a foreign country. Specifically, we investigated the duration of CMLOF that foreign IPO firms listed in the US endure. Such investigation is important because the literature is unclear on how long CMLOF lasts for foreign IPO firms (e.g., Li et al., 2016). The focus on long-term performance is important because many of the envisioned benefits of listing on a foreign stock exchange may only materialize over time.

Empirical analyses from 549 IPO firms listed in the US capital markets provided evidence of CMLOF, confirming the results of earlier studies (e.g., Bell et al., 2008). More importantly, however, we

advanced the literature by examining how long CMLOF lasts and when it starts to diminish. We argued that CMLOF will last for a year after which it will start to diminish. We claimed that one year is a critical threshold before which IPO investors can rely on limited information only (e.g., media, quarterly reports) when valuing a foreign IPO firm. After one year, however, the annual report is published, a trading history is established, and it becomes clear how well a foreign firm can handle the increased scrutiny of U.S. capital markets, the information asymmetry between the foreign IPO firm and investors starts to diminish. Investor familiarity with the foreign IPO firm's business practices will also gradually improve over time. The data provided empirical support for the hypothesis that CMLOF lasts for a year for foreign IPO firms that are listed on the US stock exchange and that after a year it starts to diminish.

Our study also contributes to the literature on CMLOF by investigating when CMLOF starts to turn into an advantage. An emerging stream of research within LOF literature investigates how being foreign can sometimes be a benefit for firms (e.g., Un, 2011; Regnér & Zander, 2014). Although these studies examine advantage of foreignness in product markets, we are not aware of any studies that examine how foreignness can become an advantage for firms in capital markets. Our study contributes to this emerging stream of research by providing evidence that CMLOF turns into CMAOF after a foreign company has gained legitimacy by consistently releasing information - for instance, showing that the firm is performing well and that the firm's management continues to set realistic performance targets. As such, our study suggests that CMLOF could become an asset if the firm continues to be listed on the stock exchange for a longer period of time-i.e., 3 years in our study. Interestingly, the interaction between foreignness and presence of the financial crisis was not significant. It is possible that the "contagion effect" may not fully offset the CMLOF of foreign IPO firms during the financial crisis because of an overall unfavorable IPO market affecting all IPO firms equally. Investors may be motivated to diversify internationally during a crisis (Vermeulen, 2013). However, they may shy away from both domestic and foreign IPO firms (Tupper, 2016) given their perceived riskiness in a turbulent environment.

Our results from the qualitative study reveal key differences between high- and low-performing IPO firms. For instance, the results suggest that IPO firms may have to carefully manage their public relations so that the media does not work against them. Considered in their entirety, the results from the qualitative study demonstrate that IPO firms have certain tactics at their disposal that allow them to mitigate CMLOF *after* they list on a foreign stock exchange. For instance, our qualitative results showed that foreign IPO firms may want to refrain from changing their top managers to alleviate CMLOF. Thus, we complemented previous studies that have already investigated how IPO firms could lessen CMLOF *before* listing on a foreign stock exchange (Bell et al., 2008) with an examination of what they can do *after* listing on the foreign exchange.

# 5.1. Managerial relevance

The results of this study reveal two key takeaways for managers. First, on average, listing on U.S. stock exchanges as a foreign IPO does payoff in the long-run. Foreign IPOs do experience CMLOF in the first year which starts to diminish in the second year and turns into CMAOF within three years. Given that IPOs are typically undertaken to fund long-term growth (Certo et al., 2009) and foreign IPOs list abroad so that they can access an investment pool that is not only larger (Zhang & King, 2010), managers may have to also adopt a long-term perspective when evaluating the stock market performance vis-à-vis their domestic counterparts. Specifically, our study suggests that if foreign IPOs can make it past three years of listing in the U.S., they will most likely start reaping the benefits associated with listing on a foreign stock market.

Second, managers of foreign IPOs can mitigate the CMLOF they face. While it is important to know that making it past the three year listing threshold is important for reaping long-term benefits, there are a number of techniques managers can use to help their companies limit the impact of CMLOF from the moment of the IPO. In the qualitative portion of this study, the emergent theme was that investors respond positively to concrete evidence of firm actions. First, making acquisitions is better than purchasing non-controlling stakes in other firms or forming partnerships with other firms. It is possible that investors want to see decisive behavior from foreign IPOs. Therefore, managers should be clear about the growth strategy they are pursuing prior to making an IPO and make sure investors are cognizant of their decisions. Similarly, when it comes to R&D strategies, foreign IPO managers need to make sure their company has something concrete to show for their efforts and not just mention that they are spending money to potentially fund projects. This also shows purposefulness to investors. Lastly, foreign IPO companies should try to prevent the changing of major executive positions within the first year of listing on the U.S. market. This also could potentially send muddled signals to investors about the direction of the firm.

Given that these results were found in the U.S. stock market specifically, the managerial implications can only be cautiously applied to foreign IPOs in other contexts. The U.S. market is unique in that it offers foreign firms the ability to subject themselves to some of the strictest corporate governance standards in the world (Coffee, 2002). However, foreign firms can inevitably face issues in regards to CMLOF in any market, particularly large and developed financial markets where investors still have home-country investment bias (French & Poterba, 1991). Yet, foreign companies may generally be able to traverse the foreign landscape by learning what investors in that market value over time.

# 5.2. Limitations and future research

As with any empirical project, the findings reported in this manuscript should be interpreted in light of certain limitations. First, our sample considers foreign IPO firms listed in the U.S. capital markets. The U.S. has a transparent and well-functioning capital market and consequently our results may not be generalizable for foreign IPO firms that list in the stock exchange(s) of another country. Specifically, the large size of the U.S. market combined with strong corporate governance guidelines makes this market unique. Future researchers should therefore further explore how CMLOF influences foreign listings over time in other capital markets. They should also explore how foreign companies manage CMLOF over time and what skills and characteristics help foreign listings achieve CMAOF and whether those skills and characteristics vary across markets. Second, we only investigate the duration of CMLOF of foreign IPO firms. Future researchers could study LOF in other business contexts such as international new ventures, joint ventures, acquisition bidding, or hedge funds. Similarly, future research is encouraged to identify the factors that may explain heterogeneity among firms with respect to the duration of CMLOF. Third, given that foreign companies frequently list abroad in order to access a sophisticated investor group (Blass & Yafeh, 2001; Zhang & King, 2010), our sample had large contingencies of companies in a few industries. Around 60 percent of our sample came from technology (computer hardware and software), communications, and transportation. These are industries that are widely developed in the U.S. and foreign companies may be motivated to list in the U.S. in order to access knowledgeable investors in this area. This opens the door for research into foreign firms that choose to list on markets where firms in their industry are less common. Fourth, we explore the difference between foreign and domestic IPO firms. We do not examine heterogeneity among foreign IPO firms in terms of how they experience CMLOF or CMAOF differently. Future research could investigate different characteristics of foreign IPO firms that would impact the level of CMLOF or CMAOF they experience. For example, it would be of particular interest for researchers to explore how different foreign IPOs are covered by analysts.

Similarly, it may also be interesting to identify factors that determine differences in the time it takes for individual foreign IPO firms to overcome CMLOF.<sup>2</sup> In spite of these limitations, we believe that this study contributes to the literature by providing evidence on how long CMLOF lasts and when it turns into CMAOF and hope that future researchers will follow our lead to better understand this phenomenon.

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