IS IT REALLY A BONDING, AN AVOIDANCE, OR A CHARACTERISTICS CHOICE? AN ANALYSIS OF FOREIGN LISTING ON LOW VERSUS HIGH INVESTOR PROTECTION MARKETS

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Abstract

We investigate the difference in the characteristics of firms that cross-list on high versus low investor protection markets. We find that civil law firms that cross-list on common law markets have higher growth rate, larger size and lower turnover pre cross-listing than their counterparts that cross-list on civil law markets. Also, we find that common law firms that cross-list on common law markets are larger and have a lower volume turnover than those that cross-list on civil law markets. Both groups experience a significant increase in their growth after cross-listing on common law markets. We also report that firms which have poor accounting standards, poor performance, are small in size, and from civil law countries are likely to cross-list on the US unregulated exchanges.

JEL: G30, G32, G34

Keywords: Foreign Listing, Legal System, Investor Protection, Civil-Law, Common-Law, Regulated Exchanges, Unregulated Exchanges

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1. Introduction

Abdallah and Goergen (2011) examine the evolution of control for foreign firms that cross-listed on 19 stock markets. They find that these firms experience a decrease in their control concentration. This is the case for civil law firms that cross-list on common law markets and for both groups of common law firms. However, the finding is not upheld for civil law firms that cross-list on civil law markets. Abdallah and Goergen (2011) conclude that the control structure influences the choice of cross-listing location since cross-listing in different legal systems may have different implications for control.

The foreign listing decision is also influenced by the financial needs of the firms. For instance, firms are more likely to cross-list if they are planning a strategic expansion that requires a large amount of external funds. Eiteman et al. (2010), argue that cross-listing enables firms to move from an illiquid market to a liquid market, since the degree of liquidity is different from one market to another. In this regard, firms in illiquid and small markets may benefit from issuing shares internationally, hence enlarging their investor bases. The benefits and reasons for international listing of shares have been explored extensively in previous studies. Those benefits and reasons range from increasing share trading volume (e.g., Barclay et al., 1990; Chowdhry and Nanda, 1991; Mittoo, 1992; Fatemi and Tourani-Rad, 1996; Noronha et al., 1996; Mitto, 1997; Domowitz et al., 1998; Foerster and Karolyi, 1998), to increasing visibility (Baker et al., 2002), reducing cost of capital (Foerster and Karolyi, 1993; Foerster and Karolyi, 1999; Miller, 1999; Ramchand and Sethapakdi, 2000), increasing the level of disclosure (Tesar and Werner; 1995; Noronha et al., 1996; Frost and Pownall, 2000; Leuz and Verrecchia, 2000; Lang et al., 2003a; Lang et al., 2003b; Leuz, 2003; Abdallah et al., 2012), overvaluation (Abdallah and Ioannidis, 2010), and increasing investor protection through bonding (Fuerst, 1998; Coffee, 1999; Kelley and Woidtke, 2001; Coffee, 2002; Reese and Weisbach, 2002; Barton and Waymire, 2003; Doidge, Karolyi and Stulz, 2003; Benos and Weisbach, 2004; Piotroski and Srinivasan, 2008).

Although the literature has answered many questions related to cross-listing, little attempt has

been made to investigate the characteristics and choice of firms that cross-list on high versus low investor protection markets. We mainly investigate how a company's characteristics determine its cross-listing location. Therefore, in a univariate study, we examine the financial characteristics of cross-listed firms before the cross-listing and the implications of cross-listing for them. In particular, we investigate whether firms that cross-list on markets with good investor protection differ from firms that cross-list on markets with low investor protection. We compare the characteristics of our sample firms before and after the cross-listing.

Subsequently, we run a logistic model to test the choice of foreign listing between regulated and unregulated international exchanges. More specifically, we focus on the factors that determine the choice of listing between regulated and unregulated exchanges with respect to investor protection. We find that firms from civil law regimes which cross-list on common law stock exchange markets have a higher growth rate, larger size and a lower turnover pre cross-listing than their counterparts that cross-list on civil law markets. Moreover, we document that firms from common law countries that cross-list on common law markets are larger and have a lower volume turnover than those that cross-list on civil law markets. Our results suggest that civil and common law firms that cross-list on common law markets experience a significant increase in their growth during the cross-listing year. Furthermore, we also provide evidence which indicates that firms from poor investor protection countries, with a low-level of accounting standards, and that are small in size choose to cross-list on the US unregulated exchanges (mainly OTC and PORTAL) which have low investor protection regulations, listing and disclosure requirements.

The rest of the paper is organised as follows. Section 2 presents the hypotheses to be tested. Section 3 defines the sources of data and our variables and explains our methodology. Section 4 discusses the results, and section 5 concludes.

2. Hypotheses to be tested

We derive our hypotheses from the determinants of the cross-listing decision. Firms cross-list in order to raise capital, to improve the liquidity of their shares and to improve their product identification in the host country.

2.1 Cross-listing and raising capital

Firms cross-list in order to raise capital, especially when the financial constraints in their home country are binding. On the home market, the firm is restricted to a certain amount of capital determined by the demand and supply of the market. By listing abroad, the firms' capacity to raise funds is expanded beyond what the firms might have been able to raise in their domestic markets. Mittoo (1992) reports that managers view access to foreign capital markets and the increased ability to raise equity as the main benefits of cross-listing.

Recent research documents that stock markets in countries with good investor protection (La Porta et al., 1997) and higher compliance with legal norms, as measured by the law and order index (Demirgüc-Kunt and Maksimovic, 1998), enable firms to raise more external funds and grow more quickly. An effective legal system discourages the misbehaviour of corporate insiders and should, in principle, impose proper compensation for violations of investor rights. Furthermore, La Porta et al. (1997) find that the percentage of the market capitalisation of equity held by outsiders is higher in common law markets than in civil law markets, and the common law markets have a higher number of listed firms and IPOs than civil law markets.

Firms that cross-list in order to raise capital may have a high level of leverage, high growth opportunities, or their capital needs may be larger than the capacity of their home markets. Due to the existing differences between common law markets and civil law markets regarding the ability of firms to obtain external funds, we hypothesize the following:

H1. Given that common law markets enable firms to raise more external funds than civil law markets, firms that cross-list on common law markets have a higher level of leverage before the cross-listing than firms that cross-list on civil law markets.

H2. Given that common law markets enable firms to raise more external finance than civil law markets, firms that cross-list on common law markets have higher growth opportunities before and after the cross-listing than firms that cross-list on civil law markets.

H3. Given that common law markets are larger and more liquid than civil law markets, firms that cross-list on common law markets have a higher market capitalization relative to their home market before the cross-listing than firms that cross-list on civil law markets.

2.2 Cross-listing and liquidity of the company's shares

Cross-listing the firm's shares abroad makes it easier for foreign investors to acquire and trade the shares. Holding shares in the foreign firm in its domicile market is more risky than holding shares in a firm listed on the local market. This is because of the investment barriers resulting from differences in language, currency, financial reporting and auditing practices, and lack of coverage by financial analysts and the media in the foreign firm. Cross-listing reduces these barriers as the firm prepares periodical information complying with local requirements of the host country. The firm also benefits from local media

and financial analysts' coverage. Accordingly, it will be easier for local investors to obtain timely and relevant information about the foreign firm. This will reduce the risk borne by foreign investors such as exchange risk fluctuations, hence encouraging investors to trade in the share. A survey conducted by Mittoo (1992) reveals that 28% of the managers cite increased liquidity of the firm's share as a major benefit of cross-listing. Mittoo (1992) also reports that firms which voluntarily delisted from foreign exchanges cited lack of trading activity as the main reason for delisting.

Firms that cross-list in order to improve the liquidity of their shares will seek to cross-list on markets with improved market information. The legal and regulatory environment determines the quantity and quality of publicly available information. A good shareholder protection environment minimises the asymmetry information in the market (Brockman and Chung, 2003), which in turn reduces the cost of trading for liquidity providers. This encourages them to trade more often since they are less likely to trade against informed traders. Therefore, we hypothesize the following:

H4. Given that good shareholder protection in common law markets improves share liquidity, firms that cross-list on common law markets have a lower share turnover before the cross-listing than firms that cross-list on civil law markets.

2.3. The choice of the cross-listing location

Coffee (1999; 2002) argues that firms domiciled in low investor protection countries will bond themselves by listing on the US regulated exchanges (AMEX, NASDAQ, and NYSE). Doidge et al. (2004), and Abdallah and Goergen (2011) find supportive evidence. Nonetheless, it is worth noting that those exchanges are associated with a higher level of regulations and listing requirements, and hence, the compliance with their listing requirements requires significant costs to be incurred by the listing firms compared to those of the US unregulated exchanges (OTC and PORTAL). In this respect, Doidge et al. (2004) argue that the decision of firms from poor disclosure environments to list in the US is supportive of the bonding hypothesis. However, the decision of those firms to list on the US unregulated exchanges is to avoid extra costs associated with the listing requirements that are born by listing on the US regulated exchanges. Hence, it is expected that firms from environments with poor accounting standards, those domiciled in poor investor protection countries, those from civil-law countries, firms that have poor performance, and firms that are small in size are more likely to cross-list on the US unregulated exchanges, in order to signal to investors the importance of listing in the US while at the same time incurring fewer listing costs. Hence, we form the following hypothesis:

H5. Firms that are small in size, have poor performance, or are from environments with low accounting standards, poor investor protection, or civil-law countries are likely to cross-list on the US unregulated exchanges to avoid the significant costs associated with listing on regulated exchanges.

3. Sources of Data and methodology

3.1 Sources of data

To test hypotheses H1 to H4, we collected a sample of 175 firms that cross-listed amongst 19 stock exchanges during the period of 1990 to 2000. This sample represents around 21% of the total population of cross-listed firms during that period, due to the fact that the sample was collected manually from websites and sometimes via email after calling the stock exchange when the list of firms was not available on the exchange website. 116 of these firms are from common law countries and 59 are from civil law countries.[2] Table 1 provides the distribution of our sample firms by country of origin[3] and the number of firms from each legal system and their cross-listing location (civil vs. common law system).

To test hypothesis H5 we collected our second sample of firms that had cross-listed on the US and UK regulated, and US unregulated, stock exchanges. Our reasons for choosing these countries were two-fold: first, the US is the only country that has regulated and unregulated exchanges, with differences in listing, disclosure, and regulation requirements. Second, the US and UK have been characterized as having the highest investor protection level worldwide (La Porta *et al*., 1997; 1998).

Accounting data were obtained from Datastream and Thomson Analytics. Trading volume, number of shares outstanding, and market capitalization of the shares outstanding were all obtained from Datastream. When market capitalization is missing, we obtained it from the Federation of the Stock Exchanges (FIBV).

3.2 Methodology

3.2.1 Univariate analysis

For the univariate analysis, we divide our sample firms into four groups: (i) civil law firms that cross-list on civil law markets, (ii) civil law firms that cross-list on common law markets, (iii) common law firms that cross-list on civil law markets, and (iv) common law firms that cross-list on common law markets. This classification of firms allows us to test our hypotheses after controlling for the legal system of the country of origin, i.e., we can compare the characteristics of civil

[2] A similar sample was used by Abdallah and Goergen, 2008.
[3] Country of origin is where the headquarters of the company is based.

firms that cross-list on common law markets with those of civil law firms that cross-list on civil law markets. To test the statistical significance of the differences between the groups, we perform t-tests and Wilcoxon-Mann-Whitney tests for the years –3 to +3 relative to the year of cross-listing.

3.2.2 Definition of variables used in the univariate analysis

Leverage is measured by dividing the long-term debt by the total share capital and reserves. Long-term debt represents the total capital repayable after one year; it includes debentures, bonds, convertibles and debt-like hybrid financial instruments. Total share capital and reserves is the equity share capital and reserves, including preference shares. Growth rate (Growth) is annual asset growth. Relative size (RSize) measures the relative market value of the firms on their domestic market. The relative size of the company is the ratio of the annual average market value of the company, divided by the market value of all the domestic firms listed on the home stock exchange at the end of the year, multiplied by 100. The annual average market value is the average value of the company market value for each day, defined by the closing price for that day multiplied by the shares outstanding. Share turnover (Turnover) is the ratio of the annual average volume of trading shares in thousands, divided by the number of shares outstanding at the end of the year. The trading volume is the volume on the home market, and we believe that this should be a good proxy for the total trading activity for each share (The trading volume on the foreign market is not available for most of the companies and including it in the analysis reduces our observations to almost half. In addition, other researchers such as Pagano et al. (2002) use the volume in the home market as a proxy for trading activity for cross-listed companies. However, they use the monthly figure of the volume at the end of December and we use the average daily figure per year).

3.2.3 Logistic analysis

We predict the choice of cross-listing between regulated and unregulated foreign exchanges. We estimate a logistic model, which allows us to examine if firms from poor investor protection countries are more likely to cross-list on regulated exchanges to signal a commitment to increase the level of investor protection. The model is given as:

$$DFEXCH_i = \alpha + \beta_1(INVESTOR\ PROTECTION) + \beta_2 LNMV_{i,PRE} + \beta_3 ROA_{i,PRE} + \beta_4 DEVEMD_i \quad (1)$$

where $DFEXCH_i$ is a dummy variable that takes the value one if the firm cross-listed on regulated exchanges (AMEX, NASDAQ, NYSE and LSE) and zero if the firm has cross-listed on unregulated exchanges (OTC and PORTAL). We focus on the US and UK, since they are characterized as having the highest level of protection countries (La Porta et al. 1997, 1998). For investor protection, we use three measures (accounting standards rating index, anti-director rights index, and whether the firm is from a civil or common law country). $LNMV_{i,PRE}$ is the natural log of the pre-cross-listing market value. $LNVO_i$ denotes the log of the trading volume during the post-cross-listing period (+2, +250). The average post-listing three years return on assets is given by $ROA_{i,PRE}$. Finally $DEVMD_i$ is a dummy variable that equals one if the firm is from a developed country and zero otherwise.[4] As the measures of investor protection are highly collinear, it is difficult to include them in one equation as this may bias the estimated coefficients, and makes the results difficult to interpret.

Under the hypotheses of investor protection one would expect that firms from countries where investor protection is weak will prefer to list on regulated exchanges to signal their resolve to provide security for the rights of minority shareholders.

4. Empirical results

4.1 Characteristics of cross-listed firms

In this section we discuss the characteristics of cross-listed firms, and the differences between firms that cross-list on low investor protection markets, i.e., civil law markets and firms that cross-list on high investor protection markets such as common law markets. The characteristics we discuss here are leverage, total asset growth, relative size and share turnover.

4.1.1 Leverage

Table 2 displays the descriptive statistics for leverage, as measured by long-term debt, divided by total share capital and reserves. Most of the leverage figures are between 0 and +2 and a few observations are greater than +2. We consider any observation greater than +2 as an outlier and exclude it from the analysis. There are 93 outliers out of 1,109 observations. Inconsistent

[4] This dummy variable is used in Reese and Weisbch (2002).

with hypothesis 1, there is no evidence that civil law firms that cross-list on civil law markets have higher leverage before the cross-listing than civil law firms that cross-list on common law markets. This is also true three years after the cross-listing. On the contrary, we find that throughout most of the period, common law firms that cross-list in common law countries have higher leverage than those that cross-list on civil law markets. However, the difference is only significant in the third year before the cross-listing according to the parametric test, and in the second year following the cross-listing according to both the parametric and non-parametric tests.

Except for common law firms that cross-list on common law markets, we find that all groups of firms reduce their leverage during the cross-listing year. Civil law firms that cross-list on civil law markets reduce their leverage by 39% compared only to 13% for civil law firms that cross-list on common law markets. Also, there is a 3% decline in leverage for common law firms that cross-list on civil law markets. However, the decline in leverage is not statistically significant for any group. We do not find a significant increase in the leverage during the cross-listing year for common law firms that cross-list on common law markets.[5]

4.1.2 Total asset growth (Growth)

Table 3 shows the descriptive statistics for total asset growth. There are 1,096 observations out of 1,017 ranging from –87% to 879%, and only 11 observations out of 1,017 observations are greater than 1000%. Therefore, we consider observations that are greater than 1000% as outliers and exclude them from the analysis. We find that, in general, civil law firms that cross-list on common law markets have higher growth opportunities than civil law firms that cross-list on civil law markets. Although this is true for all years around the cross-listing, it is only significant in the cross-listing year at the 1% level according to the t-test, and is not significant according to the non-parametric test. The finding weakly supports hypothesis 2.

On the contrary, we find that during most of the period, common law firms that cross-list on civil law markets have higher growth opportunities than their counterparts that cross-list on common law markets. The difference is only statistically significant in the second year following the cross-listing for the Wilcoxon-Mann-Whitney test, but it is not significant according to the t-test. However, for the year following the cross-listing, we find that common law firms that cross-list on common law markets have higher asset growth than those that cross-list on civil law markets, but the difference is not statistically significant.

Furthermore, Table 3 reveals that the cross-listing is associated with an increase in total assets during the year of cross-listing for all groups of firms. The increase is only significant for civil law and common law firms that cross-list on common law markets. This suggests that these firms cross-list in order to raise external funds.[6]

4.1.3 Relative size (RSize)

Table 4 displays the descriptive statistics for the company's relative size (RSize) to the home market. Relative size is calculated by dividing the annual average market value for the company over the total market value of all domestic firms which are listed on its home market. We do not report the RSize for the years after the cross-listing because it is not informative in the context of hypothesis 3, since the company is currently listed on the home and host markets. In addition, our aim is to examine whether the inability of the company to raise funds in its home market before the cross-listing motivates it to cross-list. Consistent with hypothesis 3, Table 4 reveals that the RSize of civil law firms that cross-list on common law markets is higher than the RSize of civil law firms that cross-list on civil law markets. This is true for the cross-listing year and for the three years before the cross-listing. However, the difference is significant for the third year before the cross-listing according to the parametric and non-parametric tests. This finding suggests that civil law firms whose capital needs are large relative to their home market tap large capital markets (i.e., common law markets), in order to raise external funds to finance growth opportunities.

There is some evidence that common law firms that cross-list on common law markets have a higher relative market value than their counterparts that cross-list on civil law markets. The difference is statistically significant for the cross-listing year and one year before the cross-listing, according to the Wilcoxon-Mann-Whitney test, but it is not significant according to the t-test.

4.1.4 Share turnover (Turnover)

Table 5 displays the descriptive statistics for the trading activity on the home market measured by share turnover. Turnover equals the annual average number of company shares traded on the home stock exchange divided by the number of shares outstanding of the company at the end of the year. There are 26 observations out of 1,063 observations greater than or equal to one. Therefore, we consider these observations as outliers and exclude them from the analysis. Inconsistent with hypothesis 4, there is no

[5] In addition, we run the analysis with outliers. In general, we do not find a statistically significant difference between companies that cross-list on civil law markets and those that cross-list on common law markets.

[6] We also perform the analysis for total assets growth with the outliers. In general, the results do not change drastically.

significant difference in the turnover between the civil law firms that cross-list on common law markets and those that cross-list on the civil law markets. However, the figures for common law firms support hypothesis 4. We find that there is a statistically significant difference between the two groups of common law firms. Throughout the whole period, common law firms that cross-list on common law markets have a lower turnover ratio than common law firms that cross-list on civil law markets. There is a no statistically significant increase in the turnover of our sample firms during the year of cross-listing. This is also true for the year after the cross-listing.[7]

4.2. Examining the relation between investor protection and the place of cross-listing (The choice between regulated or unregulated stock exchanges)

To provide further evidence for the relationship between cross-listing and investor protection, we examine the choice of listing between regulated and unregulated international exchanges in relation to the bonding hypothesis (Coffee, 2002). We mainly focus on two countries, the US and UK, which are characterized as having the highest level of investor protection (La Porta *et al*. 1997; 1998). We obtained data on firms that cross-listed on the US/UK regulated exchanges (AMEX, NASDAQ, and NYSE), where the level of regulations and investor protection is high, and those that cross-listed on the US unregulated exchanges (OTC and PORTAL), where the level of regulations and investor protection is low. Table 6 provides a distribution of the sample after dividing firms according to their legal system (civil-law versus common-law).

To test H5, we run a logistic model (equation 1) in order to shed light on factors that may influence the decision to cross-list on regulated or unregulated exchanges. The results of the logistic regression are presented in Table 7. The table indicates that firms with better investor protection (better accounting standards, better anti-director rights regulations, and from common law countries) are more likely to cross-list on regulated exchanges. The table suggests that firms with poor accounting standards cross-list on unregulated exchanges in the US (OTC and PORTAL) in order to prevent additional costs of reconciliation to US GAAP/IAS/UK GAAP,[8] and high levels of enforcement and legal liabilities when cross-listing on regulated exchanges. Likewise, large firms are more likely than small firms to cross-list on regulated exchanges with high levels of investor protection. It is worth noting, however, that the mean (median) size of firms cross-listed on the NYSE and LSE is $6289.02 Mln ($1972.79 Mln) and $6720.12 Mln ($2410.34 Mln), respectively, which is much larger than the $1708.47 Mln ($550.4 Mln) and $1611.4 Mln ($713.4 Mln) for foreign firms listed on OTC and PORTAL, respectively. Hence, large and more sophisticated firms are more likely to be able to meet the costs associated with listing on foreign regulated exchanges. By contrast, many firms seeking low listing costs are expected to go to the US unregulated exchanges.[9] This can be supported by the fact that unregulated exchanges account for about 63% (OTC alone represents about 37%) of foreign listing in the US. This is consistent with Doidge *et al*. (2004) who report that the lower tendency of firms from a low-level disclosure environment to list on regulated stock exchanges is associated with the lower net benefits they receive from such listings.

5. Conclusion

In this paper we investigate whether company characteristics, other than the control structure, influence the choice of cross-listing on civil law markets versus common law markets. We do this by comparing the characteristics of firms that cross-list on common law markets with those of firms that cross-list on civil law markets. We also compare the characteristics of firms within the same group before and after the cross-listing. Furthermore, we predict the choice of cross-listing on regulated exchanges with a high level of investor protection versus unregulated exchanges with a low level of investor protection.

This paper reveals that firms that cross-list on common law markets differ in some financial characteristics from firms that cross-list on civil law markets. We find that civil law firms that cross-list on common law markets have higher growth rates, larger size and lower turnover pre cross-listing than their counterparts that cross-list on civil law markets. Also, we find that common law firms that cross-list on common law markets are larger and have lower volume turnover than those that cross-list on civil law markets. We find that civil and common law firms that cross-list on common law markets experience a significant increase in their growth during the cross-

[7] We run the analysis with the outliers and obtain similar results. We also conduct the analysis after adding the trading volume on the foreign market. Although the observations are cut to almost half, the analysis (not reported) shows similar results in terms of the differences between the groups and in terms of the pattern of the trading after the cross-listing.

[8] Foreign firms listed in the US have to partially reconcile to US GAAP if listed as ADR level 2, and must fully reconcile to US GAAP if listed as ADR level 3. Foreign firms seeking UK listing have to report under IAS/US or UK GAAP, except firms where the accounting standards of their countries of origin are accepted by the UKLA under the mutual recognition regulations. By contrast, OTC and PORTAL firms do not have to register with the SEC, and do not have to report using US GAAP; they can report using their home GAAP, or any other GAAP.

[9] PORTAL's listing and annual fees are the lowest across all exchanges. In addition, OTC and PORTAL firms, despite having to register with the SEC, do not have to comply with all the reporting requirements set by the SEC. In addition, as level 1 represents the first step into the US market, many foreign firms list as level 1 and go later to levels 2 or 3.

listing year. We find no evidence that there is an increase in the share turnover during the cross-listing year or the year after for all groups of firms.

We also test the choice of cross-listing and provide evidence that is not in line with the bonding hypothesis suggested by Coffee (2002), which states that firms signal their commitment to protect minority investors by cross-listing on exchanges with better investor protection regulations. We instead find evidence indicating that firms with better investor protection (better accounting standards, better anti-director rights regulations, and from common law countries) are more likely to cross-list on regulated exchanges. On the other hand, firms with poor accounting standards are more likely to cross-list on unregulated exchanges in the US (OTC and PORTAL), in order to avoid additional costs of reconciliation to US GAAP/IAS/UK GAAP, and high levels of enforcement and legal liabilities, which they face when cross-listing on regulated exchanges. Likewise, large firms are more likely to cross-list on regulated exchanges, with high levels of investor protection, than small firms. These results are consistent with those of Doige *et al.* (2004) who find that firms from a lower (higher) disclosure environment are less (more) likely to cross-list on regulated exchanges.

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Table 1. Distribution of sample companies

Panel A: Number of cross-listings (CLS) by companies in the final sample and their cross-listing locations for the period 1990-2000

	Country of origin	Neuer. mkt	Euro.NM Amsterdam	Lenouvea marche	Brussels	Frankfurt	Paris	Amsterdam	Stockholm	OSLO	Swiss	Aus-tra-lian	New Zealand	Irish	Tokyo	To-ron-to	LSE	NYSE	NASDAQ	Total
1	**Belgium**					1	1			1										3
2	**Germany**						2	1			3				1			2	6	10
3	**France**																		5	5
4	**Italy**							1										2	1	3
5	**Netherlands**				2	2					1						3	2	4	7
6	**Sweden**																	1	4	5
7	**Norway**																1	1	2	4
8	**Switzerland**	1				1			2								2	1	2	5
9	**Austria**					1						1						1		2
10	**Australia**												10			1			5	15
11	**New Zealand**											5							1	6
12	**Denmark**	1																		1
13	**Ireland**															1	5	1	3	7
14	**South Africa**				1												1		1	3
15	**Japan**					7	1										6	3	1	14
16	**Canada**								1	1	1	2		1				4	25	34
17	**UK**	1	2		1	1		4		2				2				2	15	24
18	**US**	3		1	3	3	2	2	2	1	3	3			1	3	4			27
	Total	6	2	1	7	16	6	8	5	5	8	11	10	3	2	5	22	20	75	175

Panel B: Distribution of sample companies by their country of origin

Common law countries		Civil law countries	
Australia	15	Austria	2
Canada	34	Belgium	3
Ireland	7	Denmark	1
New Zealand	6	France	5
South Africa	3	Germany	10
United Kingdom	24	Italy	3
United States	27	Japan	14
		Netherlands	7
		Norway	4
		Sweden	5
		Switzerland	5
Sub-total	116		59
Total	Common + Civil		175

Panel C: Number of sample companies in each legal system and their cross-listing location

		Host country		
		Civil law	Common law	Total
Home country	Civil law	17	42	59
	Common law	30	86	116
	No. of companies	47	128	175

Panel D: Civil versus common law firms that have cross-listed on US and LSE between 1980 and 2000

	AMEX	NASDAQ	NYSE	OTC	PORTAL	LSE	Total	%
English Law Origin	13	65	116	200	49	52	495	0.544
French Law Origin		8	36	62	23	10	139	0.153
German Law Origin		14	23	124	39	24	224	0.246
Scandinavian Law Origin		4	11	9	2	4	30	0.033
Others			1	9	7	5	22	0.024
Total	13	91	187	404	120	95	910	1

Table 2. Descriptive statistics and univariate tests for leverage

Mean, median, minimum, maximum and sample size								
	CLS_{-3}	**CLS_{-2}**	**CLS_{-1}**	**CLS**	**CLS_{+1}**	**CLS_{+2}**	**CLS_{+3}**	**$CLS_{>3}$**
Civil law companies cross listed in civil law countries (22)								
Mean	0.444	0.468	0.437	0.266	0.573	0.505	0.377	0.321
Median	0.375	0.289	0.351	0.198	0.500	0.391	0.338	0.157
Minimum	0.121	0.086	0.006	0.002	0.002	0.000	0.001	0.001
Maximum	1.038	1.533	1.262	0.664	1.734	1.690	0.970	1.849
Sample size	10	11	13	16	11	10	7	26
Civil law companies cross listed in common law countries (21)								
Mean	0.601	0.420	0.447	0.388	0.438	0.489	0.497	0.630
Median	0.508	0.323	0.382	0.088	0.423	0.331	0.328	0.594
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	1.772	1.536	1.765	1.948	1.948	1.330	1.659	1.393
Sample size	11	18	22	41	27	20	15	20
Common law companies cross listed in civil law countries (12)								
Mean	0.211	0.175	0.270	0.261	0.205	0.233	0.280	0.422
Median	0.090	0.015	0.068	0.031	0.055	0.017	0.001	0.367
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	0.727	1.053	1.095	1.215	0.935	1.143	1.236	1.338
Sample size	12	17	22	27	18	14	13	28
Common law companies cross listed in common law countries (11)								
Mean	0.432	0.302	0.262	0.324	0.350	0.509	0.424	0.470
Median	0.195	0.069	0.072	0.084	0.164	0.332	0.315	0.322
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	2.000	1.451	1.812	1.949	1.546	1.752	1.745	1.887
Sample size	32	41	56	70	56	45	31	76
t-statistics for the difference in means between the groups								
(22) vs. (21)	-0.883	0.280	-0.068	-1.213	0.738	0.087	-0.658	-2.112
p-value	0.388	0.782	0.947	0.230	0.465	0.931	0.519	0.040
(12) vs. (11)	-1.754	-1.141	0.078	-0.672	-1.473	-1.807	-0.932	-0.561
p-value	0.087	0.259	0.938	0.503	0.145	0.076	0.357	0.576
Wilcoxon-Mann-Whitney p-value for the difference in means between the groups								
(22) vs.(21)	0.398	0.529	0.946	0.516	0.664	0.775	0.972	0.035
(12) vs.(11)	0.760	0.483	0.809	0.371	0.135	0.062	0.141	0.837
p-value of t-statistics for the difference in means within the same group								
Group 22		**Group 21**			**Group 12**		**Group 11**	
CLS_{+1} -CLS_{-1}	0.51	CLS_{+1} -CLS_{-1}	0.945		CLS_{+1} -CLS_{-1}	0.545	CLS_{+1} -CLS_{-1}	0.24
CLS-CLS_{-1}	0.16	CLS-CLS_{-1}	0.664		CLS-CLS_{-1}	0.936	CLS-CLS_{-1}	0.406
CLS_{+1}-CLS	0.065	CLS_{+1}-CLS	0.701		CLS_{+1}-CLS	0.59	CLS_{+1}-CLS	0.73

Notes:

1- *Leverage is the ratio of long term-debt divided by the total share capital and reserves.*
2- *p-values for the two-tailed test.*

Table 3. Descriptive statistics and univariate tests for growth

Mean, median, minimum, maximum and sample size								
	CLS_{-3}	**CLS_{-2}**	**CLS_{-1}**	**CLS**	**CLS_{+1}**	**CLS_{+2}**	**CLS_{+3}**	**$CLS_{>3}$**
Civil law companies cross listed in civil law countries (22)								
Mean	12.636	39.130	9.739	24.811	16.767	17.677	4.453	13.362
Median	6.824	5.696	10.557	13.475	7.624	4.828	-1.565	3.823
Minimum	-15.310	-1.569	-27.337	-8.878	-8.781	-27.903	-17.408	-28.060
Maximum	74.212	297.584	37.432	112.757	111.411	74.880	40.886	98.397
Sample size	11	14	15	16	13	11	8	34
Civil law companies cross listed in common law countries (21)								
Mean	112.194	53.395	32.893	159.775	24.825	19.075	11.730	11.138
Median	13.069	12.115	15.522	32.616	11.353	18.789	9.321	6.235
Minimum	-2.687	-25.064	-26.425	-7.163	-16.925	-25.819	-33.106	-13.381
Maximum	825.392	340.016	272.039	782.270	284.335	90.917	58.807	59.610
Sample size	15	22	26	33	27	19	14	22
Common law companies cross listed in civil law countries (12)								
Mean	19.357	38.679	88.271	95.569	49.558	67.847	21.411	24.389
Median	10.243	7.722	16.233	55.350	15.827	-0.040	8.507	9.956
Minimum	-4.107	-19.181	-26.944	-33.543	-56.202	-53.582	-27.361	-22.493
Maximum	50.631	335.928	582.666	310.508	297.524	850.401	169.685	490.687
Sample size	9	11	20	26	20	13	13	31
Common law companies cross listed in common law countries (11)								
Mean	23.964	32.285	46.392	90.452	55.218	40.016	36.473	14.695
Median	9.190	9.508	21.875	30.651	13.965	29.304	13.110	5.536
Minimum	-63.871	-49.271	-39.075	-43.824	-49.898	-15.909	-87.012	-56.561
Maximum	157.370	636.420	305.838	777.307	879.131	165.474	403.440	167.089
Sample size	27	35	44	57	59	48	36	85
t-statistics for the difference in means between the groups								
(22) vs. (21)	-1.600	-0.457	-1.263	-3.404	-0.483	-0.133	-0.785	0.335
p-value	0.131	0.651	0.214	0.002	0.632	0.895	0.442	0.739
(12) vs. (11)	-0.251	0.172	-1.138	-0.151	0.172	-0.423	-0.544	0.836
p-value	0.804	0.864	0.267	0.880	0.864	0.680	0.589	0.405
Wilcoxon-Mann-Whitney p-value for the difference in means between the groups								
(22) vs. (21)	0.186	0.436	0.317	0.208	0.697	0.401	0.195	0.933
(12) vs. (11)	0.784	0.528	0.873	0.372	0.565	0.060	0.556	0.998
p-value of t-statistics for the difference in means within the same group								
Group 22		**Group 21**			**Group 12**		**Group 11**	
CLS_{+1} -CLS_{-1}	0.451	CLS_{+1} -CLS_{-1}	0.643		CLS_{+1} -CLS_{-1}	0.36	CLS_{+1} -CLS_{-1}	0.70
CLS-CLS_{-1}	0.11	CLS-CLS_{-1}	0.007		CLS-CLS_{-1}	0.85	CLS-CLS_{-1}	0.092
CLS_{+1}-CLS	0.50	CLS_{+1}-CLS	0.003		CLS_{+1}-CLS	0.139	CLS_{+1}-CLS	0.197

Notes:

1- Growth is the annual assets growth.
2- p-values for the two-tailed test.

Table 4. Descriptive statistics and univariate tests for relative size (RSize) in %

Mean, median, minimum, maximum and sample size				
	CLS_{-3}	**CLS_{-2}**	**CLS_{-1}**	**CLS**
Civil law companies cross listed in civil law countries (22)				
Mean	0.220	0.285	0.305	0.434
Median	0.043	0.068	0.090	0.306
Minimum	0.022	0.018	0.022	0.022
Maximum	1.482	1.389	1.701	2.408
Sample size	11	13	13	17
Civil law companies cross listed in common law countries (21)				
Mean	1.150	0.943	0.866	1.560
Median	0.702	0.104	0.118	0.257
Minimum	0.028	0.035	0.036	0.017
Maximum	3.306	4.933	4.034	13.036
Sample size	9	13	14	42
Common law companies cross listed in civil law countries (12)				
Mean	0.118	0.110	0.085	0.093
Median	0.012	0.011	0.018	0.022
Minimum	0.000	0.000	0.000	0.000
Maximum	0.868	0.883	0.984	1.427
Sample size	15	17	23	30
Common law companies cross listed in common law countries (11)				
Mean	0.162	0.171	0.184	0.440
Median	0.037	0.028	0.020	0.046
Minimum	0.000	0.001	0.001	0.000
Maximum	2.368	2.211	1.801	14.095
Sample size	38	47	55	84
t-statistics for the difference in means between the groups				
(22) vs. (21)	-1.973	-1.493	-1.418	-2.286
p-value	0.079	0.158	0.175	0.027
(12) vs. (11)	-0.372	-0.566	-1.120	-1.163
p-value	0.711	0.573	0.266	0.247
Wilcoxon-Mann-Whitney p-value for the difference in means between the groups				
(22) vs. (21)	0.087	0.137	0.159	0.269
(12) vs.(11)	0.418	0.330	0.065	0.007

Notes:

1- *Relative size is the ratio of the annual average market value of the company divided by the market value of all domestic firms listed on the home stock exchange at the end of the year multiplied by 100.*
2- *p-values for the two-tailed test*

Table 5. Descriptive statistics and univariate tests for share turnover

Mean, median, minimum, maximum and sample size								
	CLS_{-3}	**CLS_{-2}**	**CLS_{-1}**	**CLS**	**CLS_{+1}**	**CLS_{+2}**	**CLS_{+3}**	**$CLS_{>3}$**
Civil law companies cross listed in civil law countries (22)								
Mean	0.054	0.041	0.044	0.100	0.092	0.057	0.088	0.046
Median	0.018	0.019	0.020	0.027	0.025	0.018	0.023	0.035
Minimum	0.006	0.006	0.002	0.000	0.000	0.000	0.000	0.001
Maximum	0.281	0.192	0.282	0.382	0.441	0.344	0.342	0.141
Sample size	9	10	12	17	13	10	9	34
Civil law companies cross listed in common law countries (21)								
Mean	0.037	0.071	0.019	0.067	0.039	0.041	0.023	0.019
Median	0.024	0.019	0.008	0.028	0.015	0.026	0.016	0.012
Minimum	0.003	0.002	0.000	0.000	0.001	0.002	0.000	0.001
Maximum	0.083	0.386	0.056	0.651	0.217	0.283	0.063	0.096
Sample size	6	8	8	37	30	20	15	30
Common law companies cross listed in civil law countries (12)								
Mean	0.086	0.122	0.089	0.124	0.072	0.056	0.069	0.132
Median	0.030	0.053	0.049	0.037	0.030	0.035	0.052	0.060
Minimum	0.002	0.000	0.000	0.000	0.005	0.006	0.000	0.002
Maximum	0.374	0.568	0.494	0.885	0.417	0.243	0.342	0.603
Sample size	13	16	20	30	23	14	14	31
Common law companies cross listed in common law countries (11)								
Mean	0.025	0.027	0.041	0.054	0.029	0.029	0.038	0.026
Median	0.011	0.014	0.016	0.018	0.016	0.019	0.019	0.023
Minimum	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000
Maximum	0.145	0.116	0.348	0.813	0.316	0.319	0.348	0.105
Sample size	31	39	49	75	63	50	39	84
t-statistics for the difference in means between the groups								
(22) vs. (21)	0.463	-0.674	0.873	0.905	1.336	0.539	1.634	3.182
p-value	0.651	0.51	0.394	0.370	0.204	0.594	0.140	0.003
(12) vs. (11)	1.695	2.305	1.757	1.825	1.884	1.771	1.540	3.467
p-value	0.114	0.035	0.092	0.076	0.071	0.081	0.130	0.002
Wilcoxon-Mann-Whitney p-value for the difference in means between the groups								
(22) vs. (21)	0.768	0.859	0.354	0.955	0.597	0.495	0.270	0.022
(12) vs. (11)	0.026	0.093	0.024	0.010	0.020	0.037	0.039	0.000
p-value of t-statistics for the difference in means within the same group								
Group 22		**Group 21**			**Group 12**		**Group 11**	
CLS_{+1} -CLS_{-1}	0.30	CLS_{+1} -CLS_{-1}	0.282		CLS_{+1} -CLS_{-1}	0.611	CLS_{+1} -CLS_{-1}	0.244
CLS-CLS_{-1}	0.215	CLS-CLS_{-1}	0.265		CLS-CLS_{-1}	0.483	CLS-CLS_{-1}	0.492
CLS_{+1}-CLS	0.887	CLS_{+1}-CLS	0.23		CLS_{+1}-CLS	0.26	CLS_{+1}-CLS	0.119

Notes:

1- *Share turnover is the ratio of the annual average volume of trading shares in thousands divided by the number of shares outstanding at the end of the year.*
2- *p-values for the two-tailed test.*

Table 6. Logit model: Regulated versus unregulated foreign listing

Investor protection measures	Accounting standards	Anti-director rights	CIVIL/COMMON
Intercept	-6.9556***	-4.2572***	-2.7427***
	(0.000)	(0.000)	(0.000)
Accounting standards	0.0634***		
	(0.000)		
Anti-director rights		0.3585***	
		(0.000)	
French Law Dummy			-0.4847*
			(0.082)
German Law Dummy			-1.5107***
			(0.000)
Scandinavian Dummy			-0.4301
			(0.388)
DEVMD	0.1221	0.4471*	0.6030**
	(0.673)	(0.088)	(0.021)
LNMV	0.3236***	0.3294***	0.3663***
	(0.000)	(0.000)	(0.000)
ROA	-0.0116*	-0.0140**	-0.0151**
	(0.097)	(0.045)	(0.037)
N	509	520	525
Max-rescaled R^2	0.1599	0.1598	0.2084
Pseudo-R^2	0.1128	0.1128	0.1448

Notes:

1. The accounting standards variable is the rating of accounting standards in the home country of the CL firm taken from La Porta (1998).
2. The anti-director rights variable is an index developed by La Porta et al. (1997; 1998).
3. The French origin dummy, German origin dummy, and Scandinavian origin dummy are dummy variables that each take the value of one if the firm is from French law origin, German law origin, and Scandinavian law origin, respectively, and zero otherwise.
4. LNMV is the natural Log of the firm's market value at day -60 (two months before cross-listing.
5. DEVMD is a dummy variable that equals one if the firm is from a developed country and zero otherwise.
6. ROA is the average of the three year return on assets in the pre cross-listing period.
7. N is the number of observations (firms) in the regression.
8. IPM stands for investor protection measures.
9. ***, **, and * indicate significance at the 1%, 5%, and 10% significance level.