Financial and operational strategies: The host market operational activity of foreign listed companies

Abstract

This study contributes to a better understanding of the characteristics and internationalization strategies of foreign listed firms by focusing on their degree of operational activity in the host country. Based on the resource based view and signaling theory, we explore how financial foreignness, defined as an initial or secondary public offering outside the country of incorporation, and the proportion of foreign subsidiaries, and host market subsidiaries in specific, are interlinked. Using foreign and domestic firms that are listed on the 13 largest EU regulated stock markets, we show that foreign listed firms show a higher degree of foreign operational activity than compared to their domestic counterparts, preferably locating their subsidiaries in the financial host markets. However, this spillover effect holds not true for companies foreign listed on the London Stock Exchange and the Boerse Frankfurt, which are by far the largest stock exchanges within the sample. Thus, we conclude that firms foreign listed on more developed stock markets primarily seek financial benefits, whereas firms foreign listed on less developed stock markets also seek ramifications on the operational activity in the host country.

Keywords: foreign listed companies, local operational activity, RBV, signaling theory

1 Introduction

Today capital markets and companies around the world are equally affected by the growing trend of globalization. In that respect, rapid information flows caused by technological progress and lower institutional barriers are opening new opportunities for companies in the form of foreign portfolio investments, foreign direct investment, cross-border acquisitions, and foreign listings (Pagano et al., 2002). While this trend enabled companies to gain flexibility in terms of raising capital, it has also intensified competitive pressure among international companies. This growing competition has made it highly relevant for companies to develop a profound knowledge on the underlying motives, benefits and costs that are related to the foreign listing decision. Furthermore, the international business environment has changed dramatically during the past decades, and international diversification has become an increasingly important strategic option available to firms seeking sustained competitive advantage (Hasan et al., 2011). As a consequence, we raise the question whether the convergence among financial markets influences financial decisions solely or if it concerns other business practices and internationalization strategies in a similar way. More specifically, we address the motives and implications of foreign listed firms by examining the host market operational activity of listed companies. Surprisingly, despite of the extensive coverage of the topic of foreign listings, both the exploration of local operational activity as a firm specific decision criteria (Stalinski & Tuluca, 2006) and the exploration of the consequences of foreign listings on the local operational activity has remained underexplored (Peng & Su, 2014).

Therefore, based on the persistent trend of globalization and its consequences on intensified competition and market integration, we closely examine the link between foreign listings, defined as an initial (IPO) or secondary public offering (SPO) outside the country of incorporation, and the relative number of subsidiaries abroad, with a special emphasis on the host market. In that respect, we argue that (1) due to self-selection, firms are likely to list in the country where their operational activity is located, and (2) a foreign listing will further facilitate the expansion of local operational activity in the respective country. It is important to

note that when referring to "operational activity", we refer to the operational activity of the firm's product market operations, which we mainly measure by the number of subsidiaries in a specific country. Thus, we look at foreign listings not only as a financial decision, but also as a strategic decision with strong ramifications on the success or failure of product market competition (Hasan et al., 2011).

To theoretically explain the decision of firms to list on foreign stock markets, we mainly use the resource based view (RBV). The resource based view argues that firms should acquire and leverage valuable, rare, costly-to-imitate, and organizationally embedded resources and capabilities to gain competitive advantage (Barney, 1991). Thus, in the context of capital markets, the RBV explains why certain foreign listed firms gain advantage by reaping lower costs of capital and reaching a higher number of customers in the host market (Peng & Su, 2014). Furthermore, foreign listed companies may signal an increased level of internationalization potential and benefit from the increased level of awareness with consumers and investors. Therefore, also signaling theory can shed light on the rationale behind foreign listing decisions (Francis et al., 2010), where managers are aiming to make investors aware of the firms' potential, and convey their superior and private information to the market (Hasan et al., 2011). However, global equity offerings are a very costly signal for imitators to utilize, as the benefits of a foreign listing come with certain direct and indirect costs. In that respect, foreign companies typically suffer from the liability of foreignness in capital markets (Bell et al., 2012). The theory of the liability of foreignness states that being foreign in a market often comes with disadvantages in terms of costs and information deficiencies compared to domestic firms (Hymer, 1976, Zaheer, 1995). The costs related to foreignness can be broadly classified in unfamiliarity, relational and discrimination hazards (Denk et al., 2012). In the context of this study, we argue that increased operational activity in the host country leads to a certain familiarity with the local institutional environment and helps to identify potential competitive disadvantages to domestic listed companies, reducing the liability of foreignness and thus the costs of listing.

Based on this theoretical angle, we conduct an empirical analysis building on publicly available data of domestic and foreign listed companies in Europe. In more detail, the sample comprises the largest European Union (EU) regulated stock exchanges on the 13 largest stock markets within the EU by the year-end 2013. The countries and the related exchanges are chosen for their high number of foreign listings and the homogeneity of the sample companies. This homogeneity is not only vital to minimize institutional differences, but the common regulation within the European Union also ensures consistent accounting and publication rules, providing comparability and availability of company data. The sample also includes firms listed on more than one stock exchange (multiple listings) due to the fact that a potentially high degree of multinationality or international orientation does not necessarily indicate that the respective company is not active in its multiple markets.

By combining management and international business research on the internationalization of product market operations, with literature on capital markets and foreign listings, the contribution of our study may be manifold. First, we provide the local operational activity as a firm specific factor in the explanation of a company's (foreign) listing decision. Although this is not a completely novel idea and has already been discussed in prior research (e.g. Saudagaran & Biddle, 1995, Pagano et al., 2002), we add to the academic discourse by providing first country specific and industry independent empirical evidence. Second, the study adds to the understanding of internationalization strategies of multinational companies by integrating the sentiment that a foreign listing is not merely a financial decision, but also a major strategic decision of the firm (Peng & Su, 2014). Hence, insight on the local operational activity of foreign listed companies contributes to a better understanding of the pursued internationalization strategies of companies and enables managers to optimize and rethink their actions and strategic intent. Finally, by detecting companies where the host country is even the main market for the firm's operational resources, our findings may evoke discussions on the appropriateness of the location of the company headquarters as a criterion for the classification as a foreign firm. In that respect, the amount of operational

activity a firm undertakes in a certain country may better reflect the costs of unfamiliarity and information deficiencies that are related to a public listing, and may thus question the liability of foreignness for these countries.

The outline of the paper is as follows, first we discuss prior literature, the main theory and our main hypotheses. Next, we provide a description of the data and methodology, followed by the empirical results. Finally, the results are discussed, possible limitations and implications for further research are provided and a conclusion is drawn.

2 Literature Review

2.1 Financial internationalization

Literature on foreign listed companies suggests that firms access foreign equity markets in different ways and with different objectives in mind. When they decide on their listing location, they take into account various factors that influence the relative magnitude of the advantages they can obtain from a foreign listing in order to maximize shareholder wealth (Corwin & Harris, 2001). As a result, they weigh the benefits of the listing against the expected costs, consider experiences from other firms and choose accordingly (Piotroski & Srinivasan, 2008).

The main motivation for issuing shares abroad is based on the constraints of the home market. However, since small firms have greater visibility in the local market, a foreign IPO might not be a logical step for them since price discovery is weaker and transaction costs are higher (Coffee, 2002). On the contrary, a variety of benefits exists, when firms expand their equity capital raising activities to foreign markets. Overcoming barriers of international investment has traditionally been regarded as the main reason for firms to list abroad. By increasing their visibility on other capital markets they are able to attract a larger number of investors and, thereby, improve their financing terms. Besides providing the firms with larger amounts of capital for growth and acquisition strategies (Cantillon & Yin, 2011, Ritter &

Welch, 2002), companies benefit due to better terms for equity and debt financing (Claessens & Schmukler, 2007), higher liquidity (Abdallah & Goergen, 2008), access to foreign expertise (Pagano et al., 2002), the presence of industry peers (Pagano et al., 2002, Baruch et al., 2007), access to new investors, a more efficient market and lower barriers to international investment (Karolyi, 2006). In addition, firms' public relations efforts (Kobialka & Koivulehto, 2011), a better ability to attract employees, and higher political reach (Saudagaran, 1988, Biddle & Saudagaran, 1989) positively influence the probability of a foreign listing. However, in an increasingly global capital market, there are also other explanations for firms to list abroad. Therefore, institutional explanations, such as the bonding hypothesis manifested in the limitation of private benefits through more rigorous governance standards, has gained importance (Coffee, 2002). This research stream asserts that firms can benefit from stricter rules and regulations on foreign markets. If they subject themselves to a foreign regime with a high level of investor protection, their attractiveness for investors increases. Furthermore, also macroeconomic variables such as income, saving rate, and financial intermediary development are important determinants of financial development (Garcia & Liu, 1999). In that respect, Claessens et al. (2002) find that foreign direct investment is positively correlated with stock market capitalization and value traded. These benefits have to be weighed against the additional costs that firms incur when listing on a foreign exchange. Costs comprise direct costs (e.g. listing and registration fees, auditing fees) and indirect costs (e.g. underpricing costs) as a result of promoting the issuance and adapting the firm to the foreign listing (Pagano et al., 2002).

In the realm of this study, Saudagaran & Biddle (1995) argue that the higher a firm's exports to a certain country, the higher is the probability that the firm lists in that country. They state that a foreign listing provides "free" advertising for a firm's products and the resulting marketing effect is especially relevant for industrial and consumer goods. This argument is in line with Bancel & Mittoo (2001), who argue that an easier implementation of marketing policies is among the major perceived benefits of firms that list abroad. However,

this effect can work in the opposite direction as well, because, if companies already sell their products in a foreign market, they benefit from their level of awareness with investors and consumers when listing shares (Pagano et al., 2002). However, although these studies already indicate the importance of the local operational activity for the listing location decision, none of the studies have provided sufficient empirical evidence on the influence of a foreign listing on the firm's operational activity in the host country. Furthermore, the increased globalization may have changed the circumstances under which firms build their financial and strategic decisions. Therefore, we analyze the motives of and implications for foreign listed firms in times of increasingly integrated capital markets by focusing on the degree of foreign operational activity, with a special emphasis on the host market operations.

2.2 Operational internationalization

Within the international business literature considerable attention is given to the role of location advantages in determining the initial entry decision of MNCs in any given market (Dunning, 1988; McCann & Mudambi, 2004; Mudambi, 1995) and it is recognized that location decisions are important for the future development of firm-level capabilities and competitive advantage (Marshall, 1920; Porter, 1980; Porter & So¨ lvell, 1998).

From the literature on subsidiary evolution, it is evident that subsidiary development results from an accumulation and depletion of resources over time (Birkinshaw & Hood, 1998; Birkinshaw, 1999). Initially, the parent company allocates resources and activities to subsidiaries, in particular to new ones. However, an MNC's support is often insufficient for the successful development of their subsidiaries as the subsidiary's own resource and capabilities may drive its growth or decline over time. In case of newly located subsidiaries, it is likely that the development of such subsidiaries in particular locations is dependent on the availability of specific expected location advantages (Benito et al., 2003). Accordingly, and in line with Uhlenbruck (2004), it can be expected that the development of a foreign subsidiary in a specific sub-national region is determined by particular advantages and re-

sources specifically residing in this sub-national region. Based on this, we therefore argue that due to the heterogeneity of the local context of sub-national regions within a transition economy, the post-entry development of foreign subsidiaries is associated with different sub-national location-specific advantages. More specifically, those sub-national location-specific advantages relate to multiple dimensions such as agglomeration, infrastructure, efficiency and knowledge factors that can be distinguished across regions (Chidlow et al., 2009).

Other significant motives and location determinants for FDI that are frequently discussed in the IB literature can be identified as efficiency-seeking factors (Dunning, 1993; Ma et al., 2013). These factors are seen as traditional motives for FDI and imply that firms invest abroad to acquire resources not available in the home country, such as a low cost raw materials or labor. Especially in the manufacturing sector, when multinationals directly invest in order to export, factor-cost considerations become important. Further, the intention of efficiency-seeking investment is to take advantage of different factor endowments, cultures, institutional arrangements, economic systems and policies, and market structures by concentrating production in a limited number of locations to supply multiple markets (Dunning, 1993; Coughlin & Segev, 2000). Researchers examining the motives for the inflow of FDI into transition economies have shown that efficiency-seeking factors, such as the availability of low cost production inputs and low labor costs, are important location determinants (Chidlow et al., 2009; Cies´ lik, 2005a, 2005b; Galego, Vieira, & Vieira, 2004; Lankes & Venables, 1996; Lansbury, Pain, & Smidkowa, 1996).

Scholars arguing from a knowledge-based perspective contend that one important motivation to expand abroad is the search for new knowledge that is not available in the home markets (Cantwell, 1989; Cantwell & Piscitello, 2005). Some studies have begun to challenge the view that knowledge-seeking through FDI is done only by firms that want to catch up (Cantwell & Janne, 1999; Chung & Alcacer, 2002). For instance, Cantwell and Janne (1999) suggest that leading technological firms may locate abroad in order to source more diverse knowledge and empirical studies show that MNCs are drawn to locations in which, for in-

stance, the public research base and higher education infrastructure is relatively developed (Cantwell & Piscitello, 2005; Frost & Zhou, 2005). This is in line with the trend for MNCs to tap into different external sources of knowledge through the establishment of innovation networks (Andersson et al., 2002; Frost, 2001; Kuemmerle, 1999) and links to public research centers, universities, and different industry associations (Breschi, 2000). Hence, the ability to get access to value added knowledge sources is not only important for the initial entry decision but also influences the subsequent development of the MNC subsidiary, including the accumulation of resources and competence development (Andersson et al., 2002; Benito et al., 2003; Porter & So¨ lvell, 1998).

This view of the MNE as a portfolio of differentiated, but interdependent subsidiaries assumes that the firm commands sets of resources that are distributed geographically. Here, each subsidiary controls part of the firm's overall resources reservoir. However, the uniqueness of the MNE is that each subsidiary is not just defined by the internal resources it commands, but also by the external resources it can access in specific locations, a perspective consistent with the modern 'resource bundling' theory of the MNE (Hennart, 2009; Meyer et al., 2011, this issue). The idiosyncratic bundling of internal and external resources ultimately determines each subsidiary's role. The Bartlett and Ghoshal (1986) typology is based on two dimensions: the strategic importance of the local environment (location advantages), and the competences (firm- specific advantages) held by the national organization, whether transferred from inside the MNE network or developed/acquired autonomously by the subsidiary itself. (Rugman, 2011)

Strategic decisions usually involve choices regarding the investment of organizational resources (Schendel and Patton, 1978) given uncertainty about future outcomes (Bettis, 1982). Real option theory naturally extends to strategic management to provide an economic logic for the behavioral process of managerial decisions (Tong, Reuer, and Peng, 2008). Global equity offerings could be a deliberate strategy to create valuable, real options for issuing firms to exercise later. Inducing foreign ownership (Kronborg and Thomsen, 2009) is an

effective way to seek intangible resources from a host country (Nachum and Zaheer, 2005). The resulting configurations of initial resources generate new options for future implementation (Bowman and Hurry, 1993). To be specific, global equity offerings allow issuers to test the market and gain access to a wide array of intangible strategic assets such as familiarity with foreign markets, institutions, potential investors, customers, and suppliers. Sequential strikes on the options chain produce other interrelated strategies (Bowman and Hurry, 1993). In other words, the initial financial strategy of offering new equity in global capital markets actually links to a subsequent operational strategy. (Hasan, 2011)

Moreover, we argue that cross-listing may facilitate the further expansion of the geographic scope of the firm. Because crosslisting will attract (generally) positive coverage by analysts and journalists (especially those in DE), cross-listing may enhance its visibility and reputation. As a result, cross-listing may lead to positive spillovers to product market sales and helps win more customers globally (Hasan et al., 2011; Khanna & Palepu, 2004).

Specifically, cross-listing facilitates more mergers and acquisitions (M&As) in the host country (Burns, Francis, & Hasan, 2007; Kumar & Ramchand, 2008). M&As can be financed by cash or the acquirer's equity. Prior to cross-listing, the firm of course can undertake M&As in the host country using cash; but shares traded on the stock exchange in the home country (such as the Shanghai Stock Exchange) cannot be used to acquire targets in the host country (such as the United States). For a Chinese firm, cross-listing on the NYSE can not only raise more cash to undertake M&As in the United States, but can also leverage the NYSE-traded shares to engage in more and larger scale M&As in the host country (Karolyi, 2006). In theoretical terms, cross-listing reduces the information asymmetries between the acquirer (whose shares are cross-listed) and the target (which is in the host country), because there is ''less disagreement about the intrinsic value of the acquirer's equity'' (Tolmunen & Torstila, 2005, p. 124). From a resource-based view, a hypothetical Chinese firm that is cross-listed on the NYSE—relative to its non-cross-listed Chinese competitors—is in a better and more advantageous position to expand its geographic scope by undertaking M&As in the

United States (Deng, 2009; Peng & Blevins, 2012; Yang, Sun, Lin, & Peng, 2011). From an institution-based view, cross-listing reduces the liability of foreignness by enabling the use of the NYSE-traded shares to acquire targets in the United States (Bell et al., 2012). (Peng, 2014)

3 Theory and Hypotheses

To understand the local operational activity of foreign listed companies, we mainly build on the resource based view of the firm. The resource based view explains the internal sources of a firm's sustained competitive advantage (Kraaijenbrink et al., 2010). Its central proposition is that if a firm wants to achieve a state of sustained competitive advantage, it must acquire and control valuable, rare, inimitable, and non-substitutable resources and capabilities, plus have the organization in place that can absorb and apply them (Barney, 1991, Barney & Hansen, 1994). In this sense, the resource based view of the firm recognizes the strategic importance of behavioral and social phenomena in enabling firms to conceive of, choose, and implement their strategies (Barney, 1991). Indeed, such strategically relevant behavioral and social phenomena inside a firm are designated as resources, capabilities, and competencies by resource based theorists (Wernerfelt, 1984). However, this perspective also recognizes that the competitive value of these phenomena can not be understood independent of the specific strategies a firm is pursuing, nor independent of the specific competitive context within which a firm operates (Barney & Zajac, 1994). Thus, in the context of capital markets, the RBV explains why certain foreign listed firms gain advantage by reaping lower costs of capital and reaching a higher number of customers in the host market (Peng & Su, 2014).

Previous research has further argued that global equity offerings not only provide a means to gain operational foothold in the respective host market, but also sends a positive signal to international investors (Francis et al., 2010). In that respect, signaling theory may explain the decision to list abroad, as international investors may use the foreign listing decision as

a reference point in the valuation of companies. In many cases, managers need to undertake certain activities to alleviate uncertainty, make potential investors aware of their firms' potential, and convey their superior and private information to the market (Hasan et al., 2011).

Besides these benefits, extensive research on internationalization strategies and market entry barriers has confirmed scholars in their belief that foreign companies typically suffer from liabilities of foreignness when entering a foreign market for the first time (e.g. Hymer, 1976, Zaheer, 1995). Bell et al. (2012) extend the liability of foreignness to capital markets and argue that foreign listed firms suffer because of the differences in institutions and disadvantages in assessing information in local markets. The costs related to foreignness can be broadly classified in unfamiliarity, relational and discrimination hazards (Denk et al., 2012). Costs of unfamiliarity arise due to a lack of knowledge about the foreign country's values, norms, business practices (embodied in regulatory schemes), culture and the market in general, whereas relational hazards arise from costs related to the transactions or interactions with customers, suppliers, other firms, regulatory bodies and political institutions (Bell et al., 2012). Therefore, higher expenses for organization, coordination and monitoring of activities across the border may occur. Furthermore, a lack of operational activity in the host country, embodied by insufficient relational ties, may promote the exclusion of foreign companies and, consequently, high market entry barriers (Ghoshal & Bartlett, 1990).

Taken together, the costs and benefits of listing on a specific exchange will depend on firm, country and exchange characteristics (Doidge et al., 2009). In that respect, we argue that (1) the operational activity of a company in a certain country is a valuable, rare and hard to imitate firm specific resource concerning the ability to attract capital, and (2) the fact that a company is listed on a specific stock exchange is a valuable, rare and hard to imitate firm specific resource concerning the ability to internationalize product market activities. This sustained competitive advantage appears to be even more important for firms that list outside their domestic markets, as additional costs through the liabilities of foreignness may,

at least partly, be absorbed by an extensive knowledge of a country's product market. Thus, the resource based view can help us understand how the listing location choice and the local operational activity of firms are related, and hence how financial and strategic decisions of companies are interlinked. As follows, we develop our basic hypotheses that build on the theoretical arguments provided.

3.1 Foreign listings and foreign operational activity

The main benefit of a foreign listing is that the company's shares are available to a wider group of global investors (Hail & Leuz, 2009). In addition, a foreign listing can be the first step in a long process of bringing the ownership of a company into better balance with the geography of the company's operations (Saudagaran, 1988). In that respect, more and more businesses are expanding their operations into foreign markets at an increasing pace. These firms are likely to list abroad, as they are export driven and experience strong growth (Pagano et al., 2002). Therefore, by self-selection, internationally active firms will proceed to list on a foreign stock exchange (Pagano et al., 2002).

Previous research further provides evidence that one of the perceived benefits of listing abroad is the visibility it generates outside the home country, particularly if foreign markets are important to the firm. Saudagaran (1988) calls this the "marketing motive" and found that firms that place a greater emphasis on foreign sales are more likely to list abroad. However, a foreign listing may not only enhance a companies international sales, but may also enable companies to engage in merger and takeover activity that may help their foreign operations (Saudagaran, 1988). In that respect, we argue that a foreign listing may be part of a firm's corporate strategy to expand its foreign operations and to signal that it has become a global player. Furthermore, increased visibility and name recognition that comes along a foreign listing, helps a firms name and brand recognition in foreign markets. As a result, a foreign listing may lead to positive spillovers to product market activities and helps to win more customers globally (Hasan et al., 2011, Khanna & Palepu, 2004). Thus, while raising

more plentiful and lower costs of capital is an attractive benefit, some firms list abroad primarily for the purpose of enhancing their product market reputation and expanding their geographic scope (Peng & Su, 2014).

Taken together, we posit that firms make use of the financial and operational benefits that are related to a foreign listing and hypothesize that foreign listed firms show a higher foreign operational activity than compared to domestic listed firms.

H1: Foreign listed firms show a higher foreign operational activity than compared to domestic listed firms.

3.2 Foreign listings and the location of operational activity

A foreign listing can boost a firm's marketing efforts in the host country by enhancing name recognition among investors and consumers (Saudagaran & Biddle, 1995). First, companies that already sell popular brands in their host market may find it easier to place their shares because local investors already trust them as customers. Second, share ownership by foreign investors creates local demand for information on a firm's products and performance. Thus, a foreign listing can be an advertisement for the firm's products by increasing corporate visibility and broadens product identification in the host country (Saudagaran, 1988). A foreign listing may not only raise customer demand, but also improve relationships with suppliers and employees. Therefore, while firms from any third country seek potential alliance partners, suppliers, and customers, foreign listed firms, due to better reputation and legitimacy, may consequently attract more attention and obtain more business opportunities (Siegel, 2009). Hence, listing a firm's shares on the stock exchange of the host country may provide a means to gain legitimacy in the host country and overcome the likelihood of discrimination and market barriers that may exist. To be specific, global equity offerings allow issuers to test the market and gain access to a wide array of intangible strategic assets such as familiarity with foreign markets, institutions, potential investors, customers, and suppliers (Hasan

et al., 2011). Furthermore, the effort to seek legitimacy in the host country and institutional pressure for local adaptation make the need for local integration of foreign companies even more likely in the long run (Bell et al., 2012).

These arguments are even strengthened by the observation that particularly foreign listed companies tend to be export oriented, growth seeking and large (Pagano et al., 2002, Wojcik & Burger, 2010) and therefore may have the determination and the resources and capabilities to gain foothold in the host market. In that respect, the location of equity listing may be part of an overall policy, facilitating merger and takeover activity in the host country, helping the firm's foreign operations and growth perspectives (Saudagaran, 1988). The initial financial strategy of offering new equity abroad thus actually links to a subsequent operational strategy (Hasan et al., 2011).

As a consequence, we hypothesize that foreign listed firms show a higher operational activity in their host market than compared to in other potential markets.

H2: Foreign listed firms show a higher operational activity in their host market than compared to in other potential markets.

4 Data and Methodology

4.1 Data and sample

We focus our analysis on European companies that are incorporated in and listed on the largest markets within the European Union. In more detail, we only consider countries which exceed a minimum market capitalization of 100bn USD per year end 2012 (see table 1). The joint affiliation to the European Union not only reduces institutional differences within our sample, it also increases similarity of the available company data, as accounting and disclosure rules are similar across the European Union. Furthermore, the European stock exchanges have been quite successful in securing their position as leading global stock markets, highly attractive for a large number of European companies, which are diverse in

their industry, size and foreign operational activity. Therefore, the data sample is chosen for its large number of foreign listings and the comparable institutional environment. In addition, the sample selection provides enough different nationalities to run country specific analysis.

Insert table 1 near here

The main data source we used for the empirical analysis is the Orbis (Bureau van Dijk) database, where we accessed the necessary subsidiary data and important firm specific corporate and financial data. In addition, we used foreign sales data from the Datastream database. Corporate and financial data was based on the year end 2013, and was supplemented by the latest available data for subsidiaries for reasons of consistency and actuality.

