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The determinants of bank internationalisation in times of financial globalisation: evidence from the world's largest banks, 1980–2007

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This article analyses the determinants of bank internationalisation, of the world's largest banks from the period 1980–2007. The purpose of the article is twofold. First, we show how a mixed-methods research design, in which we combine a variables-based research with three case studies, can contribute to the field of business history. The variables-based research helps to detect general trends, but the statistical analysis alone only provides a limited understanding of the factors that drive the trends. By analysing selected case studies, we provide a context within which the statistical results are better understood. The second purpose is to understand trends in the internationalisation strategies of banks from different regions, and during different time periods. Contrasting with prior research, we find that Japanese and US banks have exhibited different internationalisation pattern as opposed to the European banks. Also, the determinants of bank internationalisation differ in importance over time. Using case studies, we show the importance of the changing regulatory environment.

Keywords: bank; internationalism; financial; global; evidence

1. Introduction

Dating back to the Middle Ages banks have always had international presence.[1] Modern multinational corporate banks emerged in two waves, one from the 1830s – dominated by colonial banking and big merchant houses such as Barings, JP Morgan, Rothschild – and a second one starting in the 1960s.[2] Yet, large scale bank internationalisation did not accelerate until the 1980s when a process of financial globalisation began, characterised by the liberalisation of the movement of international capital and the lifting of capital controls.[3] The removal of restrictions on the incoming and outgoing capital movements by monetary authorities led to a tremendous increase in capital movements worldwide. Also characteristic of this period was the rapid innovation in capital markets in which loans were pooled, tranched and sold via securitisation[4] and in which investors and borrowers bypassed banks and transacted business directly (disintermediation). This process continued in the 1990s and accelerated due to the increasing use of derivatives.[5] 'All these developments increase the mobility of capital and facilitate the creation of a single global financial space.'[6] Thus, capital controls have been lifted, foreign investments have mushroomed, and financial regulation has loosened. As a result, the competitive structure of the financial market has changed fundamentally which forced banks to reconsider their strategies to remain competitive. Consolidation, product diversification, and internatio-

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nalisation are strategic imperatives that have been used to maintain competitive advantage. Thus, at first glance it seems that the financial industry has rapidly globalised; foreign assets of banks have increased enormously as have their international activities. Larsson et al. for example found that three large European banks (UBS, Barclays and ABN AMRO) converged on a strategy of diversification and internationalisation since the 1980s.[7] The development of financial globalisation has not been a linear process though, as shifting economic and financial conditions of countries changed at a different pace depending on differences in social and political forces.[8] Therefore, one can question whether banks from different regions converge on the same strategy of internationalisation in times of financial globalisation. In other words, has there been a clear trend in the internationalisation strategies of banks from different countries since the 1980s? And if not, what factors explain the different patterns across countries and across time?

To compare banks' internationalisation strategies across countries, we need to focus on the determinants of bank internationalisation of a large set of banks worldwide. Therefore we selected 46 of the world's largest banks from the period 1980–2007. We deliberately chose to stop before the recent financial and economic crisis of 2008 because many banks in the sample subsequently received some form of state support or simply disappeared, and this would have distorted the analysis. The approach seeks statistical generalisations based on the analysis of a few aspects across a larger sample.[9] To analyse whether the process of financial globalisation differs across countries and across time, in the analyses we compare regions (US, Europe and Japan) and the periods 1980–1989, 1990–1998, 1999–2007.[10] The 1980s were characterised by the (aftermath of the) international debt crisis whereas the 1990s on the other hand were generally characterised by economic growth. Approximately from the turn of the millennium onwards, the financial world entered a more turbulent era again.

To identify firm and country-level factors that otherwise would not be visible at an aggregate level, we also used the qualitative and multi-aspects approach.[11] We believe that the two approaches are complementary in that the qualitative approach 'provides some severe tests for generalizability of [. . .] theories'.[12] We describe the most important developments in the US, Germany, and Japan, and analyse in more detail a representative bank of each country. The cases, based on extant literature, show that context, in particular the regulatory environment, which is hard to measure in variable-based research, is a factor of vital importance in explaining different bank strategies across countries.

In section 2 of this article, we discuss the determinants of bank internationalisation. Section 3 elaborates on the methodology. The data selection is described in section 4, followed by the regression analyses in section 5. Section 6 focuses on the three case studies, and section 7 contains our conclusions.

2. Why do banks internationalise?[13]

The literature on bank internationalisation distinguishes between studies that focus on the question *why* banks internationalise and studies articulating *how* they internationalise and what organisational form (e.g. branch, joint venture or acquisition) they choose.[14]

The lack of knowledge about foreign markets forms an obstacle for international operations. Firms that expand abroad therefore face costs which arise from unfamiliarity due to cultural, political, fiscal and economic differences. Costs also increase from the need to coordinate across geographic distance.[15] Banks differ from manufacturing firms in the nature of their products that are information-intense. In particular this counts for retail banking where trust and access to information are crucial in the development of

relationship banking.[16] Keeping these liabilities of foreignness in mind, the question why banks expand their activities abroad becomes apparent. Grubel, one of the first to address this question, argued that to overcome these barriers banks will establish themselves abroad if they have some sort of comparative advantage.[17]

Most well-known theories for multinational firms (and banks) are the Eclectic Theory and Internalisation Theory.[18] The internalisation theory departs from the assumption that market failure occurs not only in the home market but also abroad. It states that transaction costs lead firms to internalise the market; in other words an arm's length contractual relation (market) is replaced by internal hierarchies (firm). By owning assets it reduces transaction costs of negotiating (transaction costs as defined by Coase).[19] The follow-the-client motive is an important example.[20] The rationale why banks follow their clients abroad is that they reduce the risk that they lose their clients' business to the host country banks. Since the bank already has a relationship with the customer, it has an informational advantage over local banks.[21] Thus long-term bank–client relationships and the market for information about clients are considered to be best exploited within the firm (internalisation) than via an external market. Kindleberger argues that it is hard to determine whether banks follow or lead their clients across borders. He finds it plausible that 'where banks are aggressive in building world networks, and industries focus on single projects, banks lead', but the other way around, under opposite conditions the reverse could be the case.[22]

In contrast to the follow-the-client motive, which can be seen as defensive expansion, the market seeker motive is an offensive expansion. This motive argues that banks are motivated by self-interest and seek new market opportunities. They have a tendency to locate in financial centres to be closely located to financial innovation.[23] It is argued that this motive of seeking profitable opportunities has become more important as a result of greater focus on the creation of shareholder value.[24]

The Eclectic Paradigm stresses three important factors in internationalisation: ownership, location and internalisation (referred to as OLI paradigm).[25] It starts from the notion that firms that want to operate in foreign markets need to possess certain advantages to compensate for an information handicap. Ownership advantages are seen as the intangible assets of firms, while the internalisation advantages originate in market failure. Thus, market failure leads to internalisation and ownership of a particular set of assets makes one firm a multinational rather than another.[26] Location advantages relate to the host as well as the home country, explaining why a firm chooses to be present at a foreign market rather than trading at arm's length (e.g. barriers to trade). In other words, it determines the form of the investment. The eclectic theory 'retains the assumption of the Hymer-Kindleberger theory that the multinational enterprise operates at a disadvantage to the incumbent firms and this disadvantage generates a need for a compensating advantage'.[27] Also it assumes that firms develop an ownership advantage in the domestic market and then apply this abroad.

As these theories are rather static, whereas internationalisation is a dynamic process, some historians turned to the internationalisation process theory.[28] The theory considers learning and how it affects decision-making within a firm to be important.[29] It is argued that physical distance leads to uncertainty which can be acquired however by experimental learning[30] or by learning via imitation, and incorporating people or organisations.[31] Incrementalism is an important concept, which implies that the more a company learns of a foreign market, the lower the perceived risks, and the higher the level of investment in that foreign market. In a more recent study, Johanson and Vahlne emphasise that except for passive uncertainty avoidance also active opportunity development is an important

factor for understanding internationalisation.[32] In general one can conclude that the process theory implies that firms' comparative advantages change over time.

Next, we discuss in more detail important motives that are based on generally formulated theories. First, an important ownership advantage could be skills and expertise. These capabilities, stemming from financial development in the home country, which can be applied abroad at relatively low costs, gives banks a comparative ownership advantage. Therefore it is argued that the degree of home country financial development positively associates with bank internationalisation.[33] Secondly, banks from developed countries are more internationalised than those from developing countries.[34] The rationale behind this is that economic development induces financial innovation. Third, the size of the home country matters; banks from larger countries internationalise less than those from smaller economies.[35] Or the other way around, banks facing small home markets and/or mature home markets are more inclined to internationalise. Tschoegl argues that domestic limits to growth relates to FDI in banking.[36] Westerhuis found this incentive to be relevant for Dutch banks. They expanded abroad because they were confronted with a saturated and oligopolistic home market after some major domestic mergers in the 1960s.[37] Lastly, more open economies, exemplified by a high degree of trade openness and capital account openness, show higher degrees of bank internationalisation.

Lane and Milesi-Ferretti test these drivers for financial globalisation empirically.[38] They find that cross country variation in the extent of financial globalisation, measured as foreign assets to GDP, indeed can be associated with some macroeconomic variables. They differentiate between advanced, developing and developed countries, but do not distinguish between individual countries. Therefore they miss country-specific factors, of which regulation in the host or home countries stands out in particular.[39] The Nordic countries are a good example where banking regulation of the home market hindered domestic banks' expansion abroad, and foreign banks from entering the country.[40] Regulation in the home market can also act as a push factor. Thus, banks seek other opportunities in less regulated countries, when protection of domestic banks constrains domestic competition.[41]

3.   Methodology

We apply a mixed methods research design, in which we combine quantitative and qualitative analysis.[42] In the mix of methods, we put most emphasis on the quantitative analysis, with which we aimed to detect statistically significant trends. Yet, statistical analysis alone is not sufficient to understand the context within which a trend should be placed. We therefore complemented the regression analysis with case studies. The cases have the purpose to illustrate and to highlight the relevance of the context.

In the quantitative analysis we test whether bank internationalisation associates with the following macroeconomic state variables postulated by King and Levine: economic development of the home country (measured as GDP per capita), and financial development of the home country (*deposit money banks to total deposits*).[43] We also include the degree of openness of the home economy (*trade openness* and *capital account openness*).[44] Lastly, we include the size of the home country (*population*), cf. the OLI paradigm.[45] Combined, the four macroeconomic state variables provide some Schumpeterian measure of the level of financial and economic development of a home country.[46] A higher level of financial development will spur economic development.[47] In turn, a higher degree of home country economic development can be seen as a facilitator for that country's internationalisation of corporations.[48]

In addition to an analysis that links bank internationalisation to (financial) development, economic theory and historical case studies show that the follow-the-client motive is also an important reason for banks to internationalise. So, we added this motive to the variables. The indicators we use are FDI outflow, real effective exchange rates, and export of goods and services. Lastly, we combined the macroeconomic variables and the follow-the-client indicators into one model.

However, these base regressions do not allow for differentiation between countries nor between time periods. Therefore, we analysed geographic effects, cf. Buckley, who claims historians would benefit from combining historical comparators with geographical ones.[49] To understand what explains differences in bank internationalisation over time, and across countries we ran the regressions again by excluding the US or Japan, and by dividing the period 1980–2007 into three sub-periods (1980–1989, 1990–1998, 1999–2007). The statistical analyses show a mix of country-specific and time-specific effects, which demonstrates that there are limits to making generalisations and calls for further analysis.

We used the case study method to better understand these country-specific and time-specific effects, with the purpose of sketching the context within which bank internationalisation has taken place. Historical case studies are in particular a good way to show the complex processes behind the internationalisation strategies of banks within their respective contexts.[50] As the purpose of the cases is to illustrate the role of historical and geographical context to the internationalisation process, most important in selecting the countries was that we ended up with countries of different financial systems and thus different institutional settings. Most bank internationalisation studies focus on three home regions, namely the US, Japan and Western Europe.[51] We stick to that convention, but instead of covering all Western European countries of the sample, we select Germany alone. In banking studies, countries as Germany and Japan are often taken as examples of so-called bank-based financial systems, in contrast to the US (and UK) market-based financial systems.[52]

We selected the Bank of America, Deutsche Bank, and Sumitomo Bank. The choice for these banks is inspired by variables-based analysis. In the variables-based analysis we rely on the elements stated by King and Levine, being the financial depth indicator, the importance of the banks for their financial systems, and their role as providers of credit.[53] Their choice for variables is driven by the logic that innovative banks positively contribute to the macroeconomic growth of a country via financial development. Their variables have been applied by numerous papers, even in different contexts.[54] When choosing the banks as illustrating cases, we thus ensured these banks would significantly contribute to the three main indicators of King and Levine. All the banks in the sample belong to the top five in terms of size in their home country, so all contribute to the financial depth indicator. Not all banks would fall under the 'systemic important banks' as classified by the IMF in 2014, but the Bank of America, Deutsche Bank, and Sumitomo Bank definitely do.[55] Moreover, all three banks are important providers of business loans. The internationalisation strategies of the three banks reflect very well the regression outcomes on the US, Japan and Europe respectively. The use of case studies in this article contrasts with the use advocated in the Introduction of this special issue. De Jong, Higgins and Van Driel (this issue) encourage observing and analysing existing case studies to formulate and/or test theory and hypotheses. We argue that case studies can also be very helpful to get more insight into the regression results, which are often generalisations neglecting the broader context.

4.   Data and sources

The mixed methods research design combines qualitative analysis (regression technique) with qualitative analysis (case studies), based on secondary sources. The purpose of the qualitative analysis is to complement the regression outcomes by providing a geographical and historical context to the overall regression results. As our research question asks for a comparative approach in geographic space and in time, we consider case studies based on secondary sources more appropriate than an in-depth case study of one country or one bank, based on archival research. Thus, for the cases we relied on existing literature, both corporate histories and studies on the banking sector of a particular country. In Germany where there is a long tradition of commissioned company histories, two impressive monographs have been published on the Deutsche Bank, one by Gall et al. and more recently another by Chris Kobrak.[56] Both studies give valuable information of the history of the bank in its historical context. Unfortunately, these company histories are not available for Bank of America and Sumitomo Bank. For both banks we had to rely on their corporate websites, whereas for Bank of America we also gathered information from Canals' book *Universal Banking*, in which he discusses the impact of the transformations in the international financial system on banks' performance. He attributes a couple of pages to Bank of America.[57] Moreover, the extant literature, mostly historical and economical articles and books on banking, gives a clear overview of the context these banks operated in. It is this historical and geographic context that we are mostly interested in.

For the quantitative analysis, we relied on annual report data and macroeconomic databases. We constructed several variables. Internationalisation of banks is often referred to as either international banking or multinational banking. They are used arbitrarily but there is an important distinction between the two. Multinational banks own and control branches or subsidiaries in more than one country while international banking only includes foreign trade financing and lending to firms and governments in foreign countries. The latter type of cross border lending does not require facilities such as branches.[58] To overcome this problem, we included foreign sales, foreign assets and foreign employees when calculating the degree of internationalisation (DOI), which captures the broader definition of multinational banking. The DOI is a standard measure in international business, being the non-weighted average of foreign to total sales, foreign to total assets, and foreign to total employment.[59] The DOI measure has been applied to bank internationalisation in studies by Hejazi and Santor, and Focarelli and Pozzolo, for example.[60]

The dataset consists of the five largest banks measured by total assets in the US, the UK, Japan, Germany, France, Switzerland, Spain and the Netherlands, as determined in the benchmark years 1980, 1990, and 2000.[61] The investigated period is 1980 through 2007. Three additional selection criteria were used: (1) the bank or its predecessor(s) must have been involved in internationalisation activities between 1980 and 2007; (2) it must have reported on its international activities in its annual reports in such a way that a DOI could be calculated;[62] and (3) included in the Banker's Top 100 banks listing so that we could ensure that e.g. the fifth-largest bank in every country indeed belonged to the world's leading banks.[63] This led to 46 banks in the sample; the banks that dominated both international banking and foreign direct investment (FDI) in banking. Table 1 lists the sample of banks and the period over which we have obtained their data. Table 2 lists some descriptive statistics of the macroeconomic variables. Most of the variables have outlier observations (indicated by positive or negative skewness), but these outliers are relatively

Table 1.   Sample overview.

Country	Bank	Sample	DOI			
			1980	1990	2000	2007
France	BNP	1980–2007	27.6	30.5	47.7	39.6
	Crédit Agricole	1980–2007	2.3	4.0	17.9	42.0
	Crédit Lyonnais	1980–2002	11.3	32.5	25.1	n.a.
	Paribas	1980–1998	28.1	39.4	n.a.	n.a.
	Societé Generale	1980–2007	29.2	27.4	34.9	44.9
Germany	Bayerische Hypobank	1980–1997	4.8	4.4	n.a.	n.a.
	Commerzbank	1980–2007	14.8	17.8	26.4	13.4
	Deutsche Bank	1980–2007	9.3	23.6	59.0	59.5
	Dresdner Bank	1980–2007	8.3	8.4	32.5	33.9
	Hypovereinsbank	1998–2007	n.a.	n.a.	36.1	20.8
	Vereinsbank	1980–1997	4.9	6.5	n.a.	n.a.
	Westdeutsche Landesbank	1980–2007	8.6	12.3	41.1	33.2
Japan	Dai Ichi Kangyo	1980–2000	29.0	19.1	15.0	n.a.
	Industrial Bank of Japan	1980–2000	12.1	26.3	20.8	n.a.
	Mitsubishi Bank	1980–1995	31.5	33.5	n.a.	..
	Mizuho Group	2001–2007	n.a.	n.a.	n.a.	23.0
	Sumitomo Bank	1980–2007	36.4	35.0	16.5	16.0
	Tokyo	1980–1995	31.4	31.3	n.a.	n.a.
	Tokyo-Mitsubishi	1996–2007	n.a.	n.a.	34.3	30.3
Netherlands	ABN	1980–1989	30.5	n.a.	n.a.	n.a.
	ABN-AMRO	1990–2007	n.a.	32.7	75.0	71.8
	AMRO	1980–1989	13.5	n.a.	n.a.	n.a.
	Fortis Bank	1990–2007	n.a.	28.8	33.6	23.3
	ING Bank	1992–2007	n.a.	n.a.	61.6	63.3
	NMB Bank	1980–1991	11.0	16.8	n.a.	n.a.
	Rabobank	1981–2007	n.a.	14.5	20.2	25.2
Spain	Argentaria	1993–1998	n.a.	n.a.	n.a.	n.a.
	Banco Bilbao Vizcaya	1987–2007	n.a.	11.5	56.0	62.2
	Banco Central-Hispano	1991–1998	n.a.	n.a.	n.a.	n.a.
	Santander	1985–2007	n.a.	29.3	59.5	62.0
Switzerland	Credit Suisse	1980–2007	26.7	47.5	69.3	71.2
	SBC	1980–1997	41.2	38.6	n.a.	n.a.
	UBS	1980–2007	27.9	37.8	65.5	66.0
UK	Barclays	1980–2007	51.5	44.3	28.5	54.0
	HSBC	1990–2007	n.a.	44.4	56.4	63.1
	Lloyds TSB	1980–2007	40.9	18.9	15.1	2.8
	Midland	1980–1991	21.4	14.2	n.a.	n.a.
	National Westminster	1980–2000	34.7	29.2	24.2	n.a.
	Royal Bank of Scotland	1996–2007	n.a.	n.a.	15.3	42.4
	Standard Chartered	1980–2007	72.6	77.0	79.7	86.9
USA	Bank of America	1980–2007	48.3	21.9	7.6	10.4
	Chase Manhattan	1980–2007	51.7	31.9	28.0	27.0
	Chemical Banking	1980–1995	38.4	15.3	n.a.	n.a.
	Citicorp	1980–2007	53.6	41.3	46.1	48.8
	JPMorgan	1980–1999	47.7	41.7	n.a.	n.a.
	Manufacturers Hanover	1980–1990	54.6	38.6	n.a.	n.a.

small in numbers (indicated by the fact that most means and medians are close in value, and by the fact that most distributions have fairly high kurtosis).

In order to overcome differences in accountancy definitions, we have relied predominantly upon US reporting data. Most of the banks have had a US subsidiary for

Table 2.   Descriptive statistics.

	DOI	FDI outflow	Real effective exchange rate	Deposit money banks to total deposits	Bank deposits to GDP	Export of goods and services	Trade openness	GDP per capita	Population	Capital account openness
Mean	0.33	0.00	99.28	0.97	0.94	0.45	55.52	0.25	0.88	2.22
Median	0.31	0.00	99.01	0.99	0.73	0.22	50.07	0.24	0.60	2.48
Maximum	0.88	0.00	136.26	1.00	2.30	5.59	145.04	0.66	3.07	2.48
Minimum	0.00	0.00	71.15	0.84	0.26	0.01	16.01	0.04	0.06	– 1.15
Standard deviation	0.19	0.00	11.65	0.03	0.47	0.64	31.96	0.12	0.78	0.73
Skewness	0.59	2.91	0.49	– 1.52	1.18	3.45	0.97	0.42	1.41	– 2.81
Kurtosis	2.99	13.81	3.82	4.50	3.42	19.00	3.15	2.64	4.11	9.36
Number of observations	946	1,341	1,380	1,368	1,312	1,187	1,380	1,380	1,350	1,325

Notes: All macroeconomic indicators expressed in current USD, unless indicated differently. All data covering the 1980–2007 period (see Table 1 for individual bank coverage), except for the Swiss FDI data which was not available prior to 1983. FDI outflow and Export of goods and services measured as percentages of GDP. Per capita GDP in current USD100,000. Population in hundred millions. Trade openness (ratio of exports plus imports to GDP) as in Lane and Milesi-Ferretti, "Drivers of Financial Globalization". Capital account openness is Chinn–Ito index of de jure capital account openness (Chinn and Ito, "New Measure of Financial Openness"). Real effective exchange rate is the nominal effective exchange rate (relative to a basket of several foreign currencies) divided by a price deflator, indexed 2005 = 100. Financial depth indicator (Bank deposits to GDP) as in Beck and Demirgüç-Kunt, "Financial Institutions and Markets". Relative bank size measure (ratio of deposit money bank assets to central bank plus deposit money bank assets) as in Beck, Demirgüç-Kunt and Levine, "New Database on Structure". The number of DOI observations refers to unique firm-year observations. For the macroeconomic variables we have a maximum of 240 unique country-year observations (eight countries over 30 years), which coincides with a maximum of 1,380 firm–country-year combinations.

(almost) the entire sample period, and have thus been obliged to report their so-called 20-F filing to the US Securities and Exchange Commission (SEC); this means that non-US private issuers of securities are required to file form 20-F with the SEC. Where possible, we have used the US reporting data. For the (very few) lacking observations, we have taken the original annual report data, converted these into USD values, and have benchmarked these for an overlapping time window with the 20-F filing data. The impact of any remaining differences in accountancy definitions have been checked by normality tests on the residuals in the regressions.

Mergers and acquisitions affected the dynamics of the sample; the number of banks decreased from 34 banks in 1980 to 27 banks in 2007. The usual data problem of survivorship bias is tackled by the selection criteria: the sample includes poorly performing banks as well. They were typically acquired by their competitors (e.g. Crédit Lyonnais, Midland Bank, National Westminster). In selecting the sample, we set the start of the sample period to 1980. The reason for this start date is twofold. First, financial globalisation did not accelerate until the 1980s. Therefore an analysis of the 1980s is a logical start for the overall problem statement. Secondly, there is a pragmatic restriction: while data collection on financial, accountancy and internationalisation data is challenging for the 1980–1990 period, before 1980 availability becomes even scarcer, which makes it impossible to determine DOI. Compared to Tschoegl, we omit banks from Australia, Belgium, Canada, and Sweden.[64] It may be that from the other countries we lack some individual banks. However when comparing the sample with the Banker Top 100 List, it is an adequate representation of the major international banking activities in the 1980s and 1990s. The sample based on the aforementioned criteria leads to a group of banks with relatively stable characteristics. The choice of size as a selection criterion implies that the banks, in terms of assets, capital or profitability, form a large part of the largest 100 or largest 1000 banks in the world. There is however no indication that they had a relatively higher share of profitability or capital (not reported here). Based on asset size, the concentration in the sample has remained stable and low between 1980 and 2007. There have been shifts in relative sizes for example US banks dominated the sample in the 1980s, the Japanese banks in the late 1980s, while the focus shifted to European banks in the 1990s.

5.   Variables-based analysis: determinants of internationalisation

Figure 1 shows the DOI of the largest banks in eight different countries. On one hand the sample average shows an upward trend in bank internationalisation over time, but at the same time the US and Japanese banks in the sample become increasingly more oriented towards their home country. What explains these differences?

The first test focused on the extent to which sample-wide bank internationalisation associates with some macroeconomic state variables, such as trade openness, per capita GDP, population size, and capital account openness. reports the regression results. For technical reasons, we had to incorporate a lagged dependent variable as a regressor.[65] The inclusion of a lagged dependent variable can create econometric problems when using ordinary least squares (OLS). The method as proposed by Arellano and Bond tackles these econometric problems, at the expense of more complexity in the estimation.[66] To highlight the strength of our results, we show that the conventional OLS estimates are qualitatively similar.[67] We refer to the Arellano-Bond results as the generalised method of moments (GMM) model (labelled after the estimation method) as opposed to the OLS model.

In Model 1, we use most of the drivers of financial globalisation, i.e. economic development (*GDP per capita*), financial development (*deposit money banks to total*
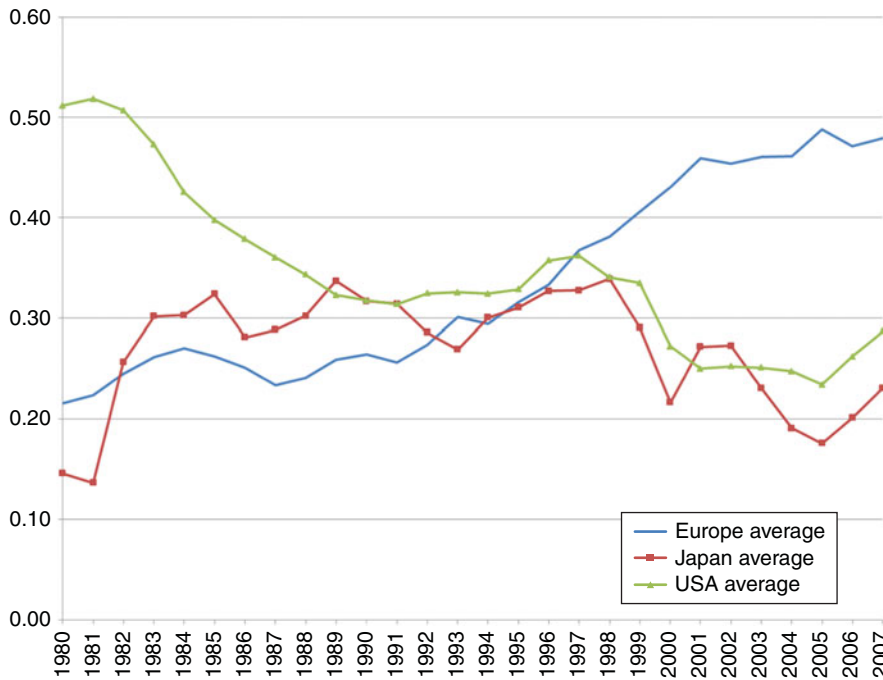
Figure 1.   Internationalisation of banking.
Note: The DOI for the unweighted average of all US banks in our sample, all Japanese banks, and all European banks in our sample. The DOI is the unweighted average of foreign to total sales, foreign to total assets, and foreign to total employment.

deposits), size (*population*), and degree of openness of the home country (*trade openness and capital account openness*). It appears that for the banks in the sample, the DOI is first of all driven by stickiness (i.e. the DOI of last year). The 'deposit money banks to total deposits' variable indicates the relative role of deposit money banks (instead of central banks) in the financial intermediation in a country. Higher levels of this ratio can be readily interpreted as a higher level of financial development in the home country. This variable strongly associates positively with bank internationalisation. Capital account openness (which measures the extent and intensity of capital controls in the home country) also has a statistically significant positive impact on DOI. That is, the higher the degree of financial openness in the home country, the higher the banks' DOI. In addition, the GMM estimates show that bank internationalisation is positively correlated with trade openness, and negatively correlated with per capita GDP (as an indicator of the level of economic development in the home country) and negatively correlated with the home country's population (as an indicator of the size of the home market).

In Model 2, we test the 'follow-the-client' motive, and investigate to what extent bank internationalisation associates with indicators of FDI and some associated variables. The regression results show that outward FDI (from the home country to the rest of the world) has a positive relationship with DOI. The real effective exchange rate has a statistically significant negative impact on banks' DOI. This can be interpreted as a typical purchasing power parity (PPP) problem: if the real effective exchange rate increases, then the currency appreciates (relative to a basket of several foreign currencies) which typically encourages imports rather than exports. In Model 2 I expected that the exports of goods

and services would have an impact on bank internationalisation, but it appeared to be statistically insignificant. The 'exports of goods and services' has a positive impact on bank internationalisation, but this effect is only detected in the GMM model.

In Model 3, we combine the variables used so far. Some of the independent variables could not be combined in one regression specification, due to multicollinearity problems, e.g. 'exports' and 'trade openness' are strongly correlated, so only one of them could be included. It appears that all variables that already had a statistically significant slope estimator in either Model 1 or in Model 2, remained statistically significant, and in addition the signs of the slope estimators remained equal, and their sizes remained roughly the same. This time, however, per capita GDP and population size did become statistically significant in the OLS estimates only, both of them exhibiting an expected sign. The higher the per capita GDP, the higher the level of economic development; it results in a higher propensity to engage in cross-border investments. Population has an expected negative slope estimator since it indicates the size of the home market; the larger the home country, the smaller the incentive to invest abroad. Unfortunately the results for per capita GDP and population appear statistically insignificant for the GMM estimates.

The results of Table 3 indicate that bank internationalisation associates with some macroeconomic variables. The descriptive statistics of Table 2 however, already revealed that most macroeconomic time series had a small number of outliers. These outliers might distort the regression analysis. The outliers can either be attributed to a small number of countries or to a special time period. We analysed their impact by performing a so-called 'dominant group analysis' (in which we assessed the impact of one country at a time) and a so-called 'dominant time period analysis' (in which we isolate the regression analysis for a particular time period).[68]

The choice for the dominant group analysis is provided in Figure 1, which reveals that the US and Japanese banks in the sample have on average become much more nationally oriented, whilst the rest of the sample increased in internationalisation. This contradicting pattern calls for a separate analysis of the US and Japanese banks, in which one investigates their structural drivers of internationalisation. Unfortunately, we have too few observations to analyse the banks of these two countries separately. Therefore, we do the opposite in Table 4; namely we *exclude* one country's banks at a time, and assess how the base-case results change. The same holds for the time periods analysis. For example, the 1980s were characterised by the (aftermath of the) international debt crisis, which has had a dramatic impact on the financial industry. The 1990s on the other hand were generally characterised by economic growth (except for Japan), whilst approximately from the turn of the millennium onwards the financial world entered into a more turbulent era again.

5.1   *Regions: US, Europe and Japan*

In Table 4, we assess the impact of excluding either the US or Japan, given the specificity of these two countries in the sample. At least two regression results stand out. First of all, it appears that the 'Deposit money banks to total deposits' (as an indicator of the relative importance of deposit money banks in the financial system of a country) positively associates with bank internationalisation in general (i.e. when analysing all countries). This remains positive when excluding the US, but once we exclude Japan, then the sign of the slope estimator flips into a negative one, and the significance of the slope estimator decreases. Hence, apparently the Japanese banks drive the base-case results of overall positive slope estimator to a large extent. In other words, for the Japanese banks in the sample, deposit money banks drive the internationalisation process. They may for example

Table 3. Structural drivers of bank internationalisation.

| | Dependent variable is DOI | | | | | |
| | Model 1 | | