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The Determinants of Multiple Foreign Listing Decision

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Abstract

This study aims to examine the determinants of multiple foreign listing decision. By implementing a multiple event-time experiment, we find no evidence to support the bonding hypothesis. Firms from developed countries prefer to list in proximate additional foreign markets (in geographic terms) to overcome market segmentation, and to benefit from better informational environment. The decision of multiple listing may be also related to the global business strategy of the firm. Firms from emerging countries, especially those with high quality, list in additional foreign market in order to overcome investment barriers. While liquidity and informational considerations play little role, culture proximity is a determining factor in the decision of multiple foreign listing for firms from emerging countries.

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1. Introduction

Since the 1980, the world's capital markets have been hugely influenced by globalization. The growth in international integration among world capital markets was mainly explained by the decision made by corporations to consider cross listing as a means of overcoming investments barriers and making a firm's shares accessible to foreign investors. In more recent years, the increased integration was supposed to reduce the need for firms to cross list; however, this was not the case and the phenomenon of cross listing remained important. Interestingly, a considerable body of academic literature has so far examined the benefits of cross listing to understand the motivations of listing abroad. These motivations was related to different considerations related essentially to market

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segmentation (Abdallah and Ioannidis, 2010; Miller, 1999; Sarkissian and Schill, 2009; You et al. 2013), to information environment(Amira and Muzere, 2011; Bailey et al. 2006; Lang et al. 2003; Lee and Valero, 2010), to liquidity (Abdallah et al. 2011; Domowitz et al.1998; Foerster and Karolyi, 1998; Silva and Chavez, 2008) and to the legal environment of the firm (Doidge, 2004; Doidge et al. 2007; Doidge et al. 2009; Reese and Weisbach, 2002; You et al. 2013).However, greater heterogeneity was recorded in the results of earlier empirical studies cited previously. And so, great ambiguities stills reign about the real motivations of cross listing. This greater heterogeneity is mainly explained by some limits associated with the methodologies used by earlier studies. On the one hand, the majority of earlier studies focus essentially on the economic consequences of cross listing around the date of listing abroad. Certainly, this literature does not analyze direct motivations of cross listing. Karolyi (2006) asserts that an important research opportunity would be to devise tests that reliably disassociate the motives for listing from the capital market consequences of the event of interest. On the other hand, the majority of earlier studies do not consider a full matrix of the factors explaining the decision to cross list. As pointed out by Karolyi (2006), cross listing is a complex decision that cannot be analyzed based strictly on a limited number of factors.

In addition to the methodological limits cited above, we are motivated by other raison to re-examine the motivations of cross listing. First, we are interesting to the important and continuing developments that have taken place in financial markets around the world in the last decade. These developments are related essentially to the adoption of the Sarbanes-Oxley Act of 2002 which has probably affected the cost of cross listing in the U.S., the introduction of new types of markets and trading platforms that are generally different from traditional regulated markets in their listing requirements. These developments may significantly affect the motivations for listing abroad. However, understanding the motivations of cross listing in different markets around the world and how these motivations may change over time remain an open question. Second, despite the fact that a significant number of stocks are listed in multiple foreign markets, current understanding of this phenomenon is very limited.

The purpose of this study is to remedy to the limits cited above by creating a new analytical framework associated, not only to the new context of multiple foreign listing, but also to limits detected from the methodologies used by earlier literature. In this paper, we try to further enrich the literature on cross-listing and to produce a greater understanding of the multiple listing phenomenon by studying the determinants of additional foreign listing decision. Our paper is, in our knowledge, the first study that analyzes direct motivations of the decision of additional foreign listings, and their evolution in time. Our new analytical framework allow us to propose and to implement multiple event-time experiment by using multiple failure time model which measures the probability of the recurrence of the cross listing event.

We aim to add to the new literature on multiple foreign listing by providing new evidence using a unique and comprehensive sample of 333 firms from 33 countries with 915 foreign listing in 19 countries over the period 1980-2013.Our main results are as follow. We find that, for firms from developed markets, those with better quality and faster growth choose to cross list in nearby foreign markets (in geographic term) to overcome market segmentation, to raise capital at lower cost and to benefit from better liquidity. Firms may also prefer to list in additional foreign markets with higher disclosure standards and where they have a subsidiary. For the subset of firms from emerging economies, those with better quality prefer to list in additional foreign markets to overcome investment barriers. We also find that culture proximity plays a significant role in the decision of multiple foreign listing. Additionally, our results do not provide evidence supporting the bonding hypothesis. The country's level of investor protection plays next to no role in the decision of multiple foreign listing both for firms from emerging and developed countries.

This paper is organized as follows: Section 2 reviews the literature on cross-listing and develops testable hypotheses on the determinants of multiple foreign listing. Section 3 explains the methodology and section 4 describes the sample and data collection. Section 5presents the empirical findings and section 6concludes.

2. Literature review and hypothesis development:

In this section, we review the literature related to cross-listing and set our hypothesis as regards to the motivation for listing in multiple foreign markets.

2.1. Market Segmentation Hypothesis

The most extensively examined reason for cross-listing is the segmentation hypothesis. Undeniably, firms make a decision to list their shares abroad in order to overcome market segmentation. The theoretical models by Alexander et al.(1987), Errunza and Losq (1985)and Stapleton and Subrahmanyam (1977) suggest that, under partial or complete segmentation, domestic investors require a higher rate of returns on foreign security compared to their home securities. By making a decision to cross list, firms can overcome international investment barriers and make their stocks more accessible to investors. In turn, improved stock investability increases the shareholders base and risk sharing, thereby leading to a lower cost of capital. Earlier studies report a significant reduction in the cost of capital after cross listing, supporting market segmentation hypothesis (Errunza and Miller, 2000; Foerster and Karolyi, 1999; Hail and Leuz, 2009; Jayaraman et al. 1993). Some other studies examine the change in stock price around cross listing and provide empirical evidence that is congruent with the segmentation hypothesis (Doukasand Switzer, 2000; Miller, 1999; Mittoo, 2003).Based on this literature, we formulate the following hypothesis:

H1: Firms seek additional foreign listing to overcome market segmentation.

Bekaert et al. (2011) report a reduction in the level of segmentation among international capital market for the period 1973-2009. However, this level of segmentation is still important in emerging markets. Miller (1999) and Serra (1999) show that firms from emerging market benefit more from cross listing. Based on this literature and given the fact that investment barriers are more important in emerging markets, we formulate the following hypothesis:

H1': Firms, especially those from emerging countries, seek additional foreign listing to overcome market segmentation.

2.2. Liquidity Hypothesis

Cross-listings on deeper and more liquid equity markets could lead to an increase in the liquidity of the stock and a decrease in the cost of capital (Roosenboom and Van Dijk, 2009). The theoretical models developed by Amihud and Mendelson (1986) and Brennan and Subrahmanyam (1996) suggest that greater liquidity can translate into a lower cost of capital for the company concerned insofar as it is valued by investors and factored into market prices. Amihud and Mendelson (1986) suggest that stock liquidity is an important factor in pricing assets and show that expected asset returns is an increasing and concave function of the bid-ask spread. Thus, financial policies that improve stock liquidity, such as cross-listing, should translate into a lower cost of equity capital (Dodd, 2013). Accordingly, enhancing liquidity is considered one of the major benefits of cross listing. Earlier empirical works show that cross listing improve stock liquidity in terms of increased trading volume (Smith and Sofianos, 1997; Foerster and Karolyi, 1998) and reduced bid- ask spread (Domowitz et al. 1998; Foerster and Karolyi, 1998). However, there is cross sectional variation across firms. In general, several studies report an improvement in stock liquidity after cross listing for firms from developed country, and no significant improvement or even deterioration in stock liquidity for firms from emerging markets (Bacidore et al. 2005; Domowitz et al. 1998; Silva and Chavez, 2008; Smith and Sofianos, 1997).Based on these arguments, we draw up the following hypothesis:

H2: Firms seek additional foreign listing to benefit from better liquidity.

H2': Market's liquidity is not crucial for the decision of multiple foreign listing for firms from emerging countries.

2.3. Information Disclosure Hypothesis

Listing in a country with better accounting standards allows the company to commit itself to greater transparency, and thereby reducing the monitoring costs of its shareholders and their required rate of returns. Fuerst (1998) developed a theoretical model to explain the increasing number of listing by foreign firms on American exchanges in 1990 and show that corporate managers make a decision to cross list in a country with better disclosure standards

to disseminate more information about the firm's future prospects and quality. In addition, theoretical models of Amira and Muzere (2011), Chemmanur and Fulghieri (2006) and Huddart et al.(1999) suggest that firms choose to cross list on the exchange with the strictest disclosure requirement to benefit more from cross listing in terms of cost of capital and liquidity. Empirically, Lang et al.(2003) and Lee and Valero (2010) show that cross listing in the US is associated with an enhanced informational environment. Finally, greater information disclosure after cross listing leads to higher market valuation and improved stock's liquidity (Abdallah et al. 2011; Amira and Muzere, 2011;Bailey et al. 2006; Chemmanur and Fulghieri, 2006; Eaton et al. 2007; Fuerst, 1998; Lang et al. 2003;Lang et al. 2012; Roosenboom and Van Dijk, 2009).Based on these theoretical and empirical arguments, we formulate the following hypothesis:

H3: Firms seek additional foreign listing to benefit from better informational environment.

Lee and Valero (2010) show that improvement in information environment after cross listing in the US is more intense among foreign firms originating from emerging markets. Roosenboom and VanDijk (2009) report that emerging markets are characterized by lower accounting standards. Based on these arguments, we put together the following hypothesis:

H3': Firms, especially those from emerging country, seek additional foreign listing to benefit from better informational environment.

2.4. Investor Protection Hypothesis

Another raison for cross listing is the commitment to higher standards of investor protection in order to protect minority shareholders. This is known as the bonding hypothesis originally put forward by Coffee (1999, 2002) and Stulz (1999) and empirically supported by Doidge (2004), Doidge et al. (2007) and Reese and Weisbach (2002), who show that cross listing in the US enhances the degree of investor protection. The hypothesis suggests that the private benefit of control increases the risk to outsiders (i.e. minority investors) and subsequently the required return on the firm's equity. This prevents the insiders (the controlling shareholders/ managers) from raising the required capital and limits their ability to finance future growth opportunities. The insiders will decide to cross list on foreign exchange with higher investor protection regulations if the size of the increase in the public value of shares is relatively larger than the fall in the private benefit. This lowers the risk of expropriation by the insiders and increases the public value of the firm's shares, which enables the firms to issue equity at a lower cost of capital (Abdallah and Ioannidis, 2010).Previous empirical evidence by LaPorta et al.(1997, 1998) shows that the US has the highest level of investor protection compared with other countries. Bonding may also play a role for non-US exchanges- although to a lesser extent- and issuers can potentially capture a bonding premium when they list in any destination market with stricter legal investor protection than their home country (Roosenboom and VanDijk, 2009).To test the bonding hypothesis, we put forward the following hypothesis:

H4: Firms seek additional foreign listing to benefit from better legal environment in term of investor protection.

Given that emerging markets are characterized by a weak investor protection (Roosenboom and VanDijk, 2009), we formulate the following hypothesis:

H4': Firms, especially those from emerging country, seek additional foreign listing to benefit from better legal environment in term of investor protection.

2.5. Proximity Preference Hypothesis

Preference proximity hypothesis implies that geography determine the decision to cross list. Sarkissian and Shill (2004) find that companies going abroad tend to prefer to list in neighboring markets. For example, firms from the Benelux countries (Belgium, the Netherlands, and Luxembourg) tend to cross list in Benelux country, Canadian and Latin American firms in the US, Irish firms in the UK, and New Zealand firms list heavily in Australia and vice

versa. Such clustering in the choice of destination markets indicates a preference for familiarity in cross listing decision (Sarkissian and Shill, 2004), and cannot be explained in terms of liquidity, disclosure, segmentation or legal bonding hypothesis. On a similar line, Dodd (2013) reports that familiarity with the cross listing firm, or with the firm's country, provides an information advantage to investors and, therefore, increases their willingness to invest. Firms anticipate this and will choose to cross list in foreign markets where investors have a significant amount of relevant information about them. Similarly, Dodd et al. (2013) outline that, as investors are more likely to invest in familiar firms and corporate managers tend to avoid possible conflict with culturally disparate investors and managers, firms are more likely to cross list in country similar to their home one in order to maximize the benefits from cross listing in terms of increase in shareholders base. Empirically, Sarkissian and Shill(2004) show that geographic proximity is the most important determinant of the decision to cross list for firms originating from developed countries as well as those from emerging countries. Dodd et al.(2013) and Sarkissian and Shill (2004) show that culture plays a significant role in the cross listing decision. Firms are more likely to cross list in countries where cultural values are similar to their home market. Based on these arguments, we formulate the following hypothesis:

H5a: Firms seek additional foreign listing in geographic proximate market.

H5b: Firms seek additional foreign listing in culture proximate market.

2.6. Business Strategy Hypothesis

Earlier studies have shown that cross listing is an integrated part of the firm's global business strategy. Firms may seek to cross-list in foreign markets for a variety of reasons related to the firm's corporate strategy: signal to market participants that the company has become a global player, provide better access to customers and suppliers, make mergers and acquisitions activities in foreign markets (Bancel and Mittoo, 2001; Fanto and Karmel, 1997; Pagano et al. 2002). Firms can benefit from cross listing if they succeed in their global strategy. According to the business strategy hypothesis, the decision to cross list is related to the firm's specific factors such as industrial belonging which represent an important determinant of the cross listing decision (Bancel and Mittoo, 2001; Fanto and Karmel, 1997; Dodd and Luca, 2012;Doidge et al. 2009; Mittoo, 2003; Pagano et al. 2001, 2002; Sarkissian and Shill, 2004).Since investors are likely to be familiar with firms that produce internationally traded goods (Sarkissian and Shill, 2004), we formulate the following hypothesis:

H6a: firms that produce internationally traded goods are more likely to seek additional foreign listing.

Based on a questionnaire sent to the corporate managers, Bancel and Mittoo (2001) find that internationally-oriented firms with a significant degree of foreign operations are more likely to cross list. Over 70% of the respondents have more than half of their sales in foreign countries; almost all respondents (96%) have foreign subsidiaries, and 84% have manufacturing operations in foreign countries (Bancel and Mittoo, 2001).Based on these arguments, we formulate the following hypothesis:

H6b: firms with foreign subsidiaries are more likely to list in additional foreign market.

2.7. Growth Opportunities and Capital Rising

One of the most cited reasons for cross listing is that the firm needs more equity capital for new investment because it is fast growing (Pagano et al. 2002; You et al. 2013).Doidge et al.(2007), Lins et al.(2005), Mittoo (2003) and Reese and Weisbach (2002) report that the presence of a substantial proportion of firms cross listed in the US is due to their capacity to finance their growth opportunities. Such firms should have a higher price-to-earnings ratio. Thus, we set the following hypothesis:

H7: firms with high price-to-earnings ratio are more likely to cross list in additional foreign market.

3. Methodology

We analyze the determinants of multiple foreign listing decisions using a model that extends the standard Cox (1972) proportional hazard model developed for single event data to multiple event data.

The standard Cox (1972) proportional hazard model can be presented as follow:

$$Y(t) = Y_0(t) \exp(\beta' Z(t)); \quad t \geq 0. \tag{1}$$

Where:

- $Y(t)$: The hazard rate, which is the probability of listing at time t conditional on not having listed yet.
- $Y_0(t)$: The baseline hazard function assumed to be equal for every failure type.
- β: A parameters regression's vector that measure the effect of the determinant Z_j on the decision to cross list.

Under the Cox (1972) model, the assumption of proportional hazard implies that the hazard of any firm is a fixed proportion of the hazard of any other firm. Earlier studies, such as Pagano et al.(2002), use the standard Cox (1972) proportional hazard model to analyze the determining factors of a decision to cross list but they do not consider multiple foreign listing, i.e. after a firm lists abroad on one market, it is excluded from the model estimation because it is no longer at risk of listing. However, Doidge et al.(2009) uses a competing risk model where listing choice includes both US and the UK. Since the objective of our work is to analyze the determinants of multiple foreign listing, we propose to use a multiple failure time model as an extension of the single event Cox (1972) proportional hazard model. Under multiple failure time models, with multiple foreign listing, a cross listed firm is still at risk of listing in additional foreign market. The case we analyze is sometimes referred to as "ordered failure event", and the model we estimate is the Prentice, Williams and Peterson conditional gap time model, (Prentice, Williams and Peterson, 1981, model; PWP model).The PWP model requires the same assumption as the standard Cox proportional hazard model but allows the baseline hazard to vary from recurrence to recurrence, and therefore adjust for the fact that the current event may have been affected by earlier events.

The hazard function for the listing event k in a PWP model is as follows:

$$Y_k(t) = Y_{0k}(t - t_{k-1}) \exp(\beta_k' Z_k(t)); \quad t \geq 0 \tag{2}$$

Since the PWP model defines the risk set for the kth recurrence (k^{th} foreign listing event) as any firm who had not yet experienced the kth recurrence and does necessarily have had the $(k-1)^{th}$ recurrence, it is therefore suitable for our analysis (See Lim et al.(2007) for further details on multiple failure time models).To estimate the model, we follow the procedure outlined in Cleves (1999). For each firm, there must be one observation per event of foreign listing. For example, if a firm has two events, then, there will be two observations. The first observation will cover the time span from entry into the study until the time of the event of foreign listing, and the second observation spans the time from entry to the end of follow up, and a variable indicating the failure order is included. The conditional gap model measures time to each event from the time of the previous event (Cleves, 1999).

4. Sample and data collection:

Our initial sample consists of 1135 firms with foreign listing in US markets (including AMEX, NASDAQ, NYSE and OTC), European markets (including LSE, Deutsche Boerse (including Frankfort stock exchange and XETRA), Euronext Paris, Euronext Amsterdam, Euronext Brussels, Swiss stock exchange, Madrid stock exchange, Milan stock exchange, Stockholm stock exchange, and the Irish stock exchange), Toronto stock exchange, Tokyo stock

exchange, Australian stock exchange, New Zealand stock exchange and Johannesburg stock exchange, over the period from 1980 to 2013. Information on cross listed firms is from stock exchanges websites. Data on ADRs are from the bank of New York and J.P Morgan ADRs databases. The sample is also supplemented with information on foreign listing from Datastream. We include both active and inactive stocks. Thus, this dataset is unlikely to suffer from survivorship bias. Our analysis includes both direct and ADRs listing.We remove 350 cross-listings from the sample for which we could not find an identifiable listing date for a cross-listing. Based on this sample, and following You et al (2013), we use the listing date as the cross listing event date. Then, we eliminate preference stocks listing as well as Rule 144 from the analysis; this requirement excludes another 89 cross-listings from our sample.Next, the firm-level and country-level explanatory variables we use to test our hypothesis are collected from various sources. Returns correlation indices, market liquidity, market capitalization, Price-to-Earnings ratio and Return-On-Assets are from Datastream and Worldscope. Information about firm's subsidiaries is available on fr.transnationale.org. Legal variables (Investor protection index and Rule of Law) are from LaPorta et al.(1998) and Djankov et al.(2008), and accounting standard index is from LaPorta et al.(1998).Firms with no available data are omitted. This reduces the number of cross listed firms and the final sample consists of 333 firms from 33 countries with 915 foreign listing. Table 1 present the frequency distribution of the cross listing event by host and home countries and by the period of time. And table 2 provides information about the number of foreign listings by home countries. This paper represents international perspectives as it is based on the experience of companies from various countries that are cross listed in various international stock markets. The sample is also significant in that it represents stocks listed, directory or via ADRs, in multiple foreign markets.

5. Empirical Results

5.1. Multiple Foreign Listing: Data Description:

5.1.1: Sample Description:

   Table 1 presents the distribution of cross listing by home and foreign listing countries and by period of time. The US is the largest host market for cross listing firms that constitute 28.74% of the sample. The three largest European host markets are Germany (20.33%), the UK (18.9%), and Switzerland (12.24%). The most important countries in terms of the number of cross listing firms are France (13%), the UK (8.63%), Germany (8.63%) and US (6.45%).

   Table1 shows some evidence that companies choose to cross list in country with geographic proximity. For example, European firms list heavily in European countries; Australia attracts more firms from New Zealand; while Canadian firms list mostly in the US. Out of 50 Irish listings abroad, 25 are in the UK. Table 1 also shows that the 1990s and the 2000s are the most important periods with respectively 33.7% and 56.3% of the total cross listing events. We observe that Europe was the most important host market for overseas listing up until 1990.

   In the 1990s and 2000s, the cross listing event within Europe and the US had an upward trend. It is still significant in Europe and has become more important in the US, especially inthe 2000s.Table 2 describes the multiple foreign listing in the sample. There are 87, 75, 90, 38, 17, 15, 7 and 4 firms which respectively cross-listed in one, two, three, four, five, six, seven and eight foreign markets. Firms from developed markets are more likely to list in multiple foreign markets, especially for the high order of foreign listing. These firms are essentially from Europe.

Table 1

This table provides sample distribution by host and home country and period of time. Home country is the country of domicile of the cross listing company. Host country is the cross- listing destination country. The total sample consists of 915 cross listing events.

	Host country																	
	Australia	Belgium	Canada	France	Germany	Ireland	Italia	Japan	Netherlands	New Zealand	South Africa	Spain	Sweden	Switzerland	UK	US	Total	% of Total
Home country																		
Argentina												1			1	7	9	0.98
Australia					5			2		3	2				11	15	38	4.15
Austria					5									2	2	5	14	1.53
Belgium				1	9				2					3	2	6	23	2.51
Brazil					1							3		1		6	11	1.20
Canada	2			1	15									3	8	19	48	5.25
Chile												2				3	5	0.55
China	2				1										9	7	19	2.08
Denmark					3									3	2	4	12	1.31
Finland				1	1		1		1						2	1	7	0.77
France		3			21		13	3	8					23	22	26	119	13
Germany		4		5			11	4	7			3		20	15	10	79	8.63
Greece														2	1	3	6	0.66
India															3	3	6	0.66
Indonesia					1										1	1	3	0.33
Ireland					11									3	25	11	50	5.46
Italia				3	7				2			1		4	4	10	31	3.39
Japan				5	13				3					1	9	16	47	5.14
Luxembourg		2			3				2			2		2	3	5	19	2.08
Mexico					1											1	2	0.22
Netherlands		2	1	2	10		4	1						8	5	10	43	4.70
New Zealand	10				2										1	12	25	2.73
Norway					3								3	1		3	10	1.09
Singapore					1											4	5	0.55
South Africa	2			2	3									1	6	8	22	2.4
South Korea								1							4	4	9	0.98
Spain				1	8		2	1	4					5	6	11	38	4.15
Sweden			1		7									1	4	7	20	2.19
Switzerland				2	15			1					1		10	17	46	5.03
Taiwan					3										3	3	9	0.98
Turkey															1	1	2	0.22
UK		1	1	7	22	1		1	3		1			18		24	79	8.63
US	2	2		5	15			5	5				1	11	13		59	6.45
Total	18	14	3	35	186	1	31	19	37	3	3	12	5	112	173	263	915	100
Period of time																		
1980-1989	0	7	0	20	26	1	0	0	2	0	0	0	0	1	18	17	92	10
1990-1999	8	4	2	9	76	0	4	16	21	2	3	4	1	34	58	66	308	33.7
2000-2013	10	3	1	6	84	0	27	3	14	1	0	8	4	77	97	180	515	56.3
Total	18	14	3	35	186	1	31	19	37	3	3	12	5	112	173	263	915	100
% of Total	1.97	1.53	0.33	3.83	20.33	0.11	3.39	2.08	4.04	0.33	0.33	1.31	0.55	12.24	18.9	28.74	100	

Table 2

This table provides the number of stocks listed in 1, 2, 3, 4, 5, 6, 7 and 8 foreign markets. For example, there are 12 Canadian firms listed in one foreign market, 13 Canadian firms listed in two foreign markets, 2 Canadian firms listed in three foreign markets and 1 Canadian firm listed in four foreign markets.

		Number of Foreign listing								Total number of firms	Total number of foreign listing
		1	2	3	4	5	6	7	8		
1	Argentina	5	2	0	0	0	0	0	0	7	9
2	Australia	10	5	6	0	0	0	0	0	21	38
3	Austria	0	3	0	2	0	0	0	0	5	14
4	Belgium	0	3	2	0	1	1	0	0	7	23
5	Brazil	3	1	2	0	0	0	0	0	6	11
6	Canada	12	13	2	1	0	0	0	0	28	48
7	Chile	1	2	0	0	0	0	0	0	3	5
8	China	2	2	3	1	0	0	0	0	8	19
9	Denmark	0	1	2	1	0	0	0	0	4	12
10	Finland	1	0	0	0	0	1	0	0	2	7
11	France	4	2	4	5	3	7	2	1	28	119
12	Germany	3	0	3	1	3	3	2	2	17	79
13	Greece	1	1	1	0	0	0	0	0	3	6
14	India	0	3	0	0	0	0	0	0	3	6
15	Indonesia	0	0	1	0	0	0	0	0	1	3
16	Ireland	13	2	7	3	0	0	0	0	25	50
17	Italia	4	2	2	3	1	0	0	0	12	31
18	Japan	10	2	4	4	1	0	0	0	21	47
19	Luxembourg	0	0	1	1	1	0	1	0	4	19
20	Mexico	0	1	0	0	0	0	0	0	1	2
21	Netherlands	1	2	2	2	1	2	1	0	11	43
22	New Zealand	0	5	5	0	0	0	0	0	10	25
23	Norway	0	0	2	1	0	0	0	0	3	10
24	Singapore	0	1	1	0	0	0	0	0	2	5
25	South Africa	5	2	3	1	0	0	0	0	11	22
26	South Korea	1	1	2	0	0	0	0	0	4	9
27	Spain	2	3	2	1	1	0	1	1	11	38
28	Sweden	2	1	4	1	0	0	0	0	8	20
29	Switzerland	1	4	11	1	0	0	0	0	17	46
30	Taiwan	0	1	1	1	0	0	0	0	3	9
31	Turkey	0	1	0	0	0	0	0	0	1	2
32	UK	5	5	9	4	3	1	0	0	27	79
33	US	1	4	8	4	2	0	0	0	19	59
	Total	87	75	90	38	17	15	7	4	333	915
	Total: EA Region	42	32	55	27	14	15	7	4		
	% of Total: EA Region	48.3	42.7	61.1	71	82.4	100	100	100		
	Total: American Region	22	23	12	5	2	0	0	0		
	% of Total: American Region	25.3	30.6	13.3	13.2	11.8	0	0	0		
	Total: Asian Region	13	8	10	5	1	0	0	0		
	% du Total: Asian Region	14.9	10.6	11.1	13.2	5.9	0	0	0		
	Total: Australasia	10	10	11	0	0	0	0	0		
	% of Total: Australasia	11.5	13.3	12.2	0	0	0	0	0		
	Total: Developed country	68	49	71	33	17	14	7	4		
	% of Total: developed country	78.2	65.3	78.9	86.8	100	93.3	100	100		
	Total: Emerging country	19	26	19	5	0	1	0	0		
	% of Total: Emerging country	21.8	34.6	21.1	13.2	0	6.7	0	0		

5.1.2. VARIABLE MEASURES:

We construct proxies for the characteristics of the home and the foreign market, as well as for the cross listed firms, for the following competing hypotheses discussed in Section 2. Following Sarkissian and Schill (2004), we use the correlation between the stock market returns of the home and foreign countries as proxy for the market segmentation hypothesis. The market segmentation hypothesis discussed in Section 2 predicts a negative relationship between this variable and the decision to cross list in additional foreign market.

To test liquidity hypothesis, we use an exogenous variable that measures market liquidity. This latter is measured by the number of shares traded of the home, or foreign, market index. According to the liquidity hypothesis discussed in section 2, we expect a negative (positive) relationship between the decision to cross list in additional foreign market and home market liquidity (the difference in liquidity between the destination and the home market). For firms from emerging countries, we do not expect any significant effect of liquidity variable on the decision to cross list in additional foreign markets.

We measure information disclosure with the accounting standards index of La Porta et al.(1998).This index measures the level of information disclosure, and so can evaluates the quality of information environment in a country. According to the information disclosure hypothesis, we expect a negative (positive) relationship between the decision to cross list in additional foreign market and home market accounting standards (the difference in accounting standards between the destination and the home market). As a legal measure, we take the anti-director rights index of La Porta et al.(1998) as a measure of investor protection. Their index varies between one and six, and a higher value of this index indicates a greater protection for minority shareholders. We also use the rule of law index from Djankov et al.(2008) and LaPorta et al.(1998). This index reveals the degree of enforcement of investor protection laws. A higher value of this index corresponds to more strict compliance to the rule of law. According to the investor protection hypothesis, we expect a negative (positive) relationship between the decision to cross list in additional foreign market and home market legal measure (the difference in legal measure between the destination and the home market).

To test the proximity preference hypothesis, we use the following exogenous variables: 1/***«Geography»:*** Is a dummy variable equals 1 if the home and the host country are in same region and equals 0 otherwise. In this work we consider 4 regions: European and African region, American region, Australasia, and Asian region. 2/***«Culture»:*** Is a dummy variable equals 1 if the home country shares a common language with host country and equals 0 otherwise. According to the proximity preference hypothesis we predict a positive relationship between these variables and the decision of additional foreign listing.

To test the Business strategy hypothesis, we use the following exogenous variables: 1/***«Industry»:*** Is a dummy variable equals 1 if the firms produce internationally traded goods and equals 0 otherwise. According to Sarkissian and Schill (2004), there are eight tradable industries: chemicals, consumer goods, electronics, manufacturing, health care, mining, oil and gas, and paper. There are also eight non tradable industries: construction, financials, leisure, retail, support services, telecommunications, transportations and utilities. 2/***«Subsidiary»:*** Is a dummy variable equals 1 if the firm has a subsidiary abroad and equals 0 otherwise. According to the business strategy hypothesis we predict a positive relationship between these variables and the decision of additional foreign listing.

To test the growth opportunities and capital rising hypothesis, we use the following exogenous variable: ***«PER»:*** Is the Price-to-Earnings ratio for the year preceding cross listing. And we expect a positive relationship between this variable and the decision of additional foreign listing.

Saudagaran (1988) suggest that the relative size of the firm in his local market affect significantly the decision to cross list. Empirically, Doidge et al (2009), Pagano et al (2002), and You et al (2013) show that firms with better quality are more likely to cross list. Furthermore, Pagano et al (2001) and Sarkissian and Schill (2004) show that firms are more likely to cross list in markets which are larger and highly capitalized. We then control for the home market size and firm performance. We use respectively the following variables: 1/***«LogCap»:*** Is the natural logarithm of the home market capitalization for the year preceding cross listing. 2/***«ROA»:*** Is the Return on Assets for the year preceding cross listing.

5.2. Determinants Of The Decision Of Multiple Foreign Listing:

Before analyzing the determinants of multiple foreign listing, we use the Schoenfeld (1982) residuals test to examine whether the proportional hazard assumption of the Cox model is not violated. As can be seen in table 3, the variables measuring market returns correlation and accounting standards; market returns correlation and ROA; market returns correlation; for respectively the full sample; subset of firms from developed countries; subset of firms from emerging countries; violate the proportional hazard assumption.

Table 3 :

This table reports results of the Schoenfeld test of the proportional hazard assumption.

Correlation is the correlation of the host and home market monthly index returns 2 years before cross listing. ***Liquidity*** is home market liquidity measured as the number of shares traded of the market index for the year preceding cross listing. ***Accounting standard*** is the home accounting standard index from LaPorta et al. (1998). ***Legal*** is home anti-director*home Rule of Law from LaPorta et al. (1998) and Djankov et al.(2008). ***Geography*** is a dummy variable=1 if the home and the host country are in same region; =0 otherwise. In this work we consider 4 regions: European and African region, American region, Australasia, and Asian region. ***Culture*** is a dummy variable=1 if the home country share a common language with host country; =0 otherwise. ***Industry*** is a dummy variable =1 if the firms produce internationally traded goods; =0 otherwise. There are eight tradable industries: chemicals, consumer goods, electronics, manufacturing, health care, mining, oil and gas, and paper. There are also eight non tradable industries: construction, financials, leisure, retail, support services, telecommunications, transportations and utilities. ***Subsidiary*** is a dummy variable = 1 if the firm have a subsidiary abroad; =0 otherwise. ***PER*** is the Price-to-Earnings Ratio for the year preceding cross listing. ***ROA*** is the Return On Assets for the year preceding cross listing. ***LogCap*** is the natural logarithm of the home market capitalization for the year preceding cross listing. A variable is assumed to violate the proportional hazard assumption if p-value<0.1.

	All			Developed			Emerging		
	ρ	Chi-squared	p-value	ρ	Chi-squared	p-value	ρ	Chi-squared	p-value
Variable									
Correlation	-0.19	32	0	-0.21	32.3	0	-0.21	6.7	0.01
Liquidity	-0.03	0.79	0.4	-0.04	0.63	0.4	0.08	1.08	0.3
Accounting standards	0.06	3.52	0.06	-0.01	0.06	0.8	0.04	0.22	0.6
Legal	-0.02	0.47	0.5	0.02	0.44	0.5	-0.03	0.12	0.7
Geography	0.03	0.98	0.3	0.04	1.5	0.22	0.03	0.17	0.7
Culture	-0.01	0.2	0.7	-0.02	0.35	0.56	0.01	0	0.9
Industry	0.01	0.12	0.7	-0.006	0.02	0.9	0.05	0.18	0.7
Subsidiary	0.01	0.31	0.6	0.01	0.06	0.8			
PER	-0.01	0.02	0.9	-0.01	0.02	0.9	-0.11	0.83	0.4
ROA	0.05	2.1	0.14	0.1	4.34	0.04	-0.03	0.1	0.8
LogCap	0.01	0.02	0.9	-0.06	2.32	0.13	0.08	0.64	0.4

One of the well-known and accepted estimation approaches for dealing with suspected non- proportionality is the addition of an interaction between the covariate and a function of time. If the interaction term is significant, therefore, the violation of the proportional hazard assumption is corrected; and if the interaction term is not significant, the effect of the variable is time independent and there is no reason to reject the proportional hazard assumption (Box-Steffensmeier and Zorn, 2001). Therefore, the variables mentioned above, which violate the assumption are interacted with the log of time. Table 4 reports the estimation results of the PWP model. We use the coefficients in exponentiated form that can be interpreted as the effect of a unit change in the explanatory variable on the baseline hazard. For example, an exponentiated coefficient of 1.2 (0.8) implies that a one unit increase (decrease) in the explanatory variable increases (decreases) the probability of additional foreign listing by 20% relative to the baseline hazard.

The first model reported in table 4 includes all firms in our sample. The next two models focus only on cross listed firms from developed country and those from emerging economies. The first row contains all variables included in the analysis; whereas, the second row contains those variables that violate the proportional hazard assumption interacted with the log time. The first row indicates the nature of the relationship between the independent variable and the cross listing event; whereas, the second row shows how that relationship changes over time. For example, if the hazard ratio for a variable in the first row is 1.2 (0.8), and in the second row is 0.8(1.2) and significant, this means that the effect of the independent variable is positive (negative) but it decays (increases) over time and becomes negative (positive).

Table 4 :

This table reports the estimation results of the PWP model witch estimate the probability of listing in foreign market in year t, given that the firm does not yet have a listing of that order. ***Correlation*** is the correlation of the host and home market monthly index returns 2 year before cross listing. ***Liquidity*** is the home market liquidity measured as the number of shares traded of the market index for the year preceding cross listing. ***Accounting standard*** is the home accounting standard index from LaPorta et al.(1998). ***Legal*** is home anti-director*home Rule of Law from LaPorta et al.(1998) and Djankov et al.(2008). ***Geography*** is a dummy variable=1 if the home and the host country are in same region; =0 otherwise. In this work we consider 4 regions: European and African region, American region, Australasia, and Asian region. ***Culture*** is a dummy variable=1 if the home country share a common language with host country; =0 otherwise. ***Industry*** is a dummy variable =1 if the firms produce internationally traded goods; =0 otherwise. There are eight tradable industries: chemicals, consumer goods, electronics, manufacturing, health care, mining, oil and gas, and paper. There are also eight non tradable industries: construction, financials, leisure, retail, support services, telecommunications, transportations and utilities. ***Subsidiary*** is a dummy variable = 1 if the firm have a subsidiary abroad; =0 otherwise. ***PER*** is the Price-to-Earnings Ratio for the year preceding cross listing. ***ROA*** is the Return On Assets for the year preceding cross listing. ***LogCap*** is the natural logarithm of the home market capitalization for the year preceding cross listing. The table report hazard ratio (i.e. exp (β) not β). The t-statistics, in parentheses, test the null hypothesis that the hazard ratio is equal to one. *, ** and *** indicate statistical significance at the 10%, 5% and 1% level, respectively.

	Model 1: All firms	Model 2: Developed	Model 3: Emerging
Correlation	0.78	0.81	0.71
	-(1.4)	-(0.87)	-(0.42)
Liquidity	1	1	1
	-(2.97)***	-(3.1)***	-(1.66)*
Accounting standard	1	1	1
	-(0.91)	-(0.14)	-(0.51)
Legal	1.08	1.01	1.007
	(2.31)**	(2.26)**	(1.03)
Geography	1.35	1.34	1.08
	(4.16)***	(3.74)***	(0.23)
Culture	1.01	1.005	0.76
	(0.13)	(0.06)	-(1.2)
Industry	1.13	1.1	1.28
	(1.9)*	(1.46)	(1.34)
Subsidiary	1.32	1.3	
	(1.76)*	(1.58)	
PER	1.0001	1.001	1.00001
	(8.73)***	(3.77)***	(1.13)
ROA	1.003	1	1.03
	(0.94)	-(3.52)***	(2.27)**
LogCap	0.92	0.9	0.95
	-(2.48)**	-(2.23)**	-(0.95)
Correlation	0.74	0.73	0.64
	-(5.7)***	-(5.38)***	-(3.53)***
Accounting standard	1.003		
	(2)**		
ROA		1.002	
		(4)***	
Number of failures	915	812	103
Number of observations	915	812	103
Log likelihood	-3831.2	-3270.4	-248.4
χ2	286.83	149.4	117.2
Prob> χ2	0.0000	0.0000	0.0000

From table 4, we observe that the hazard ratio of the variable measuring the degree of integration between the home and the host listing market is below 1 in all the models estimated. This suggests that, if there is any effect of integration on the decision of multiple foreign listing, it is a negative effect. However, the hazard ratio for the variable "correlation" is statistically insignificant at any conventional level, although the interaction term with time is significant and below 1 for all the models. This shows that the effect of the level of integration on the decision of additional foreign listing varies over time and is still negative. These results lead us to accept hypothesis H1. Our

findings are congruent with Abdallah and Ioannidis (2010), Doukas and Switzer (2000) and Miller (1999), who associate the change in stock prices around cross listing and the reduction of cost of capital with a market segmentation consideration. Table 4 also shows a lower coefficient of hazard ratio for the variable "correlation" in model 3. Firms from emerging markets are more likely to cross list in countries having a higher degree of segmentation with their local countries. This result leads us to accept the hypothesis H1', and to be in line with Miller (1999) and Serra (1999) who find that firms from emerging country benefit more from cross listing due to the high level of segmentation. Regarding the variable related to the geographic proximity, the hazard ratio is above 1 and significant for the first two models. This result leads us to conclude that firms prefer to list in additional foreign countries that are geographically closer to their home countries and offer an empirical evidence for the geographic proximity hypothesis. This is in line with the results of Sarkissian and Shill (2004, 2009). For the subset of firms from emerging markets, we observe an even preference for listing in additional proximate market (in geographic terms). The coefficient on the hazard ratio is above 1. However, it is no longer statistically significant due, probably, to a smaller sample size. Regarding the variable related to cultural proximity, the coefficient of the hazard ratio of the variable "culture" is not significant for all the models estimated. These results lead us to reject the hypothesis H5b, and to assert that firms have no preference for additional listing in proximate market (in cultural terms). This result may be due to the correlation between cultural proximity and market correlation. As pointed out by Sarkissian and Shill (2004), if neighboring markets produce correlated market returns, the market correlation variable proxies, in our case, sharing of common language. This means that this result offers another empirical evidence for the segmentation hypothesis. Concerning the variables related to the global strategy hypothesis, "industry" and "subsidiary", estimation results of model 1 in table 4 show that, the coefficients of the hazard ratio are above 1 and statistically significant. Firms that produce internationally traded goods and have a subsidiary abroad are more likely to cross list in additional foreign market. For the subsets of firms from emerging and developed countries, the coefficient of the hazard ratio related to the global strategy's variables is also above 1 but not overly significant. For the full sample and subset of firms from developed countries, the coefficient of the hazard ratio on the "PER" is above 1 and is significant at a 1% level. Fast growing firms tend to make additional foreign listing. These results lead us to accept hypothesis H7. Our findings are similar to those of You et al.(2013) who find that firms list in additional foreign country to take advantage of higher valuation to raise capital more cheaply. For the subset of firms from emerging country, the coefficient on the "PER" variable is also above 1 but not so significant. This result does not support hypothesis H7 for subset of firms from emerging countries, and can be explained by the smaller sample size. From table 4, we can observe that the coefficient on the liquidity variable is equal to 1 and significant in the three estimated models. This suggests that local market liquidity plays no role in the decision of additional foreign listing. This result leads us to reject hypothesis H2 and accept H2'. Such a finding contradicts those of Domowitz et al.(1998) and Foerster and Karolyi (1998).Overall, the quality of the local accounting standard seems to have no effect on the decision made by firms to list in multiple foreign markets. Thus, we reject hypotheses H3 and H3'. Our results are not in harmony with those of Lang et al.(2003) and Lee and Valero (2010) who maintain that cross listing in the US is associated with an enhancement in the informational environment. Moreover, we also confirm a significant and positive relationship between the decision for multiple foreign listing and the home country's investor protection level for the total sample and for the subset of firms from developed countries. These results are similar to those of You et al (2013) who find that additional foreign listing decision is positively related to home country's investor protection level, and Roosenboom and VanDijk (2009) who assert that cross listing premium is positively related to the home country's investor protection level for stocks cross listed in continental European countries. For the subset of firms from emerging markets, the coefficient on the legal variable is above 1. This suggests that if there is any effect of the home country's investor protection level, it is a positive one. However, the hazard ratio for the variable "legal" is statistically insignificant. Thus, we do not empirically support the bonding hypothesis for firms from emerging countries. Our findings are not in line with those of Doidge (2004), Doidge et al.(2007) and Reese and Weisbach (2002), who find empirical support for the bonding hypothesis for firms cross listed in the US. Table 4 shows that, an additional listing decision appears to be significantly influenced by the home country's market capitalization and firm performance. For firms from developed countries, those with better quality and coming from markets with lower capitalization are more likely to list in additional foreign markets. For the subset of firms from emerging markets, those with better quality are more likely to list in multiple foreign markets. Our results against the bonding hypothesis, the information disclosure hypothesis and the liquidity hypothesis contradict a considerable body of literature examining the motives and benefits of cross listing (Doidge, 2004; Doidge et al. 2007; Domowitz et al. 1998; Foerster and Karolyi, 1998; Lang et al. 2003; Lee and Valero, 2010;

Reese and Weisbach, 2002). The main reason for this difference is that previous studies focus on cross listing in the US market; whereas we focus on listing in different countries in the world. The US is a relatively highly developed country in terms of the level of investor protection, liquidity and accounting standard, which may attract foreign firms seeking better investor protection, better liquidity and better informational environment than their home country. Thus, we rerun the regression by controlling the characteristics of the foreign listing market relating to liquidity consideration, information and legal environment. We report the results of the test of the proportional hazard assumption on table 5.

Table 5:

This table report results of the Schoenfeld test of the proportional hazard assumption.
Correlation is the correlation of the host and home market monthly index returns 2 year before cross listing. *Liquidity* is the host market liquidity to home market liquidity ratio. Liquidity market is measured as the number of shares traded of the market index for the year preceding cross listing. *Accounting standard* is a dummy variable equals 1 if the host accounting standard index is superior to home accounting standard, and equals 0 otherwise. *Legal* is a dummy variable =1 if host legal regime is better than home legal regime; =0 otherwise. Legal regime is measured by anti-director*Rule of Law from LaPorta et al.(1998) and Djankov et al.(2008). *Geography* is a dummy variable=1 if the home and the host country are in same region; =0 otherwise. In this work we consider 4 regions: European and African region, American region, Australasia, and Asian region. *Culture* is a dummy variable=1 if the home country share a common language with host country; =0 otherwise. *Industry* is a dummy variable =1 if the firms produce internationally traded goods; =0 otherwise. There are eight tradable industries: chemicals, consumer goods, electronics, manufacturing, health care, mining, oil and gas, and paper. There are also eight non tradable industries: construction, financials, leisure, retail, support services, telecommunications, transportations and utilities. *Subsidiary* is a dummy variable = 1 if the firm have a subsidiary abroad; =0 otherwise. *PER* is the Price-to-Earnings Ratio for the year preceding cross listing. *ROA* is the Return On Assets for the year proceeding cross listing. *LogCap* is the natural logarithm of the home market capitalization for the year proceeding cross listing
A variable is assumed to violate the proportional hazard assumption if p-value<0.1.

	All			Developed			Emerging		
	ρ	Chi-squared	p-value	ρ	Chi-squared	p-value	ρ	Chi-squared	p-value
Variable									
Correlation	-0.18	31.4	0.000	-0.21	34.2	0.000	-0.14	3.9	0.046
Liquidity	-0.15	94.9	0.000	-0.13	58.6	0.000	-0.19	7.7	0.005
Accounting standards	0.088	8.8	0.003	0.1	10.2	0.001	0.07	1.11	0.29
Legal	0.027	1.33	0.24	0.009	0.12	0.73	0.09	1.47	0.22
Geography	0.1	11.3	0.008	0.067	3.6	0.05	0.05	0.32	0.57
Culture	0.067	4.8	0.028	0.004	0.01	0.9	0.2	7.6	0.005
Industry	-0.05	3.17	0.075	-0.07	4.9	0.025	0.11	1.81	0.17
Subsidiary	0.018	0.38	0.53	0.005	0.03	0.85	-	-	-
PER	-0.17	22.2	0.000	0.1	5.26	0.02	0.03	0.12	0.72
ROA	0.11	15.6	0.0001	0.1	10.3	0.001	-0.08	0.69	0.4
LogCap	0.007	0.05	0.83	-0.05	2.63	0.1	0.06	0.42	0.51

Table 5 shows that the hypothesis is violated for the following variables: *« Correlation », « Liquidity », « Accounting standard », « Geography », « Culture », « Industry », « PER »* and *« ROA »* for full sample;*« Correlation », « Liquidity », « Accounting standard », « Geography », « Industry», « PER »* and *« ROA »* for subset of firms from developed countries; « *Correlation* », « *Liquidity* » and « *Culture* » for subset of firms from emerging countries. Therefore, these variables are interacted with log time when estimating the PWP model. The results are reported in table 6.

Table 6 shows that all interaction terms are significant except for the following variables: *« Culture »* and *« Industry »* for full sample. *«Industry»* and *« PER »* for subset of firms from developed countries. So, there is no reason to reject the proportional hazard hypothesis for these latter variables, and consequently, there is no reason to interact them with a function of time. Our final results about the estimation of the PWP model are reported in table 7.

Table 6

This table reports the estimation results of the PWP model which estimate the probability of listing in foreign market in year t, given that the firm does not yet have a listing of that order. ***Correlation*** is the correlation of the host and home market monthly index returns 2 year before cross listing. ***Liquidity*** is the host market liquidity to home market liquidity ratio. Liquidity market is measured as the number of shares traded of the market index for the year preceding cross listing. ***Accounting standard*** is a dummy variable equals 1 if the host accounting standard index is superior to home accounting standard, and equals 0 otherwise. ***Legal*** is a dummy variable =1 if host legal regime is better than home legal regime; =0 otherwise. Legal regime is measured by anti-director*Rule of Law from LaPorta et al.(1998) and Djankov et al.(2008). ***Geography*** is a dummy variable=1 if the home and the host country are in same region; =0 otherwise. In this work we consider 4 regions: European and African region, American region, Australasia, and Asian region. ***Culture*** is a dummy variable=1 if the home country share a common language with host country; =0 otherwise. ***Industry*** is a dummy variable =1 if the firms produce internationally traded goods; =0 otherwise. There are eight tradable industries: chemicals, consumer goods, electronics, manufacturing, health care, mining, oil and gas, and paper. There are also eight non tradable industries: construction, financials, leisure, retail, support services, telecommunications, transportations and utilities. ***Subsidiary*** is a dummy variable = 1 if the firm have a subsidiary abroad; =0 otherwise. ***PER*** is the Price-to-Earnings Ratio for the year preceding cross listing. ***ROA*** is the Return On Assets for the year proceeding cross listing. ***LogCap*** is the natural logarithm of the home market capitalization for the year proceeding cross listing. The table report hazard ratio (i.e. exp (β) not β). The t-statistics, in parentheses, test the null hypothesis that the hazard ratio is equal to one. *, ** and *** indicate statistical significance at the 10%, 5% and 1% level, respectively.

	Model 1: All firms	Model 2: Developed	Model 3: Emerging
Correlation	0.78	0.83	0.51
	(-1.02)	(-0.71)	(-0.65)
Liquidity	1.005	1.06	1.002
	(5.23)***	(5.41)***	(-0.57)
Accounting standard	0.82	0.8	1.48
	(-1.8)*	(-2.05)**	(0.81)
Legal	0.95	0.94	1.05
	(-0.71)	(-0.63)	(0.17)
Geography	1.13	1.1	1.4
	(1.21)	(0.98)	(1.22)
Culture	1.07	1.09	0.45
	(0.61)	(1.14)	(-2.16)**
Industry	1.1	1.1	1.4
	(1)	(0.97)	(1.47)
Subsidiary	1.36	1.35	
	(1.93)*	(1.92)*	
PER	1.001	1.001	1.00002
	(4.41)***	(4.55)***	(1.78)*
ROA	1	1	1.04
	(-2)**	(-2.46)**	(3.27)***
LogCap	0.92	0.9	0.96
	(-2.53)***	(-2.43)**	(-0.67)
Correlation	0.74	0.72	0.69
	(-5.4)***	(-5.64)***	(-2.54)**
Liquidity	1	1	1
	(2.33)***	(-6.03)***	(-2.95)***
Accounting standard	1.16	1.16	
	(2.33)**	(2.23)**	
Geography	1.05	1.05	
	(2.03)**	(2.08)**	
Culture	1.02		1.21
	(0.74)		(2.94)***
Industry	1.01	0.99	
	(0.52)	(-0.05)	
PER	1	0.99	
	(-4.2)***	(-0.02)	
ROA	1.002	1.002	
	(3.56)***	(3.5)***	
Number of failures	915	812	103
Number of observations	915	812	103
Log Likelihood	-3814.1	-3259.1	-243.8
χ2	536.7	295.2	123.6

Prob> χ2		0.0000	0.0000	0.0000

Table 7:

This table reports the estimation results of the PWP model witch estimate the probability of listing in foreign market in year t, given that the firm does not yet have a listing of that order. *Correlation* is the correlation of the host and home market monthly index returns 2 year before cross listing. *Liquidity* is the host market liquidity to home market liquidity ratio. Liquidity market is measured as the number of shares traded of the market index for the year preceding cross listing. *Accounting standard* is a dummy variable equals 1 if the host accounting standard index is superior to home accounting standard, and equals 0 otherwise. *Legal* is a dummy variable =1 if host legal regime is better than home legal regime; =0 otherwise. Legal regime is measured by anti-director*Rule of Law from LaPorta et al.(1998) and Djankov et al.(2008). *Geography* is a dummy variable=1 if the home and the host country are in same region; =0 otherwise. In this work we consider 4 regions: European and African region, American region, Australasia, and Asian region. *Culture* is a dummy variable=1 if the home country share a common language with host country; =0 otherwise. *Industry* is a dummy variable =1 if the firms produce internationally traded goods; =0 otherwise. There are eight tradable industries: chemicals, consumer goods, electronics, manufacturing, health care, mining, oil and gas, and paper. There are also eight non tradable industries: construction, financials, leisure, retail, support services, telecommunications, transportations and utilities. *Subsidiary* is a dummy variable = 1 if the firm have a subsidiary abroad; =0 otherwise. *PER* is the Price-to-Earnings Ratio for the year preceding cross listing. *ROA* is the Return On Assets for the year proceeding cross listing. *LogCap* is the natural logarithm of the home market capitalization for the year proceeding cross listing. The table report hazard ratio (i.e. exp (β) not β). The t-statistics, in parentheses, test the null hypothesis that the hazard ratio is equal to one. *, ** and *** indicate statistical significance at the 10%, 5% and 1% level, respectively.

	Model 1: All firms	Model 2: Developed	Model 3: Emerging
Correlation	0.76	0.83	0.51
	(-1.14)	(-0.71)	(-0.65)
Liquidity	1.005	1.01	1.002
	(5.82)***	(5.4)***	(-0.57)
Accounting standard	0.82	0.8	1.48
	(-1.84)*	(-2.05)**	(0.81)
Legal	0.94	0.94	1.05
	(-0.73)	(-0.7)	(0.17)
Geography	1.13	1.11	1.4
	(1.23)	(0.98)	(1.22)
Culture	1.14	1.1	0.45
	(1.74)*	(1.13)	(-2.16)**
Industry	1.14	1.1	1.4
	(2.07)**	(1.4)	(1.47)
Subsidiary	1.34	1.35	
	(1.83)*	(1.93)*	
PER	1.001	1.001	1.00002
	(4.46)***	(2.78)***	(1.78)*
ROA	1	1	1.04
	(-2)**	(-2.47)**	(3.27)***
LogCap	0.92	0.9	0.96
	(-2.59)***	(-2.43)**	(-0.67)
Correlation	0.74	0.72	0.69
	(-5.4)***	(-5.65)***	(-2.54)**
Liquidity	1	1	1
	(-8.27)***	(-6.04)***	(-2.95)***
Accounting standard	1.16	1.16	
	(2.33)**	(2.23)**	
Geography	1.05	1.05	
	(2.06)**	(2.07)**	
Culture			1.21
			(2.94)***
PER	1		
	(-4.2)***		
ROA	1.002	1.002	
	(3.57)***	(3.52)***	
Number of failures	915	812	103
Number of observations	915	812	103
Log likrlihood	-3814.1	-3259.1	-243.8
χ2	516.1	286.8	123.6
Prob> χ2	0.0000	0.0000	0.0000

From table 7, we reach the same conclusion for the variables related to market correlation, geographic proximity,

firm's global strategy, growth opportunities and quality of the firm as well as local market capitalization. We also keep the same conclusions about the role of cultural proximity in the decision of additional foreign listing for the subset of firms from developed countries. However, the hazard ratio for the variable *«Culture»* is above 1 and significant in model 1. For firms from emerging markets, the related coefficient is also significant and cultural proximity seems to play a role in the decision of multiple listing for firms originating from emerging markets. While the main effect of *«Culture»* variable is negative (hazard ratio=0.45), this effect grows over time and becomes positive (hazard ratio=1.21). This result leads us to accept hypothesis H5a for firms from emerging markets. Our first finding related to the main effect of cultural proximity on the decision made by firms from emerging countries to list their shares in additional foreign markets is in line with that of Dodd et al.(2013) who finds that firms from some emerging markets (Greece and Portugal) seek culturally disparate countries to list in. The evolution of this effect over time and the newly created positive effect of culture proximity on the decision for additional foreign listing may be interpreted by the fact that firms have become more aware about the benefit of listing in closely related foreign country in term of culture. As argued by Grinblatt and Keloharju (2001), investors are more likely to trade stocks of firms that share the investor's same language and cultural background. Regarding the liquidity variable, models 1 and 2 show that the main effect of the variable *«liquidity»* is positive and significant. While this effect varies over time, it does not become negative. In other words, these firms may list in additional foreign markets to benefit from better liquidity. We can thus accept hypothesis H2.For the subset of firms from emerging markets, liquidity plays no role in the decision of multiple foreign listing. This result leads us to accept hypothesis H2'.Our results are in accordance with the findings in earlier literature which show that cross listing enhances liquidity, especially for firms from developed countries (Bacidore et al. 2005; Domowitz et al. 1998; Silva and Chavez, 2008;Smith and Sofianos, 1997).

Turning to the variable measuring the quality of the informational environment, table 7 shows the same results for all sample and subsets of firms from developed countries. The effect of the variable measuring the quality of the information disclosure of the listing countries compared to that of the home countries grows in time and becomes positive. These results show that firms have become more aware of the benefits of cross listing related to an enhancement of the informational environment which motivates them to list in additional foreign markets with better accounting standard. These results lead us to accept hypothesis H3.For the subset of firms from emerging markets, the coefficient on the variable accounting standard is not significant. The quality of the country's accounting standard plays no role in the decision of multiple listing for firms from emerging countries. Based on these results, we reject hypothesis H3'. We also spot no significant relationship between the level of the country's investor protection and the decision for additional foreign listing. Investor protection plays no role in the decision of multiple foreign listing, and we reject, therefore, hypotheses H4 and H4'.Even after taking into account listing market characteristics, we again reject the bonding hypothesis and show the absence of a correlation between the level of investor protection and multiple listing decision. These results can be explained by two reasons. First, as pointed out by Doidge et al.(2009), for firms from countries with weak investor protection, dominant shareholders may expropriate firm value at the expense of minority shareholders, and are, therefore, less likely to seek a listing in a country with better investor protection. Corporate managers may go abroad if the benefit associated with cross listing exceeds its costs which stem from additional investor protection granted their minority shareholders that make it harder for them to extract private benefit of control. Second, the difference in our results with those of earlier literature who find an empirical support of the bonding hypothesis may also be explained by the fact that previous studies use only a single listing country while we focus on the average effect of a covariate on the recurrence of foreign listing event.

6. Conclusion

With the increased number of firms seeking foreign listing, a substantial body of literature has emerged to study the motivations of cross listing. While a considerable proportion of cross listed firms choose to list in multiple foreign markets, earlier literature focused on cross listing on the US. In this paper, we aim to investigate the motivations of the decision of additional foreign listing by using a set of 333 companies with 915 foreign listing in 19 countries. We study the reasons of multiple listing based on both country and firm-specific characteristics and we provide empirical evidence against the bonding hypothesis. Bonding hypothesis can explain cross listing in the US, while multiple foreign listing is related to reasons other than committing to a higher level of investor protection. We find that firms from developed countries and coming from markets with lower capitalization are more likely to list

their shares in additional foreign markets. We also find that market segmentation hypothesis, information considerations and geographic proximity between home and host countries play a growing important effect over time on the decision made by firms from developed markets to list in additional foreign markets. Firms from developed countries may also choose to list in additional foreign market with better liquidity and where they have a subsidiary. For firms from emerging countries, we provide empirical evidence for the segmentation hypothesis. Country factors, such as liquidity and accounting standard play no role in explaining multiple foreign listing. However, culture proximity significantly affects the decision of additional foreign listing for firms from emerging countries. This latter effect becomes more positive over time because firms have become more aware about the benefit of listing in proximate country in term of culture. The finding of this research has important implications for various groups of market participants. First, understanding the motivations of additional foreign listing and their evolution over time is important for companies wishing a foreign listing of their shares. Second, the findings of this paper help financial markets identify the factors that make them competitive in attracting foreign companies. While this work investigates various reasons for the decision of multiple listing, we limit the sample size to 333 firms. Future research can provide further empirical evidence on the motivations of multiple listing by using a larger sample.

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