



**Mergers across Borders: Analysing the Internationalisation of Financial Institutions**

Journal:	<i>Journal of International Business Studies</i>
Manuscript ID:	draft
Manuscript Type:	Original Manuscript
Keyword:	Internationalization theory, Foreign Market Entry < Marketing and Consumer Behavior < TOPICS, Cultural Distance < Culture < TOPICS, Banking and Finance < Industry Studies < TOPICS, Language, Financial Institutions



Review Only

# Mergers across Borders: Analysing the Internationalisation of Financial Institutions

## Abstract

What determines the patterns of international expansion of financial institutions? Rugman and others have argued that internationalisation primarily occurs at the regional rather than global level. Others, including Johanson and Valne, have argued that, as well as region, language, culture and legal system are also important in explaining internationalisation patterns.

We investigate FIs' preferences for regional expansion compared with the impacts of language, culture and legal system, using a quantitative analysis of over 12,000 cross-border, financial-services merger-and-acquisition transactions from 1990 to mid-2005. We find that the region effect is high, and stronger than language and cultural effects individually, but about the same as their combined effect. The legal system similarity is not statistically significant when all effects are combined.

Our research also tests the impact of international experience on these factors. The tendency for internationalisation to occur in similar regions, languages, legal systems and cultures is found to be less prevalent in FIs that had more experience of internationalisation. That is, internationally active FIs appear more willing to expand into "distant" countries, where distance is measure by geography, language, legal system and culture. Experienced FIs have apparently learnt how to reduce the barriers they face associated with geographical distance and different languages, cultures and legal systems.

Keywords: Internationalization theory, foreign market entry, Cultural Distance, Language, Banking and Finance, Financial institutions

## 1.0 Introduction

Some researchers contend that there are no truly global financial institutions (FIs) (Rugman and Brain 2004; Grosse 2005; Rugman 2005). Rugman (2005) states that FIs are highly localised in their home regions and that geographical proximity is important in the choice of new countries for FIs to enter. Similarly, Grosse (2005) examines the strategies of ten major FIs, including their geographical scope, and finds that, while most espouse a global intent, they are at most bi-regional (North America and Europe) in their actual distribution of income.

To better understand the factors driving their choice of country, we interviewed 38 financial services executives (Young 2007), which suggested that, in addition to geographical proximity, culture, language and legal system are also important in the choice of country to enter, and further suggested that the Stages Model (Johanson and Vahlne (1977)) might provide additional insight to Rugman's contention. Is the primary driver geographical proximity or similarities of cultures, languages and legal systems? Here we test hypotheses on these questions and a further hypothesis on the impact of an FI's experience on its behaviour, and find that the more international experience a FI gains, the more likely it is to enter countries with larger differences in geography, culture, language and legal system.

We use a database of over 12,000 cross-border, financial-services M&A transactions from 1990 to mid-2005. Our research contributes to the debate on regionalisation versus globalisation with particular application to financial services, investigating the relative strength of region versus other similarity variables (such as language and legal system), and examining the moderator variable of the level of international experience.

## 2.0 Theory and Hypotheses

### 2.1 The First Hypothesis: Regional rather than global.

Rugman et al (Rugman and Brain 2004; Rugman and Verbeke 2004; Rugman 2005) argue that to be globally successful, firms need Firm-Specific Advantages (FSAs) with a global reach, and Locational FSAs with a global scope. Locational FSAs depend on the nature and effect of Country-Specific Advantages (CSAs) on the firm. Rugman argues that building these advantages is difficult to achieve, as most firms do not have the ability to be locally responsive in many countries simultaneously and consequently most firms have yet to build these advantages beyond their own home regions.

Rugman (2005) supports his argument with an analysis of a sample of firms from the *Fortune* Global 500 in 2002, including 40 banks and 27 'other financial services' firms. He analyses the geographical distribution of firm revenues, to determine whether firms were 'Home-region-oriented', 'Host-region-oriented', 'Bi-regional' or 'Global'<sup>1</sup>. Of the 67 financial services firms in the sample, Rugman finds that none were Global, two firms namely ING and Banco Santander were Host-region-oriented and the remainder were Home-region-oriented.

One issue with this analysis is that international firms can use transfer pricing to move revenues to countries with more favourable tax treatments, which raises questions in relation to the integrity of the revenue data. This transfer-pricing issue is also present if the distribution of profits rather than revenues is used.

Another issue is that this analysis is static, and concerned with the distribution of revenues in a single year. Almost all financial institutions were originally based in a home country, and internationalisation tends to occur gradually over time. Focarelli and Pozzolo (2001) find that only 6.7% of a sample of OECD banks had international

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<sup>1</sup> Under Rugman's definitions, Home-region-oriented firms derived at least 50% of revenues from their home region; Host-region-oriented derived at least 50% of revenues from a foreign region; Bi-regional firms derived at least 20% of revenues from two regions but less than 50% in any one region; while Global firms derived at least 20% of revenues from each of the European, North American and Asia Pacific regions, and less than 50% in any one region.

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3 shareholdings in 1997<sup>2</sup>. Their findings suggest that the financial-services industry is  
4 in the early stages of internationalisation, and therefore one would expect that most  
5 firms' revenues would still be in their home country and consequently their home  
6 region.  
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12 Buch (2005) analyses the effect of distance on international banking using data on the  
13 distribution of assets and liabilities of commercial banks from France, Germany, Italy,  
14 the UK and the US in 50 host countries for the years 1983 to 1999. She finds that  
15 banks hold significantly less assets in more geographically distant countries and  
16 concludes that distance remains important for international banking. One problem  
17 with her data is that all of her home countries were in Europe or the US. No Asian,  
18 African or Latin American firms were included in the data. Nevertheless, her analysis  
19 does provide evidence to support the importance of distance.  
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28 Other research raises questions about these findings. Ball and Tschoegl (1982) find  
29 that geographical proximity has a minor effect on bank foreign investment, but their  
30 study is restricted to foreign banks' investments in Japan or California. They examine  
31 only whether a foreign bank had a branch in Japan or a subsidiary in California (in  
32 1978) and analyse the effect of a distance variable from the foreign bank's head office  
33 to either Japan or California.  
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40 To overcome these issues, we analyse the cross-border expansion efforts of FIs, to  
41 determine whether expansion efforts are more frequent in intra-regional expansion or  
42 inter-regional expansion. Our analysis examines the dynamic aspects of  
43 internationalisation, that is, the actions by FIs to increase their international presence  
44 via cross-border merger-and-acquisition (M&A) transactions. Such actions are not  
45 overwhelmed by the existing distribution of the financial institution's business, nor is  
46 the analysis static. Our analysis also effectively covers a number of joint ventures and  
47 alliances, as FIs sometimes take an equity stake in the parent company along with the  
48 joint venture. Consistent with Rugman's argument, our first hypothesis is based on  
49 the concept of regionalisation:  
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<sup>2</sup> International shareholdings include international subsidiaries and investments but exclude international branches and representative offices.

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*Hypothesis 1: The frequency of cross-border M&A transactions for FIs will be higher for intra-regional than for inter-regional expansions.*

The null hypothesis is that there is *no difference* in the incidence of intra-regional expansion compared with inter-regional expansion.

## **2.2 The Second Hypothesis: Geography matters.**

Under the Stages Model (Johansen and Valne 1977), the choice of country is driven by the concept of “Psychic Distance” – a function of the factors preventing the flow of information from the host country to the firm’s home country (Wiedersheim-Paul 1972). Examples of these factors include language, culture, education, business practices and level of industrial development. The Model predicts that firms enter countries at close psychic distance (similar languages, culture etc), and only subsequently enter countries at further psychic distance.

Our second hypothesis is based on the combined effects of geographical proximity and the similarity factors of language, culture and legal system. Consistent with Rugman’s findings (2005), we expect geographical proximity to be a stronger factor than any similarities of language, culture or legal system.

*Hypothesis 2: Home-country region is a stronger factor than similarity of language, similarity of culture, or similarity of legal system in explaining the geographical distribution of cross-border M&As for FIs.*

The null hypothesis is that Home-country region is *not* a stronger factor than any similarities of language, culture, or legal system.

## **2.3 The Third Hypothesis: Experience matters**

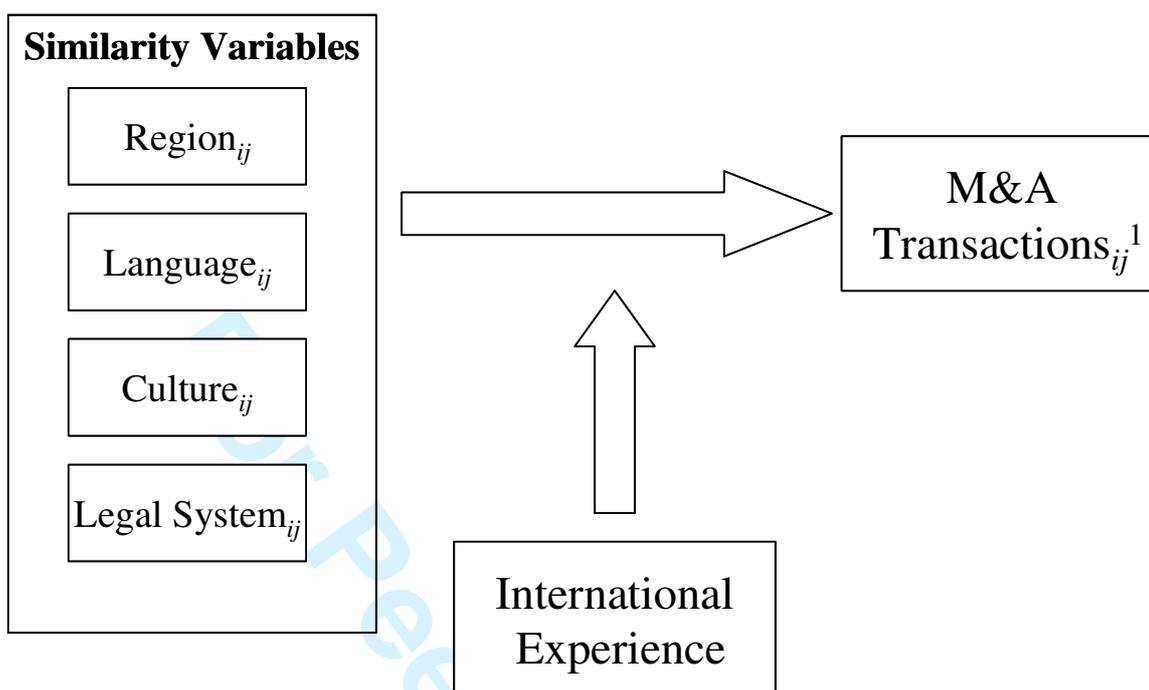
Our third hypothesis seeks to build on Erramilli’s (1990) findings that less experienced service firms prefer to enter foreign countries that are similar to their home country, and that, as their experience increases and becomes more diversified, they are more likely to seek more geographically and culturally distant countries for

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3 expansion. Although Erramilli's sample includes banks, these represent only 9% of  
4 his 175 service firms.  
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9 Davidson also finds that a firm's level of international experience affects the relative  
10 importance of different country characteristics in country decisions (Davidson 1980;  
11 Davidson 1983). Inexperienced firms have a greater tendency for entry into near,  
12 similar countries than do more experienced firms. In his analysis, however, Davidson  
13 does not systematically measure the similarity level of different countries: rather he  
14 observes that the UK is more similar to Canada than to Taiwan, for instance.  
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21 Our interviews with financial services firm executives (Young 2007) suggests that a  
22 more internationally experienced firm is in a better position to overcome many of the  
23 barriers that impede inter-regional expansion. As firms obtain more international  
24 experience, they learn how to manage differences in language, culture and legal  
25 system, and other factors (such as economic attractiveness) will become more  
26 significant in determining the choice of country, findings consistent with Davidson  
27 (1980, 1983).  
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35 In the model of Figure 1, the frequency of M&A transactions from home country,  $i$ , to  
36 host country,  $j$ , is a function of the geographical closeness (same region), and the  
37 similarity of language, culture and legal system of the two countries. The level of  
38 international experience of the acquiring firms, however, will moderate this effect.  
39 Less internationally experienced firms prefer M&A targets in nearby countries with  
40 similar language, legal systems and cultures, while more internationally experienced  
41 firms are more adventurous.  
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**Figure 1: Model of factors affecting the selection of target country**

<sup>1</sup> From home country  $i$  to host country  $j$

Our final hypothesis seeks to test this model:

*Hypothesis 3: Home-country region and similarity of language, culture and legal system will influence the distribution of cross-border M&A activity, but the effect will be moderated by the acquiring firm's level of international experience: the greater the level of experience, the less the impact of region and similarity.*

The null hypothesis is that the level of international experience will have no impact on the effects of region, language, culture and legal system on the expansion decision.

### 3.0 Data Sources

The key source for the cross-border M&A transactions was Thomson Financial's Securities Data Company (SDC) Mergers and Acquisitions database. It contains 12,858 cross-border M&A transactions data from 1990 to 2005. We use M&A transaction announcements rather than completed M&A transactions, since the

announcements reflect the original intention of the bidding firm, irrespective of the many factors that might have prevented completion of the transaction.

For the purposes of this research, regions are defined as Europe, North America, South America, Asia/Australia and Africa/Middle East. (Middle Eastern countries are included in the Africa region.) For language similarity, a dichotomous measure is used: it has a value of 1 if the same language is readily understood in the home and host countries, and 0 if not. The information on language spoken by country is sourced from the CIA World Factbook (CIA 2005).

Cultural similarity is based on Hofstede's measures (Hofstede 2003), where a country's culture is assessed using five measures: Power Distance, Individualism, Masculinity, Uncertainty Avoidance, and Long-Term Orientation. Unfortunately, the Long-Term Orientation measure is a relatively recent addition such his assessment, and data have only been developed for 23 countries, which is insufficient for our analysis. The remaining four measures cover 67 countries. This covers almost 90% of the cross-border M&A transactions in the database.

The Cultural Difference ( $CD_{jk}$ ) between two countries (home country  $j$  and host country  $k$ ) is determined by equation (1) (Kogut and Singh (1988), Benito and Gripsrud (1992), Grosse and Goldberg (1991), Grosse and Trevino (1996)).

$$CD_{jk} = \sum_{i=1}^4 ((X_{ij} - X_{ik})^2 / V_i) / 4 \quad (1)$$

where  $CD_{jk}$  is the cultural difference between the  $j$ th home country and the  $k$ th host country,  $X_{ij}$  is the index for the  $i$ th cultural dimension in the  $j$ th home country,  $k$  is the host country, and  $V_i$  is the variance of the  $i$ th cultural dimension.

Log-linear regressions require a transformation of the scores into a dichotomous variable, for example, intra-culture (similar) or inter-culture (dissimilar). Based on a comparison of CDs of several country pairs of known similar cultures (e.g. Australia/New Zealand (0.16), Denmark/Norway (0.15), Singapore/Malaysia (0.88))

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3 and dissimilar cultures (e.g. Japan/Sweden (9.85) and Canada/Peru (2.58)), the  
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5 criterion for a similar culture is set at a CD of less than one.  
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9 LaPorta et al. (1998) measure the similarity of legal systems based on the origins of a  
10 country's legal system. They classify legal systems into two broad legal traditions:  
11 civil law and common law. Civil law can be sub-categorised, based on having a  
12 French, German, or Scandinavian origin, while common law is primarily of English  
13 origin. On the basis of these categories, they classify forty-nine countries, which  
14 provides a broad range of countries involved in international activities, with the major  
15 exception of China. We use a unique category for the Chinese legal system, since it is  
16 a communist country with a legal system that appears significantly different from  
17 other countries'. We further supplement this classification with information from the  
18 CIA World Factbook (CIA 2005), which enables the legal systems of another 76  
19 countries to be classified. As 15 countries not classified by LaPorta et al. are from the  
20 former Soviet Union, a category of Soviet is added to the classification.  
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32 Other research (Focarelli and Pozzolo 2001; Zaheer and Mosakowski 1997) has  
33 argued that host-country regulations are major barriers to financial services  
34 internationalisation. We do not include regulations as a variable in the analysis, as  
35 our focus is primarily on the relative effect of geographical distance, language, culture  
36 and legal systems on the country decision. We expected host-country regulations to  
37 affect all entries into a specific country equally, unless there were discriminatory  
38 regulations. For example, if a specific country prevents any foreign companies from  
39 making acquisitions in its financial service sector, then there will be no M&A  
40 transactions, irrespective of the geographical distance, language similarity, cultural  
41 distance or legal system similarity of the host and home countries.  
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51 The level of a firm's international activity (measured by the number of cross-border  
52 M&A transactions initiated by the firm over the period of 1990 to 2005) is used as a  
53 proxy for level of international experience. It is a reasonable assumption that firms  
54 that engage in many cross-border M&A transactions over fifteen years are likely to  
55 have more international experience than firms that engage in only a few transactions  
56 over the same period. As there is a relationship between the number of cross-border  
57 M&As and the number of different countries entered, this assumption is also  
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consistent with Erramilli's findings that the diversity of international activity (that is, the number of countries entered, rather than the number of years engaged in international operation) is more effective in preparing firms for entry into culturally distant countries (Erramilli 1990; Erramilli 1991).

## 4.0 Analysis and Results

### 4.1 Inter-regional predominates.

For the first hypothesis, the data were compiled and tabulated based on the region (home) of the ultimate acquiring firm and of the region (host) of the target firm. These data were then analysed using a Chi-squared analysis to determine whether the distribution was statistically significantly different from that expected under the null hypothesis. This analysis identified the cells (combinations of home and host regions) where the observed values were significantly different from those expected. For the first hypothesis to hold, the intra-regional transactions (in the cells along the diagonal) must be significantly different from those expected under the null hypothesis.

The distribution of M&A transactions by region is shown in Table 1. In total, there were 7,324 (or 57%) intra-regional transactions out of the 12,858 cross-border M&A transactions in the 15-year sample, summing the six diagonal cells.

**Table 1: Distribution of cross-border M&As by region (1990–mid-2005)**

Target Region	Acquiror Region					Total
	Africa	Asia	Europe	Latin America	North America	
Africa	89	42	235	0	72	438
Asia	53	1,749	841	0	766	3,409
Europe	156	267	4,500	12	1,116	6,051
Latin America	2	10	359	66	242	679
North America	37	295	1,021	8	920	2,281
Total	337	2,363	6,956	86	3,116	12,858

We calculated a Chi-squared statistic of 5,678 with 16 degrees of freedom. Since the corresponding *p*-value was less than 0.5%, this distribution was highly unlikely to have occurred had there been no relationship between the home and host regions.

The biggest contributor to the Chi-squared statistic was Asia-Asia transactions, where 1,749 transactions occurred but only 626 were expected under the null hypothesis. The next largest contribution was from Latin America to Latin America, where 66 transactions occurred but only 5 were expected. The next largest contribution was Asia-to-Europe transactions, where 267 transactions occurred but 1,112 were expected.

The tabulated data were also analysed for the tendency of transactions to occur on the diagonal, that is, intra-regional transactions. Cohen's Kappa (equation 2) was used to assess this tendency (Cohen 1960; Siegel and N. J. Castellan 1988; Howell 2002). Using this technique and defining  $i$  as the region,  $e(i,i)$  as the expected number in the  $i$ th diagonal,  $o(i,i)$  as the observed count,  $E$  as the sum of expected diagonal cells,  $O$  as the sum of all the observed diagonal cells and  $N$  as the total count in the whole table, then:

$$Kappa = (O - E)/(N - E) \quad (2)$$

Cohen's Kappa = 1 indicates 'perfect correspondence' (in this case 'always expand intra-region'); positive Kappa < 1 indicates some degree of higher tendency for intra-regional expansion; Kappa very close to 0 indicates little or no tendency for expansion of any kind; and negative Kappa indicates a higher tendency for inter-regional expansion. Here, Kappa = 0.34, which indicates that there was some tendency for intra-regional expansion.

To perform a hypothesis test of any tendency to be on the diagonal, all diagonal values were combined into 'Intra-region M&As' and all off-diagonal values into 'Inter-region M&As' for all the observed and expected values in the table. A Chi-square statistic with one degree of freedom was calculated from the values of observed and expected. A hypothesis test on the diagonal calculated a Chi-squared statistic of 2,796 with 1 degree of freedom, resulting in a  $p$ -value of less than 0.5%. Statistical significance was defined at the 95% level for this hypothesis and all subsequent hypotheses. This is consistent with Hypothesis 1.

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A log-linear regression technique (Agresti 1990; Howell 2002) was used to test the statistical significance of the relative number of intra- versus inter-regional transactions (Hypothesis 1) and the combined effects with the other similarity variables of language, culture and legal system (Hypothesis 2). This technique is used when modelling cell counts based on a number of independent explanatory variables. In this case, the dependent variable was the number of cross-border M&A transactions for each combination of home country and host country. For the first and second set of hypotheses, the regression equations were of the form:

$$\ln(N_{ij}) = \lambda + \lambda_{Homecountry} + \lambda_{Hostcountry} + \lambda_R + \lambda_L + \lambda_{CD} + \lambda_{LS} \quad (3)$$

where  $N_{ij}$  is the number of M&A transactions from home country  $i$  to host country  $j$  over the sample period, and  $\lambda_{Homecountry}$  and  $\lambda_{Hostcountry}$  are dummy variables for each home and host country, which were included to account for country-based effects (other than the similarity factors) that can result in higher or lower counts to or from specific countries. (For example, the USA has such a large domestic economy that it will naturally have a high number of cross-border M&A transactions.) Subscript  $R$  represents Intra-Region,  $L$  represents Intra-Language,  $CD$  is Cultural Difference and  $LS$  is Intra-Legal System. Intra-Region, Intra-Language and Intra-Legal System are all dichotomous integer variables, with values of 1 if the country pair of the transaction is intra, and 0 if the transaction is inter. In the log-linear regression analysis, Cultural Difference was included as a continuous variable as described in section 3 (see equation (1)). For Hypothesis 1,  $\lambda_L$  and  $\lambda_{CD}$  and  $\lambda_{LS}$  were set to zero.

The result of this regression was a coefficient of 1.20 for Intra-Region, with a standard error of 0.024 and a  $t$ -value of 50.9. These results are significant and directionally consistent with Hypothesis 1. That the acquirer and the target reside in the same region is consistent with higher numbers of cross-border M&A transactions between countries, supporting Hypothesis 1 that there is a tendency for intra-regional over inter-regional expansion.

## 4.2 Geography matters.

Table 2 shows the ten pairs of countries with the highest number of cross-border M&A transactions in the sample and the status of region, language, cultural difference and legal system similarity for these pairs. Interestingly, while 5 of the top 10 pairs are intra-region, 7 are intra-language, 7 are between countries with relatively similar cultures, and 5 are between countries with similar legal systems. Economic size is important but does not fully explain the patterns. The United States is the largest economy, followed by Japan, but transactions from the US to Japan are ranked tenth, and transactions from Japan to the US are ranked eleventh, by the number of transactions.

**Table 2: Top ten country pairs, ranked by number of transactions**

Rank	M&A Count	Target Nation	Acquirer Nation	Intra-Region	Intra-Language	Cultural Difference	Intra-Legal
1	429	United Kingdom	United States	0	1	0.09	1
2	343	United States	Canada	1	1	0.14	1
3	253	United States	United Kingdom	0	1	0.09	1
4	198	Canada	United States	1	1	0.14	1
5	180	China	Hong Kong	1	1 <sup>3</sup>	0.16	0
6	160	Hong Kong	China	1	1	0.16	0
7	133	France	United Kingdom	1	0	2.44	0
8	129	Australia	United Kingdom	0	1	0.15	1
9	116	United States	Netherlands	0	0	2.18	0
10	113	Japan	United States	0	0	2.83	0

The most numerous transactions are those between the United States and the United Kingdom, with a total of 682 transactions. These countries have the same language, similar cultures and legal system origins but are in different regions. The regional effect is present in the second most numerous country pair, the United States and Canada (total of 541 transactions), but the two also have the same language, similar

<sup>3</sup> Based on Cantonese being widely understood in the Guangdong region of China.

cultures and legal system origin. Table 2 suggests that language, cultural difference and legal system are stronger factors in the top ten pairs of countries than is the region. This observation is contrary to Hypothesis 2, but Table 2 includes data for the top ten pairs only.

For Hypothesis 2, a log-linear regression of equation (3) was used to test the statistical significance of the relative number of intra- versus inter- transactions for the similarity variables. Results for the log-linear regression are shown in Table 3. The regression uses the transactions for which information is available for each of the fields of region, language, cultural difference and legal system ( $N = 11,508$ ). The variables of Intra-Region, Intra-Language and Cultural Difference are all statistically significant, but Intra-Legal is not significant, perhaps because it is correlated with the other variables, particularly language. The directions of the values for Intra-Regional, Intra-Language and Cultural Difference are as expected, that is, higher counts were expected for higher Intra-Region and Intra-Language and lower Cultural Difference.

**Table 3: Log-linear regression results for combined effects**

Variable	Coefficient	Std. Error	t-value
Intra-Region	1.058	0.02	41.2
Intra-Language	0.697	0.03	18.94
Cultural Difference	-0.353	0.01	-33.34
Intra-Legal System	0.011	0.03	0.38

As Intra-Region and Intra-Language are both (1,0) variables, coefficients from the regression results are comparable. The size of the Intra-Region effect (1.058 with a standard error of 0.02) is significantly greater than that of Intra-Language (0.697 with a standard error of 0.03), implying that the region has a larger effect than does language on the number of transactions between countries. The level of correlation between Intra-Region and Intra-Language is low (-0.016).

Because Cultural Difference is a continuous variable rather than a dichotomous (1,0) variable, it is not possible to compare the size of the coefficients directly. It is

possible, however, to determine that a level of Cultural Difference of 3 ( $= -1.058 / -0.353$ ) would achieve the same effect as expanding to another region.  $CD = 3$  is equivalent to the cultural difference between Portugal and South Africa or between Australia and the Philippines. It is a relatively high Cultural Difference: three quarters of the cultural differences in the sample are less than 2.71: across all pairs, the Cultural Difference variable has a mean of 1.82 and a standard deviation of 1.40. So our analysis shows that region has a stronger influence than do language, cultural distance or legal system.

### 4.3 Experience matters.

The third hypothesis relates to the effect of experience on the similarity factors. The M&A transactions were first categorised by the level of international activity of the acquiring firm over the sample period. As some values of transaction per acquirer had only a small number of transactions, data were grouped as in Table 4. The first row of 1 transaction per acquirer includes all transactions for firms that engaged in only 1 such transaction over the 15-year period. The second row of 2–5 transactions per acquirer includes the 2,244 transactions conducted by the 816 acquirers who engaged in between 2 and 5 transactions each over the period. Each row contains over 1000 M&A transactions. The number of acquirers falls significantly with the number of transactions per acquirer, as shown in Column 2.