The sample is composed of 7,189 companies listed on the largest EU regulated stock exchanges in each of the sample countries. We chose to consider EU regulated markets only, since disclosure requirements are higher than for exchange regulated markets, allowing for comparable results between stock markets. The sample also includes firms listed on more than two stock exchanges (multiple listings), due to the fact that a potentially high degree of multinationality or international orientation does not necessarily indicate that the respective company does not have operational activity in its multiple markets. This leads to a total number of 9,603 observations. Out of these 9,603 observations, we eliminated 3,067 observations (2,727 companies), which are from the financial and insurance industry (2-digit NACE Code 64 to 66). This leads to a final sample of 6,536 observations and 4,462 companies. For a detailed overview on the geography of European equity listings, please consider table 2, where we show the listing location of the sample companies. The table shows that Boerse Frankfurt and the London Stock Exchange are by far the biggest stock exchanges in terms of the total and foreign number of listings. However, in contrast to the London Stock Exchange, which shows a high number of domestic and foreign companies, the

Boerse Frankfurt attracts an especially high number of foreign firms. In total, the London Stock Exchange and the Boerse Frankfurt account for more than 97% of foreign listings, which mainly comprise cross-listed companies. Nevertheless, 69 companies are foreign listed on different stock exchanges, where 36 out of these companies even underwent a foreign IPO in the sense that they have their main exchange abroad. With respect to the country of incorporation, the sample is much more diversified. The largest markets in terms of number of companies are Great Britain and France, followed by Germany, Sweden, Poland and Italy. Noticeable is that especially smaller markets, like Austria, Ireland or Netherlands show an extremely high level of cross-listing in Germany and/or Great Britain, exceeding even the number of listings on their domestic stock exchanges.

Insert table 2 near here

4.2 Dependent variables

To measure the operational activity of the sample companies per country, we take the proportion of a company's subsidiaries in a certain country as opposed to the total number of subsidiaries. In that respect, we considered 127,321 subsidiaries, being first level subsidiaries of the sample companies. Out of these 127,321 subsidiaries, we eliminated those that did not fulfill the criterion of being fully consolidated and owned by the listed mother company. As a consequence, 39,977 companies with no declaration of ownership and less than 50% direct or indirect ownership were dropped. Furthermore, we excluded all financial and insurance subsidiaries (2-digit NACE Code 64 to 66) in order to focus on production related industries, accounting for additional 35,076 dropped data entries. We ended up with a total number of 52,268 non-financial subsidiaries that were fully owned by the 4,462 sample companies. Table 3 shows the proportion of controlled, non-financial subsidiaries per country of origin. The table shows that on average about 50% of the total subsidiaries are domiciled in the

home country and about one-quarter each is domiciled in the other European sample countries and in third countries. Whereas the smaller countries like Denmark, Finland, Ireland or Netherlands show a rather small percentage of domestic subsidiaries, larger economies like Germany, Spain, Great Britain and Poland show an extensively high proportion of domestic subsidiaries. In order to test for hypothesis 1, we aggregated the proportion of the individual foreign subsidiaries ratio, which is the inverse proportion of non-domestic subsidiaries to total subsidiaries.

4.3 Independent variables

The explanatory variables in our analysis are dummy variables that display the listing location. In order to test for hypothesis 1, we constructed two dummy variables indicating if the company is foreign listed (cross-listed or foreign IPO listed) or foreign IPO listed. The financial foreignness dummy is coded 1 if the country of incorporation is different to the listing country and 0 otherwise, whereas the foreign IPO dummy is coded 1 if the country of incorporation is different to the country where the company's main exchange is located and 0 otherwise. This implies that a multiple listed company is counted repeatedly and in the case of cross-listings at least once as a domestic listing and at least once as a foreign listing. The reason for generating two dummy variables for financial foreignness is that prior studies indicated a different behavior of cross-listings and foreign IPOs. While for example Saudagaran (1988) includes foreign IPOs and foreign cross-listings, similar studies like for example Pagano et al. (2002) only included cross-listed companies in their sample. For the analysis of hypothesis 2, we constructed dummy variables for each listing location, where the dummy variable is coded 1 if the company is listed on a specific stock exchange and 0 otherwise.

4.4 Control variables

Firm size The size of foreign listed companies is found to be larger than compared to domestic companies, which is explained with the presence of economies of scale in foreign listings, reflecting fixed costs combined with benefits that increase with company size (Pagano et al., 2002). A large company places larger demands on equity markets, thus benefiting more from a wider shareholder base. Furthermore, scholars have found that larger companies, due to less structural and financial obstacles, are often more international (e.g. Banalieva & Robertson, 2010, Curwen & Whalley, 2006, Claessens & Schmukler, 2007). Due to data availability, we measure firm size by the total number of employees (in thousands).

Firm age Following the eclectic paradigm of Dunning (2000) companies increase their degree of internationality over time. This may imply that older companies tend to be more embedded than recently founded firms although exceptions from this rule (e.g. born internationals) may exist. Hence, a firm´s age has been used as a control variable in internationalization theory. We measure firm age by taking the year of incorporation, which is subtracted from 2014.

Listing period Bell et al. (2012) argue that firms become more familiar and acquire knowledge about the host market over time. As knowledge about the host market is accumulated over time, liabilities of foreignness are expected to diminish. In order to control for this change in operational activity over time, the duration of the listing is taken as a control variable. We measure this duration by taking the year the company was listed and subtract it from 2014.

High-tech sector dummy Pagano et al. (2002) show that cross-listed firms are R&D intensive. This agrees with the idea that high-tech companies turn to foreign equity markets for capital because foreign investors and intermediaries know more about the company's business than their domestic counterparts, and thus, can better evaluate its stock (Pagano

et al., 2002). Therefore, we construct a high-tech sector dummy that controls for R&D intensity based on the NACE Rev. 2 industry classification. In order to do so, we follow the aggregation of Eurostat, and coded the variable as 1, if the industry is classified as "high-technology", "medium-high-technology" or "high-tech knowledge-intensive services" and 0 otherwise.

Internationalization While testing for hypothesis 2, we also control for the level of internationalization as the percentage of foreign sales to total sales. The intention is that companies that are more international show less operational activity in their host country than compared to less international companies.

Financial internationalization We also control for financial internationalization of foreign listed companies, as companies that are listed on multiple stock exchanges are on average less embedded in their respective host countries. The financial internationalization is measured by the total number of different stock exchanges a firm is listed on.

5 Results

5.1 Descriptive statistics

Table 4 and 5 show the descriptive statistics for the various regression measures. As an indicator of international orientation, the table includes foreign subsidiaries as a proportion of total subsidiaries. The observations show a mean foreign subsidiaries ratio of 40.82%, which is higher for foreign listed companies as compared to domestic listed companies. Hence, the data suggests that a foreign listing may be more likely to be pursued by international oriented companies and/or is part of an expansion strategy to foreign markets. The mean company has 11,640 employees, is 44.44 years old and 13.59 years listed. The values for domestic and foreign listed companies differ in the sense that foreign listed companies are larger, older and listed longer than compared to their domestic counterparts. There is also huge variation

within the variables, where for example the number of employees ranges from 0 to 629,140, and the listing period ranges from 1 to 151 years.

As expected, the correlation matrix indicates a significant relationship between the independent variables and the foreign subsidiaries ratio. Furthermore, it appears that primarily larger, older, high-tech and longer listed companies tend to list on foreign markets. As expected, also firm age and listing period are positively associated and high-tech sector companies appear to be younger and more recently listed. Although, we think that these correlations do not cause any problems in terms of multicollinearity, we calculated variance inflation factors indicating a lack of multicollinearity.

Insert table near 6 and 5 here

In table 4, we show the subsidiaries ratios for foreign listed companies per country of listing. The table shows that the number of foreign listings for which subsidiaries data was provided is rather small for most of the stock exchanges. Only the Boerse Frankfurt and the London Stock Exchange provide an extensively high number of foreign listings. However, the average proportion of host market operational activity for these two markets seems rather low than compared to other European countries. The picture seems to be inverse for most of the smaller markets, where the companies listed in Austria, Spain, Finland, Ireland or Poland show an extremely high proportion of host market operational activity.

Insert table 4 near here

5.2 Regression results

To test for hypothesis 1, we use OLS regression, where the dependent variable is the foreign subsidiaries ratio capturing international diversification of companies as defined previously.

In that respect, model 1 in table 7 only includes control variables and indicates that firm size, firm age, the listing period and high-tech industry affiliation positively influence the foreign subsidiaries ratio. The main results for hypothesis 1 are presented in models 2 to 4, and show that financial foreignness leads to increased foreign operational activity. These results are in line with the expected result and are comparable to prior studies (e.g. Pagano et al., 2002, Saudagaran, 1988, Hasan et al., 2011). In model 2 we added the financial foreignness dummy and found that financial foreignness positively influences the foreign subsidiaries ratio (ß=12.17, $p<0.01$). This addition further increased the explained variance in the model. Instead of the total number of foreign listed companies, model 3 only measures the influence of foreign IPOs on the foreign operational activity and results are similar to model 2 (ß=26.72, $p<0.01$), although the coefficient is much higher. Hence, in both model specifications, we find international equity offering is significantly associated with higher international diversification. Finally, model 4 includes both the financial foreignness dummy and the foreign IPO dummy. The results indicate that a foreign listing is associated to an increased foreign operational activity, where the effect is larger for foreign IPOs than compared to cross-listed companies (ß=10.93, $p<0.01$ and ß=20.38, $p<0.01$).

Insert table 7 near here

To provide empirical evidence on the relation between a company's foreign listing and host market operational activity, we run an OLS regression including the subsidiaries ratio per country of listing as dependent variable. The results are shown in table 8 and reveals if foreign companies are more operationally active in their host country than compared to the other sample markets. The findings are mixed for the sample countries and indicate a positive and significant effect for companies listed in Austria (ß=26.89, $p<0.01$), Finland (ß=49.65, $p<0.01$), France (ß=13.31, $p<0.05$), Ireland (ß=12.11, $p<0.01$), Netherlands (ß=18.73, $p<0.01$), Poland (ß=16.02, $p<0.01$) and Sweden (ß=20.68, $p<0.01$). However,

no significant results are found for foreign listed companies in Germany (ß=0.15, p>0.10), Denmark (ß=0.41, p>0.10), Great Britain (ß=5.56, p>0.10) and Italy (ß=2.15, p>0.10). For Belgium and Spain we do not have any results, as there is only one foreign company listed. Although the number of foreign listings is quite small for most of the sample markets, the results mostly indicate support for hypothesis 2. Hence, foreign listed companies have a higher proportion of subsidiaries in their respective host market. This result holds especially true for the smaller stock exchanges in the sample, with the exception of Denmark and Italy. Interestingly, the result indicate that there is no host market effect for companies listed on the two largest European stock exchanges, London Stock Exchange and Boerse Frankfurt.

Insert table 8 near here

5.3 Robustness checks

5.3.1 Estimation methodology

Although we argue that the relationship between financial and product market internationalization works in both ways, we only used OLS regression to predict if financial internationalization influences operational internationalization so far. Due to our theoretical framework and data restrictions, we believe that this approach is more suitable to our hypothesis. However, in order to proof our results and compare the results to studies on the choice of the listing location, we also run LOGIT regressions using financial internationalization as the dependent variable and operational internationalization as the independent variable. Results are very similar and indicate that operational internationalization is a means to predict financial internationalization.

5.3.2 Dependent variable

In order to control for effects in the calculation of the subsidiaries ratios, we controlled for a different construction of the variable. More specific, we ran the regression analysis without dropping financial/insurance subsidiaries and/or without dropping subsidiaries with lower ownership than 50% or no ownership stated. Results stay the same for either of the two different variables constructions.

To consider the size and therefore the importance of the different subsidiaries, we also calculated the proportion of sales, employees and assets to the total value of sales, employees and assets of the subsidiaries within the sample. The regression results using these measures as dependent variables, leads to very similar results.

Although this paper relies on subsidiary data in order to track the operational activity per country, we use the foreign sales ratio as an additional dependent variable in the analysis of hypothesis 1. The foreign sales ratio is most often used in empirical studies on internationalization and measures the proportion of foreign sales to total sales, where domestic is defined as the country of incorporation (Pagano et al., 2002, Saudagaran, 1988). The analysis mainly serves as a proof of similarity and applicability of the subsidiaries ratio as a proxy for foreign business activity. The results are very similar to the results obtained using the foreign subsidiaries ratio, where financial foreignness leads to operational internationalization.

5.3.3 Control variables

We also run the regressions also by including further, removing existing and changing control variables. In that respect, the industry is a frequently chosen control variable (e.g. Lane, 1998, Nachum, 2010) in internationalization theory since scholars have demonstrated that it may affect a firm´s performance and thus also indicates foreignness. Furthermore, firms from certain industries may choose to locate on certain international stock exchanges due to location-specific characteristics of the host country, historical links, or a "follow-the-leader" effect (Pagano et al., 2002). Although we already indicated an industry effect by controlling

for the high-tech industry, we additionally controlled for industry by distinguishing between manufacturing and service industries, thus coding the dummy variable as 1 if the company is from the service industry and 0 otherwise. The results differ slightly in their magnitude, but basic outcomes are similar.

Furthermore, prior studies on the decision to list abroad (Pagano et al., 2002) and on the implications of foreign listing decisions (e.g. Hasan et al., 2011) controlled for return on assets (ROA) as a measure of firm performance. Although we believe that this is not applicable in our setting, the basic results do not change if we control for ROA. Slight differences in the magnitude are mainly due to missing data and the associated reduction of observations.

Similarly, results do change slightly if we use the value of total assets or total sales as proxies for firm size instead of the total number of employees. These differences are also mainly due to missing data of assets and sales and the respective smaller sample size. Nevertheless, basic results do not change even with the smaller sample.

Finally, we further excluded firm age due to a potential effect of multicollinearity within the independent variables, leading to no change in the results.

6 Discussion, Implications and Limitations

6.1 Discussion

The increasing trend of globalization which increasingly drives companies towards spreading their activities on multiple foreign markets rather than focusing on their country of origin, has changed the motives and implications of firms choosing to internationalize. Therefore, the aim of this study is to explore the relationship between financial and operational internationalization, a topic that has been underexplored in international business and finance research so far (Hasan et al., 2011). More specifically, our analysis examines the link between financial foreignness and international operational activity, with a special focus on host market operational activity.

The results for hypothesis 1 indicate that companies performing foreign equity offerings show an increased level of foreign operational activity. To be more specific, we found that foreign listed companies have a higher proportion of foreign subsidiaries as compared to domestic listed companies. Hence, our findings lend strong support that firms with the intention to expand their operations beyond the boundary of their home countries can use certain financial strategies to acquire and control valuable, rare and costly-to-imitate resources and capabilities to gain competitive advantage. Besides potential benefits due to increased visibility among investors and customers (Saudagaran, 1988), a foreign listing may be used to signal confidence and serious intentions of subsequent internationalization, leading to higher valuations at the IPO stage (Hasan et al., 2011). Although the relationship between financial and operational internationalization has been shown before (e.g. Pagano et al., 2002, Hasan et al., 2011), prior empirical research has neglected the effect of financial internationalization on host market operational activity.

Therefore, we are to the best of our knowledge the first to empirically test the relationship between the location of equity listing and the host market operational activity of foreign listed companies. The results provide mixed evidence for hypothesis 2 and show that a foreign listing in Austria, Finland, France, Ireland, Netherlands, Poland and Sweden is associated with a significant increase in the relative number of subsidiaries in the host country. Therefore, we agree with Chaplinsky & Ramchand (2000) that the motives for issuing equity in multiple markets are not purely financial. Our empirical investigation provides strong indication that the way a firm finances its future investments also serves as a strategic tool to increase name recognition and expanded network with foreign stakeholders, both increasing a firm's visibility in the host market. However, we do not find such an effect for foreign listed companies in Germany and Great Britain. Hence, foreign listed companies on the London Stock Exchange and on the Boerse Frankfurt appear to have different motives and face different implications than compared to companies listed on smaller European stock exchanges. These result is in line with prior research indicating that the main benefit of listing on a sizeable market may

be that the firm's shares are available to a wider group of global investors, as opposed to a smaller group of domestic investors (Hail & Leuz, 2009). Thus, firms incorporated in smaller domestic capital markets are more likely to list abroad for the purpose of lowering its cost of capital (Saudagaran, 1988). Therefore, although we find a positive relationship between the location of equity listing and the proportion of subsidiaries in the host market, the effect is only present for companies that list on small stock exchanges. Nevertheless we provide an important finding, as our results provide an explanation of firms' willingness to list on stock markets that are smaller than their home market exchanges.

Furthermore, scholars have argued that barriers for foreign firms, compared to domestic firms, are equally present on capital markets (Bell et al., 2012). Therefore, it is generally accepted that foreign firms tend to face larger disadvantages and find it harder to gain legitimacy in the host market compared to domestic firms due to information deficits and obstacles related to culture (Xu & Shenkar, 2002). This argument leads to the shortsighted conclusion that the financial foreignness aspect of listed companies automatically translates into a lower degree of operational activity in the host market. However, our results indicate that foreign listed companies on small European stock exchanges show an extremely high level of operational activity in their host markets. Thus, the classification of "foreignness" through the country of incorporation may be inappropriate for these companies. In that respect, table 9 shows the number of companies that have an even higher operational activity in their host country than compared to their home country. The descriptive statistics show that smaller European stock exchanges show an extremely high percentage of foreign listed companies that do have their main operational activity in the host country. As a consequence, we question the negative consequences of financial foreignness, and thus the liability of foreignness for these companies. By arguing that at least part of the companies that are listed on smaller stock exchanges show more operational activity in their host country than compared to their country of incorporation, the decision to list abroad may simply be an obvious choice to minimize the costs of capital.

Insert table 9 near here

6.2 Implications and contribution

Although there already exists clear evidence that a firm's strategic decisions will have financial consequences, less is known whether a firm's financial decisions have any strategic consequences (Hasan et al., 2011). Therefore, we include both theoretical arguments in our study of the interplay between financial and operational internationalization, by integrating the resource based view, signaling theory and the liability of foreignness in capital markets. More specifically, we demonstrate that firms listed on a foreign stock market have a higher proportion of operational activity abroad, where for companies that are listed on small stock exchanges the foreign operational activity is mainly located in the host market. In that respect, we argue that listing on the exchange of the host market provides a valuable, rare and costly-to-imitate resource that explains why these firms gain advantages by reaping lower costs of capital and reaching a higher number of customers (Peng & Su, 2014). In addition, increased operational activity in the host country leads to a certain familiarity with the local institutional environment and helps to identify potential competitive disadvantages to domestic listed companies, reducing the liability of foreignness and thus the costs of listing. These benefits may be even increased in the long run, as the listing costs have been amortized and the foreign listed firm enjoys the lower cost of capital that can facilitate its growth (Bell et al., 2012).

By providing evidence for the influence of financial decisions on the operational activity in foreign markets, this study adds to prior international business and finance research and introduces a firm-specific explanation of the motives and implications of foreign listing decisions. Furthermore, the results show that the spillover effect of a foreign listing on the operational activity in the host country is only present for companies listing on small foreign capital markets. In that respect, we do not only support our hypothesis that a foreign

listing leads to an increased host market operational activity, we even show that most companies on smaller capital markets have a higher operational activity in their host country than compared to their home country. As a consequence, our results provide doubts on the appropriateness of the "foreignness" of firms that are listed in a foreign country, but actually display a high degree of operational activity in that market. Therefore, the findings also challenge the operationalization of foreignness in existing empirical studies including foreign listed companies. Especially the costs of unfamiliarity, referred to as costs arising through a lack of knowledge about the foreign country's values, norms, business practices, culture and the market in general may not be present, if firms are intensively operationally active in their host market. Therefore, we provide implications for future research, in the sense that foreignness, defined as the country of incorporation, may not be a correct operationalization within the theoretical idea of the liability of foreignness on capital markets concept.

However, our results do not only have implications for international business and finance research, we also provide important insights for companies deciding on the location of equity listing. Firms may better evaluate the benefits and costs of listing on a certain stock exchange, where a foreign listing may be beneficial compared to a domestic listing. In that respect, while listing on a large stock market may provide certain financial benefits, a listing on a rather small market may provide spillover effects for the operational activity in the respective host country.

6.3 Limitations and future research

While our study contributes to the question why companies list on certain foreign stock exchanges, it also suffers a few limitations. One of the major limitations can be attributed to the focus on European companies. Although we believe that the diverse set of different stock exchanges in the sample provides important insight to the academic discourse, a European based sample naturally impacts the generalizability of the results. Therefore, further research should expand the scope of analysis by including other relevant stock exchanges.

Consequently, comparing the results with companies listed on other global stock markets would contribute to a better understanding on the relationship between the choice of the listing location and the degree of operational activity in the host country. In addition, the results have to be taken with caution, as the foreign listed firm sample is rather small for some of the stock exchanges. Although, we think that these stock markets also add important understanding for the motives and implications of foreign listed companies that decide to list on small stock markets, the rather small number of foreign listed companies limits the validity of the study. Furthermore, the lack of available data makes a more precise analysis, differing between the motives and the implications of the foreign listing decision, impossible. The static nature of the study also conflicts with the dynamic nature of the liability of foreignness concept. Finally, the degree of operational activity is reflected in attitudinal and organizational variables too. Strategic orientation of management, staffing policy, corporate culture, relationships between headquarters and subsidiaries, the existence of joint-ventures and alliances in the host country, relations to governments and foreign trade associations or compliance with regional laws, regulations and business practices are only some of the vast set of additional possible explanatory variables that would allow to better capture a firm's degree of operational activity in the host market.

7 Concluding remarks

Based on the persistent trend of globalization and its consequences on intensified competition and market integration, we provide combine the resource based view, signaling theory and the liability of foreignness in capital markets to explain the relationship between financial and operational internationalization. In that respect, we show that foreign listed companies show a higher degree of foreign operational activity than compared to their domestic counterparts. Furthermore, foreign listed companies on small European stock exchanges are significantly more active in their respective host countries than in other foreign markets, where some of

these companies have even more subsidiaries in their host country than compared to their home country. As a consequence, we question the "foreignness" of these companies and the appropriate operationalization in prior empirical studies. However, by providing different theoretical explanations for this effect, we do not only draw on finance research, but also probe into the strategic nuances associated with foreign listings that have been overlooked in previous research (Hasan et al., 2011). The results of this study may further help to revive researchers' interest in financial internationalization and its consequences on the competitive advantage of international firms. Thus, we do not only show that a foreign listing may be a financial decision that deserves to be studied by finance researchers. We also show that listing on a small stock market may be a strategic decision with a significant impact on the operational activity in the host market.

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Appendix

Sample countries.

Country code	Country	Stock Exchange	Market capitalization in bnUSD[a]
AT	Austria	Vienna Stock Exchange	106
BE	Belgium	Euronext Brussels	300
DE	Germany	Boerse Frankfurt	1,486
DK	Denmark	Nasdaq OMX Copenhagen	225
ES	Spain	Bolsa de Madrid	995
FI	Finland	Nasdaq OMX Helsinki	159
FR	France	Euronext Paris	1,823
GB	Great Britain	London Stock Exchange	3,019
IE	Ireland	Irish Stock Exchange	109
IT	Italy	Borsa Italiana	480
NE	Netherlands	Euronext Amsterdam	651
PL	Poland	Warsaw Stock Exchange	178
SE	Sweden	Nasdaq OMX Stockholm	561

[a] *Source: www.quandl/com/c/economics/stock-market-capitalization-by-country, 2015/03/15*

Table 1: Data sample

Number of non-financial European listings per country of origin.

	Country of Origin																
Stock Exchange	AT	BE	DE	DK	ES	FI	FR	GB	IE	IT	NL	PL	SE	Domestic	Foreign cross-list	Foreign IPO	**Total**
Vienna Stock Exchange	68	0(0)	0(0)	0(0)	0(0)	0(0)	1(0)	1(1)	0(0)	0(0)	1(1)	0(0)	0(0)	68	1	2	**71**
Euronext Brussels	0(0)	132	0(0)	0(0)	0(0)	0(0)	1(1)	2(2)	0(0)	0(0)	2(2)	0(0)	0(0)	132	0	5	**137**
Boerse Frankfurt	48(6)	49(0)	555	33(0)	39(0)	53(0)	198(0)	427(35)	27(2)	96(1)	65(6)	16(0)	96(0)	555	1,097	50	**1,702**
Nasdaq OMX Copenhagen	0(0)	0(0)	0(0)	118	0(0)	0(0)	1(0)	1(0)	0(0)	0(0)	0(0)	0(0)	1(0)	118	3	0	**121**
Bolsa de Madrid	0(0)	0(0)	0(0)	0(0)	87	0(0)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)	0(0)	87	0	1	**88**
Nasdaq OMX Helsinki	0(0)	0(0)	0(0)	0(0)	0(0)	112	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	4(0)	112	4	0	**116**
Euronext Paris	0(0)	6(6)	1(1)	1(1)	1(1)	0(0)	718	4(2)	0(0)	2(1)	2(2)	0(0)	0(0)	718	3	14	**735**
London Stock Exchange	28(0)	47(0)	172(2)	34(0)	45(3)	49(1)	182(0)	1,157	43(17)	121(1)	63(7)	28(0)	113(0)	1,157	894	31	**2,082**
Irish Stock Exchange	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	0(0)	4(0)	32	0(0)	0(0)	0(0)	0(0)	32	4	0	**36**
Borsa Italiana	0(0)	1(0)	9(0)	0(0)	1(0)	1(0)	12(0)	0(0)	0(0)	216	4(0)	0(0)	0(0)	216	28	0	**244**
Euronext Amsterdam	0(0)	1(1)	3(0)	0(0)	1(0)	1(0)	1(0)	7(3)	0(0)	3(0)	85	0(0)	0(0)	85	13	4	**102**
Warsaw Stock Exchange	1(0)	0(0)	0(0)	0(0)	0(0)	0(0)	1(0)	3(1)	0(0)	0(0)	7(6)	704	1(1)	704	5	8	**717**
Nasdaq OMX Stockholm	0(0)	0(0)	0(0)	2(1)	0(0)	4(0)	0(0)	3(1)	0(0)	0(0)	0(0)	1(0)	375	375	8	2	**385**
Domestic	68	132	555	118	87	112	718	1,157	32	216	85	704	375				**4,359**
Foreign cross-list	71	97	182	68	83	107	396	407	51	219	120	45	214				**2,060**
Foreign IPO	6	7	3	2	4	1	1	46	19	3	24	0	1				**117**
Total	**145**	**236**	**740**	**188**	**174**	**220**	**1,115**	**1,610**	**102**	**438**	**229**	**749**	**590**	**4,359**	**2,060**	**117**	**6,536**

Table 2: Listed companies on EU regulated markets per country of incorporation

Subsidiaries ratios of listed companies per country of origin.

		Percent of subsidiaries per country																
Country of origin	**N**	AT	BE	DE	DK	ES	FI	FR	GB	IE	IT	NL	PL	SE	3rd	**Domestic**	**Foreign Europe**	**Foreign 3rd country**
Austria	134	46.39	0.42	12.37	0.16	0.82	0.32	2.65	4.65	0.30	1.72	0.63	2.60	0.47	26.49	46.39	27.12	26.49
Belgium	187	0.33	42.52	5.47	0.42	1.91	0.19	12.67	3.12	0.50	1.06	4.54	1.41	0.61	25.25	42.52	32.23	25.25
Germany	607	2.17	1.05	60.17	0.32	1.81	0.35	4.08	3.14	0.34	1.72	2.62	1.32	0.74	20.17	60.17	19.66	20.17
Denmark	157	0.80	0.96	7.95	35.54	2.18	1.15	2.49	3.88	1.50	2.27	3.86	3.15	4.24	30.02	35.54	34.44	30.02
Spain	161	0.60	0.73	2.65	0.24	61.96	0.06	5.61	3.27	0.20	2.56	1.10	1.01	0.24	19.77	61.96	18.27	19.77
Finland	215	0.76	1.57	6.75	1.84	0.75	37.26	2.57	4.25	0.35	1.41	2.12	1.84	7.82	30.70	37.26	32.04	30.70
France	921	0.66	2.21	4.88	0.33	3.28	0.28	58.61	5.09	0.44	2.34	1.30	1.32	0.84	18.42	58.61	22.97	18.42
Great Britain	1,230	0.28	0.62	3.56	0.47	1.74	0.25	1.95	67.74	1.54	0.59	1.93	0.61	0.44	18.28	67.74	13.97	18.28
Ireland	75	0.20	1.29	1.99	0.34	2.65	0.11	0.47	26.47	34.85	0.07	4.32	0.65	0.82	25.76	34.85	39.39	25.76
Italy	404	0.57	0.55	5.72	0.25	4.08	0.29	5.38	4.55	0.35	53.80	1.04	2.19	0.62	20.61	53.80	25.59	20.61
Netherlands	209	1.66	3.95	9.92	0.56	3.06	0.92	4.12	4.76	0.39	1.51	33.07	2.33	2.20	31.54	33.07	35.39	31.54
Poland	477	0.20	0.08	3.35	0.09	0.18	0.02	0.16	0.39	0.03	0.32	0.03	88.13	0.16	6.87	88.13	5.00	6.87
Sweden	478	0.49	0.99	3.65	3.71	0.83	4.18	1.94	6.49	0.29	0.93	1.56	0.96	54.66	19.32	54.66	26.02	19.32
Total	**5,255**	**55.12**	**56.94**	**128.46**	**44.27**	**85.25**	**45.36**	**102.71**	**137.81**	**41.08**	**70.30**	**58.12**	**107.52**	**73.85**	**293.20**	**51.90**	**25.55**	**22.55**

Table 3: Subsidiaries ratios of listed companies in the sample countries

Descriptive statistics hypothesis 1.

	Full sample					*Domestic*					*Foreign*				
	N	*Mean*	*S.D.*	*Min*	*Max*	N	*Mean*	*S.D.*	*Min*	*Max*	N	*Mean*	*S.D.*	*Min*	*Max*
Foreign subsidiaries ratio	5,255	40.82	38.07	0.00	100.00	3,344	33.77	37.36	0.00	100.00	1,911	53.16	36.12	0.00	100.00
Financial foreignness dummy	6,536	0.33	0.47	0.00	1.00										
Foreign IPO dummy	6,536	0.02	0.13	0.00	1.00	4,359	0.00	0.00	0.00	0.00	2,177	0.05	0.23	0.00	1.00
Firm size	5,600	11.64	40.60	0.00	629.14	3,593	6.97	31.55	0.00	629.14	2,007	20.00	52.05	0.00	629.14
Firm age	6,282	40.56	44.44	1.00	649.00	4,177	36.77	41.67	1.00	649.00	2,105	48.07	48.62	1.00	649.00
Listing period	5,349	13.75	13.59	1.00	151.00	3,668	12.90	12.73	1.00	151.00	1,681	15.58	15.14	1.00	151.00
High tech sector dummy	6,536	0.33	0.47	0.00	1.00	4,359	0.32	0.47	0.00	1.00	2,177	0.35	0.48	0.00	1.00

Table 4: Descriptive statistics hypothesis 1

Correlation matrix hypothesis 1 (N=6,536)	1	2	3	4	5	6	7
1 Foreign subsidiaries ratio	1						
2 Financial foreignness dummy	0.2451 ***	1					
3 Foreign IPO dummy	0.0975 ***	0.1910 ***	1				
4 Firm size	0.1217 ***	0.1539 ***	-0.0130	1			
5 Firm age	0.1549 ***	0.1200 ***	-0.0702 ***	0.1617 ***	1		
6 Listing period	0.1050 ***	0.0917 ***	-0.0601 ***	0.1024 ***	0.4331 ***	1	
7 High tech sector dummy	0.1287 ***	0.0286 **	-0.0214	-0.0214	-0.0278 **	-0.0288 **	1

Note: * p<0.10; ** p<0.05; *** p<0.01.

Table 5: Correlation matrix hypothesis 1

Subsidiaries ratios of foreign listed companies per country of listing.

	AT			BE			DE			DK			ES			FI			FR		
	N	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*
Subsidiaries ratio Austria	3	26.19	25.08	3	0.00	0.00	967	2.69	11.55	3	0.55	0.95	1	0.00	0.00	4	0.98	1.15	11	0.07	0.23
Subsidiaries ratio Belgium	3	0.00	0.00	3	0.00	0.00	967	3.13	12.63	3	0.37	0.63	1	0.00	0.00	4	3.48	4.45	11	0.13	0.29
Subsidiaries ratio Germany	3	2.38	4.12	3	40.00	52.92	967	5.59	12.62	3	0.55	0.95	1	0.00	0.00	4	1.40	1.69	11	20.92	32.84
Subsidiaries ratio Denmark	3	0.00	0.00	3	0.00	0.00	967	1.55	8.61	3	7.59	12.67	1	0.00	0.00	4	1.53	2.10	11	1.58	5.01
Subsidiaries ratio Spain	3	2.38	4.12	3	0.00	0.00	967	4.54	14.36	3	0.00	0.00	1	100.00	0.00	4	4.03	4.38	11	7.31	16.75
Subsidiaries ratio Finland	3	0.00	0.00	3	0.00	0.00	967	2.33	9.89	3	5.17	5.60	1	0.00	0.00	4	29.59	47.06	11	0.31	0.84
Subsidiaries ratio France	3	2.38	4.12	3	40.00	52.92	967	11.39	23.88	3	0.37	0.63	1	0.00	0.00	4	3.90	4.30	11	22.58	29.66
Subsidiaries ratio Great Britain	3	2.38	4.12	3	0.00	0.00	967	24.69	35.62	3	8.97	15.54	1	0.00	0.00	4	3.35	4.71	11	19.56	31.11
Subsidiaries ratio Ireland	3	0.00	0.00	3	0.00	0.00	967	1.38	7.12	3	0.92	1.59	1	0.00	0.00	4	0.98	1.15	11	2.03	5.91
Subsidiaries ratio Italy	3	2.38	4.12	3	0.00	0.00	967	5.67	17.82	3	0.00	0.00	1	0.00	0.00	4	0.98	1.15	11	9.54	24.72
Subsidiaries ratio Netherlands	3	0.00	0.00	3	0.00	0.00	967	3.76	12.36	3	2.20	3.81	1	0.00	0.00	4	1.53	2.10	11	2.23	4.97
Subsidiaries ratio Poland	3	11.42	19.77	3	0.00	0.00	967	2.76	12.10	3	0.18	0.32	1	0.00	0.00	4	0.98	1.15	11	0.19	0.44
Subsidiaries ratio Sweden	3	16.67	28.87	3	0.00	0.00	967	4.81	16.02	3	15.00	25.50	1	0.00	0.00	4	17.09	19.54	11	0.39	0.91

table continued	GB			IE			IT			NL			PL			SE		
	N	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*	*N*	*Mean*	*S.D.*
Subsidiaries ratio Austria	854	2.45	9.87	4	0.00	0.00	27	0.92	1.19	15	0.81	1.56	10	0.63	1.98	9	0.14	0.41
Subsidiaries ratio Belgium	854	3.37	12.32	4	0.00	0.00	27	2.58	3.64	15	0.70	1.61	10	0.00	0.00	9	0.14	0.41
Subsidiaries ratio Germany	854	14.47	24.59	4	0.00	0.00	27	15.47	21.22	15	12.76	24.16	10	2.05	4.73	9	6.80	12.49
Subsidiaries ratio Denmark	854	1.81	8.22	4	0.00	0.00	27	0.75	0.95	15	0.34	0.62	10	0.48	1.51	9	0.60	1.40
Subsidiaries ratio Spain	854	5.40	15.44	4	0.00	0.00	27	4.03	9.98	15	4.49	13.57	10	0.00	0.00	9	1.38	2.80
Subsidiaries ratio Finland	854	2.75	10.73	4	0.00	0.00	27	0.95	1.99	15	0.75	2.57	10	0.00	0.00	9	5.28	8.88
Subsidiaries ratio France	854	12.77	24.23	4	0.00	0.00	27	23.73	31.23	15	8.62	21.60	10	1.90	6.02	9	2.91	4.24
Subsidiaries ratio Great Britain	854	5.89	12.93	4	30.84	25.36	27	6.28	4.44	15	12.79	17.70	10	0.00	0.00	9	8.17	11.69
Subsidiaries ratio Ireland	854	1.71	9.70	4	35.31	46.46	27	0.68	1.17	15	0.07	0.20	10	0.00	0.00	9	4.40	10.98
Subsidiaries ratio Italy	854	8.55	22.04	4	0.00	0.00	27	3.30	4.25	15	15.16	31.48	10	0.00	0.00	9	3.61	8.21
Subsidiaries ratio Netherlands	854	4.19	13.11	4	12.50	25.00	27	5.28	9.72	15	10.52	15.83	10	5.71	18.07	9	2.31	3.99
Subsidiaries ratio Poland	854	4.40	16.02	4	0.00	0.00	27	1.41	1.52	15	3.01	8.75	10	26.57	29.90	9	2.40	4.96
Subsidiaries ratio Sweden	854	6.70	19.17	4	0.00	0.00	27	1.03	1.72	15	0.78	2.20	10	0.00	0.00	9	12.50	15.86

Table 6: Descriptive statistics hypothesis 2

Regression results hypothesis 1.

	Model 1	Model 2	Model 3	Model 4
Control variables				
Firm size	0.1196 ***	0.1017 ***	0.1182 ***	0.1024 ***
Firm age	0.0397 ***	0.0374 ***	0.0425 ***	0.0398 ***
Listing period	0.1179 ***	0.1134 ***	0.1241 ***	0.1186 ***
High-tech sector dummy	10.4226 ***	10.2039 ***	10.3555 ***	10.1749 ***
Home country dummies	YES	YES	YES	YES
Host country dummies	YES	YES	YES	YES
Independent variable				
Financial foreignness dummy		12.1712 ***		10.9329 ***
Foreign IPO dummy			26.7196 ***	20.3760 ***
N	3,688	3,688	3,688	3,688
F-ratio	26.49 ***	27.54 ***	26.56 ***	27.17 ***
Adjusted R^2	0.1622	0.1727	0.1674	0.1755

Note: * p<0.10; ** p<0.05; *** p<0.01.

Table 7: Regression results hypothesis 1

Regression results hypothesis 2.

	AT	BE	DE	DK	ES	FI	FR	GB	IE	IT	NL	PL	SE
Control variables													
Firm size	-0.0009	-0.0001	-0.0114	-0.0025	-0.006637	0.0025	0.0087	-0.0023	0.0049	-0.0034	-0.0099	0.0034	-0.0002
Firm age	-0.0114 **	0.0001	0.0004	0.0043	0.0025978	-0.0006	-0.0097	-0.0095	0.0000	0.0073	-0.0024	0.0002	-0.0175 ***
Listing period	-0.0276	-0.0077	-0.0728 **	0.0153	0.0044756	0.0192	0.0156	0.0379	0.0072	0.0175	0.03328 **	0.0001	0.0001
High-tech sector dummy	-0.1475	-0.8595	2.9596 ***	-0.1362	1.773345 ***	-0.7649	-3.2054 ***	-2.5302 *	0.2073	-1.0609 *	-0.8846	-0.6051 *	0.3851
Internationalization	0.0038	-0.0205 **	-0.0366 **	0.0025	-0.000421	-0.0288 ***	-0.0407 ***	-0.0611 ***	-0.0085	-0.0073	0.00841	0.0012	-0.0211 **
Financial internationalization	0.7716	0.1999	0.1375	0.5749	0.162628	-1.2468 **	-2.1949 **	-3.0161 **	0.3172	0.4484	0.44155	0.3102	-0.2633
Home country dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Host country dummies	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Independent variable													
Stock exchange dummy	26.8873 ***		0.1486	0.4082		49.6454 ***	13.3131 **	5.5598	12.1133 ***	2.1487	18.7289 ***	16.0241 ***	20.6808 ***
N	1,010	1,010	1,010	1,010	1010	1,010	1,010	1,010	1,010	1,010	1,010	1,010	1,010
F-ratio	39.64 ***	21.93 ***	28.79 ***	8.38 ***	25.12 ***	33.53 ***	33.48 ***	43.43 ***	29.51 ***	27.98	12.40 ***	242.54 ***	34.19 ***
Adjusted R^2	0.5175	0.3674	0.4354	0.1701	0.4009	0.4729	0.4741	0.5407	0.4417	0.4282	0.2404	0.8702	0.4795

Note: * p<0.10; ** p<0.05; *** p<0.01.

Table 8: Regression results hypothesis 2

Host vs. home market business activity of listed companies per stock exchange.

	Cross-listed companies			Foreign IPO companies			Total foreign companies		
Stock Exchange	**Total**	**Host/Home**	**Percentage**	**Total**	**Host/Home**	**Percentage**	**Total**	**Host/Home**	**Percentage**
Vienna Stock Exchange	1	1	100%	2	1	50%	3	2	67%
Euronext Brussels	0	0	-	5	0	0%	5	0	0%
Boerse Frankfurt	1,097	77	7%	50	6	12%	1,147	83	7%
Nasdaq OMX Copenhagen	3	0	0%	0	0	-	3	0	0%
Bolsa de Madrid	0	0	-	1	1	100%	1	1	100%
Nasdaq OMX Helsinki	4	1	25%	0	0	-	4	1	25%
Euronext Paris	3	0	0%	14	4	29%	17	4	24%
London Stock Exchange	894	72	8%	31	7	23%	925	79	9%
Irish Stock Exchange	4	1	25%	0	0	-	4	1	25%
Borsa Italiana	28	2	7%	0	0	-	28	2	7%
Euronext Amsterdam	13	1	8%	4	1	25%	17	2	12%
Warsaw Stock Exchange	5	2	40%	8	3	38%	13	5	38%
Nasdaq OMX Stockholm	8	3	38%	2	0	0%	10	3	30%
Total	**2,060**	**160**	**8%**	**117**	**23**	**20%**	**2,177**	**183**	**8%**

Table 9: Host/Home market operational activity per stock exchange