**Table 4: Distribution of transactions per acquirer**

Transactions per acquirer	Number of Acquirers	Number of Transactions	Intra-region Transactions	Inter-region Transactions	% Intra-region
1	3020	3020	1889	1131	63%
2 - 5	816	2244	1414	830	63%
6 - 10	174	1338	793	545	59%
11 - 20	79	1119	698	421	62%
21 - 50	78	2449	1204	1245	49%
> 50	27	2688	1326	1362	49%
total	4194	12858	7324	5534	57%

Another way to view the data is to determine the sequence of the transaction by the acquirer based on the sequence of the transaction. That is, a specific transaction is the first, second, third, or subsequent transaction undertaken by a specific acquirer during

the period. This treatment has the advantage of allowing us to identify trends over time.

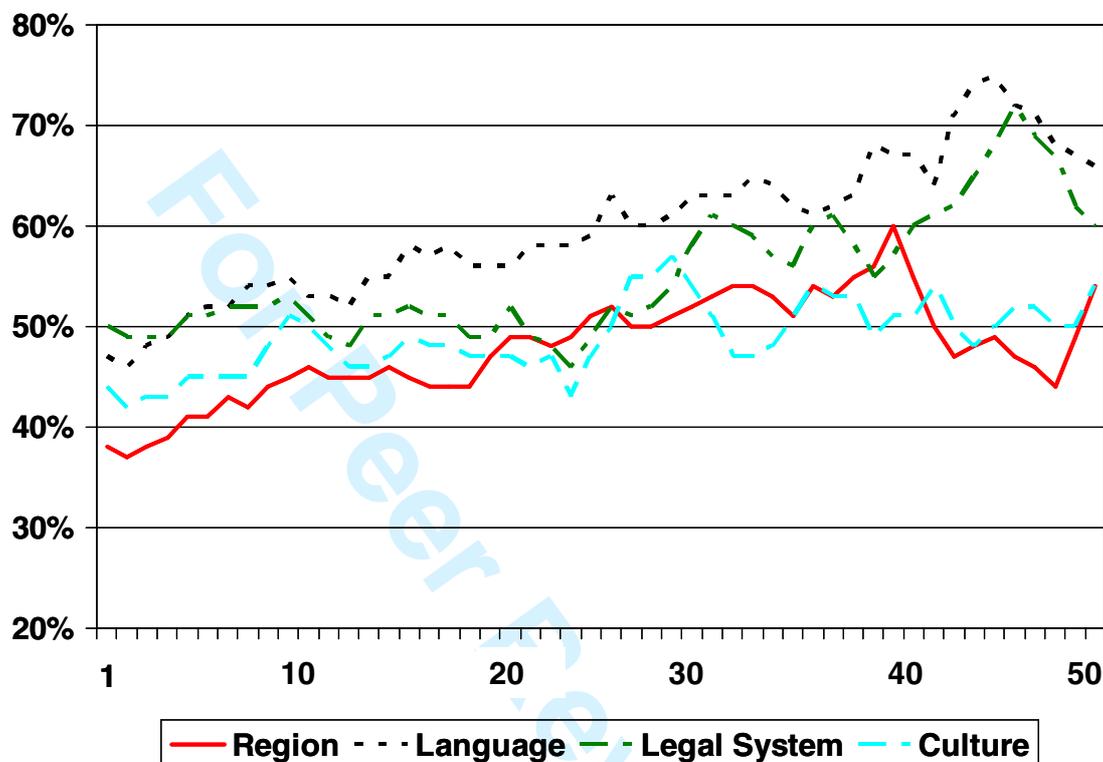
**Table 5** Table 5 shows the distribution based on the sequence of transactions. This shows is that each of the 4194 acquirers in the sample has a first transaction, but only 1174 have a second transaction, and of those, only 728 have a third transaction. As the later categories are grouped, there are over 1338 transactions that are later than the fiftieth transaction of the respective acquirers in the period.

**Table 5: Distribution of transactions by sequence**

Sequence of Transaction	Number of Transactions
1	4194
2	1174
3	728
4	531
5	427
6 to 10	1388
11 to 20	1379
21 to 50	1699
>50	1338

Figure 2 shows the percentages of international expansions that are Inter- transactions for each variable by the sequence of the transactions (using a moving average) for the four measures of Region, Language, Legal System, and Culture. The  $x$ -axis shows the sequence of the transaction for each acquirer. At  $x=1$ , the  $y$  value is the percentage (38%) of Inter-Region transactions (2604) for the first transaction ( $x=1$ ) for each acquirer (4194). It shows that as the sequence of the transaction increases from a firm's first to second to subsequent, the proportion of Inter-Region transactions increases. This supports the hypothesis that greater experience reduces the influence of the barriers associated with language, cultural and legal system differences. Figure 2 shows similar patterns if the sequence of cross-border M&A transactions is plotted against Inter-Language, Inter-Legal, and Inter-Culture ( $CD>1$ ).

Figure 2: Graph of percentage Inter- expansions by the sequence of transaction



The above analyses are aggregate: they do not use information about each firm's sequence of transactions. For example, if a firm engages in an Inter-Region transaction, is it more or less likely to engage in an Intra-Region transaction subsequently? To investigate this, we analyse the transactions based on each firm's earlier transactions, a form of conditional analysis. Specifically, we calculate the proportion of Intra-Region (or Language or Culture or Legal System) transactions for the criteria listed in Table 6.

The results show that there is no significant difference between the percentage Intra-Region for the items 1, 2, 3, 6 and 8 of Table 6. Each of these analyses calculates the percentage Intra-Region irrespective of the status of the first or second transaction by acquirer. In contrast, there is a significant difference for the analyses that are dependent on the status of the first or second transactions, that is, whether the first or

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4 second transaction is Inter-Region or not. For example, for firms whose first  
5 transaction is Inter-Region, the proportion of Intra-Region on subsequent transactions  
6 varies from 18% (item 4: only 2 transactions in total) to 29% (item 7: >2 transactions  
7 in total). This contrasts with the firms that have an intra-regional first transaction,  
8 whose proportion of Intra-Region on their second transaction is 91% (for those firms  
9 with only 2, item 5). These findings imply that if a firm has already experienced an  
10 inter-regional transaction then there is an increased willingness to engage in further  
11 subsequent inter-regional transactions,.  
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19 The analysis for Legal System and Culture is performed on fewer data points, as the  
20 lack of data available for Culture could confound the results. For example, if the  
21 culture data is missing for a firm's fifth transaction but available for the sixth, should  
22 we treat the sixth transaction as the fifth?  
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**Table 6: Proportion of M&A transactions Intra by criteria**

Item	Criterion	Intra-Region	Intra-Language	Intra-Culture	Intra-Legal System
1	First and only transaction (tx) for firms with only 1 tx	63%	52%	54%	50%
2	First tx for firms with greater than 1 tx	61%	54%	60%	56%
3	Second tx for firms with only 2 tx	64%	58%	62%	55%
4	Second (and last) tx for firms with first tx inter and 2 tx	18%	18%	25%	16%
5	Second (and last) tx for firms with first tx intra and 2 tx	91%	88%	80%	81%
6	Second tx for firms with greater than 2 tx	63%	53%		
7	Subsequent tx for firms with first tx inter and more than 2 tx	29%	25%		
8	Third tx (and last) for firms with only 3 tx	64%	52%		
9	Subsequent tx for firms with first tx inter and more than 3 tx	29%	25%		
10	Third tx (and last) for firms with at least one inter for 1st or 2nd, and 3 tx	37%	21%		
11	Third tx (and last) for firms with inter for 1st and 2nd, and 3 tx	23%	14%		
12	Next tx for firms with at least one inter for 1st or 2nd, and more than 3 tx	35%	26%		
13	Next tx for firms with inter for 1st and 2nd, and more than 3 tx	18%	20%		

Finally, log-linear regression techniques are applied by separating the data into two samples. One sample includes all transactions where the acquirer engaged in 5 or fewer transactions over the 15-year period. The other includes the remaining data, that is, the transactions where the acquirer engaged in more than 5 transactions. Table 4 above shows that the first group contains 5,264 (or 41%) of the 12,858 transactions and 3,836 (or 91%) of the 4,194 acquirers. Log-linear regressions are performed on both of these samples using the number of transactions in each acquirer-

country/target-country pair as the dependent variable and the independent variables as described for Hypothesis 2 (section 4.2).

Are any of the statistically significant variables for the sample of less experienced acquirers not significant for the sample of more experienced acquirers? To answer this, we compared the statistical significance of each variable across the two samples. The regression coefficients are then compared to see whether the effect of any variable wanes from the less experienced to the more experienced sample.

**Table 7: Log-linear regression results for multiple variables**

Variable	Acquirers					
	≤ 5 transactions			> 5 transactions		
	Value	Std. Error	t value	Value	Std. Error	t value
Intra-Regional	0.99	0.04	24.39	0.92	0.03	26.45
Intra-Language	0.75	0.06	12.65	0.55	0.05	11.3
Cultural Difference	-0.31	0.02	-18.98	-0.34	0.01	-23.21
Intra-Legal	0.09	0.05	1.78	-0.02	0.04	-0.57

Table 8 shows that the Legal System origin variable is insignificant for both the less and more experienced acquirers. Intra-Region and Intra-Language are significant for both groups, and their coefficients are lower for the more experienced acquirers, consistent with Hypothesis 3. But, while the difference in the coefficient for the Intra-Language is significant ( $>2$  standard deviations), the Intra-Region is not significant ( $< 2$  standard deviations).

Cultural Difference is a significant factor in each group and is negative as expected. But the effect appears to increase in the more experienced group. That is, the more experienced acquirers appear to be less likely to enter countries with high cultural difference than are less experienced acquirers. The difference between the coefficients, however, is small, less than 2 standard deviations.

## 5.0 Discussion

### 5.1 Intra-regional Transactions Are Preferred

The results show that the Intra-Region variable is an important factor, consistent with Rugman's (2005) findings. The Intra-Region effect is highly statistically significant, both when analysed independently (Hypothesis 1) and when combined with other similarity variables (Hypothesis 2). These results strengthen Rugman's contention that Region is a strong influence, particularly as these results are based on cross-border M&As, a form of international growth activity, rather than the current geographical distribution of revenues, a static measure .

The results also support and strengthen Buch's (2005) findings that geographical distance is important in banking, particularly because the dataset includes home countries from the Asian, African and Latin American regions, which is important, as the largest contributions to the Chi-squared statistic were from Asia-Asia, Latin America-Latin America and Asia to Europe. That is, the region combinations with the greatest statistical effect were from home regions not included in Buch's analysis.

### 5.2 Geography Versus the Other Effects

While the analysis for Hypothesis 1 assesses the effects of Region independently, Hypothesis 2 assesses the combined effect of Region and other similarity factors: Language, Culture and Legal System. These results are shown in Table 3 and reveal several important findings.

First, the most noticeable finding is that the Legal-System effect is insignificant, that is, it does not offer any additional explanatory power above that from Cultural Difference and Language. Many of the countries with a shared British heritage have English as a widely understood language and a Common Law origin for their legal system. Similar findings occur for other colonial historical relationships, for example, France and the French colonies.

Perhaps differences in legal system origins are less of a concern for financial institutions, as they can easily hire local law firms to deal with host-country legal issues. But the lack of significance for the Legal-System effect does not imply that

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regulation is not important. After all, regulations are not dependent on the origin of the legal system. The regulatory barriers preventing foreign participation in the financial sector are usually more of a political response to the perceived threat of foreign takeover of the financial sector (Levine 1997; Moshirian 2004; Young and Marks 2005).

Second, the Language effect, while statistically significant, is less than the Region effect. Third, Cultural Difference has a relatively smaller effect than does the Region effect. That is, a CD of around 3 is equivalent to the effect of the Region variable. Interestingly, while these results show that the Intra-Region variable has the largest effect, it is about the same as the combined effects of the Intra-Language and Cultural Difference variables. That is, a change in the Intra-Region variable from 1 to 0 (Intra-Region to inter-region) results in a value of 1.05, while a similar change in the Intra-Language variable has a value of 0.697 and a change in Cultural Difference of at least 1 would provide a value of at least 0.35. The combined value ( $0.697 + 0.35$ ) is approximately 1.05. Thus, while Region has a larger effect than Language *or* Culture *or* Legal system, it has about the same effect as Language *and* Culture. These results suggest that, while Rugman's observations on regionalisation are sustained, language and cultural factors should not be ignored as explanatory variables.

### 5.3 Experience Effects

The Experience variable reduces the effect of the similarity variables. Although in the log-linear regression only the reduction of the Intra-Language effect is statistically significant, the Intra-Region effect decreases, but was not statistically significantly. The Cultural Difference effect slightly increases with increased experience, but not statistically significantly.

The effects of similarity variables are still statistically significant for the more experienced acquirers (with the exception of Legal System). The persistence of these effects with increased international experience is stronger than expected.

The weaker-than-expected moderating effect of international Experience might be due to several factors. First, the internationalisation barriers may be so high that even

experienced FIs need to continually seek to reduce them to the extent possible – by reducing distance, language and cultural barriers wherever possible.

Second, the 15-year duration (1990-2005) could have been too short to support the development of internationalisation capabilities and transferable competitive advantage sufficient to overcome the Liability of Foreignness (LOF) (Hymer 1960/1976) and Liability of Newness (LON) (Stinchcombe 1965; Hannan and Freeman 1984; March 1991). Zaheer and Mosakowski (1997) find that it takes 15 years for FIs to overcome the LOF associated with an internationally standardised business: forex trading desks.

The conditional analysis results finds effects larger than expected. The differences in subsequent transactions for acquirers whose first transaction is ‘Intra’ versus those whose first transaction is ‘Inter’ is substantial, as Table 9 shows.

**Table 8: Percentage of M&A transactions Intra for second transaction by acquirer**

Criterion	Region	Language	Cultural Difference	Legal System
Second (and final) transaction, first tx inter, firms with 2 tx	18	18	25	16
Second (and final) tx, first tx intra, firms with 2 tx	91	88	80	81

These findings suggest that once a firm has experienced an ‘Inter’ transaction, then it is much more willing to engage in further ‘Inter’ transactions. This is consistent with Davidson’s findings that the level of international experience affects the relative importance of different country characteristics in country decisions (Davidson 1980; Davidson 1983). Inexperienced firms have a greater tendency to enter nearby, similar countries than do more experienced firms.

These findings are also consistent with the observation that firms tend to overstate the potential risks and understate the potential returns of operating in a foreign market (Agarwal and Ramaswami 1992), which inhibits firms from engaging in business outside their domestic markets. A similar finding appears to hold for operating

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3 outside one's home region, language or culture: that is, the incremental risks are  
4 overestimated.  
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## 9 10 **6.0 Conclusion**

11 This research expands on Rugman's (2005) theory of regional expansion by applying  
12 it to financial services internationalisation. The research explores the relative  
13 importance of the Region variable versus other similarity variables, such as Language,  
14 Culture and Legal Systems, to explain the internationalisation patterns of financial  
15 services firms. The research finds that the Regional variable has the greatest  
16 explanatory power. When the variables are analysed together, the Legal System is  
17 found to be not significant, and the Region variable effect is approximately equivalent  
18 to the combined effects of Language and Cultural Difference.  
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27 We also explore the effect of greater international experience on the incidence of  
28 intra-regional expansion and also on the incidence of expansion to countries with  
29 similar language, culture and legal systems. We find that the strength of these effects  
30 decreases as the international experience of the firms increases, but still persists even  
31 for experienced firms. That is, more experienced firms, when expanding  
32 internationally, are less likely to engage in intra-region or intra-language or similar  
33 culture or intra-legal system expansion than are less experienced firms.  
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42 The research findings may aid managers' decision-making on choice of target  
43 countries, particularly for those firms in the early stages of internationalisation. For  
44 instance, the research findings suggest that newly internationalising firms target  
45 countries that are either geographically close or have the same language and a similar  
46 culture, or ideally a combination of all three of these characteristics. Finally, the  
47 influence of international experience on the internationalisation ability of FIs suggests  
48 that managers and institutions follow "learning by doing" (Arrow 1962) approaches,  
49 that is, approaches that build the institutional skills of the firm.  
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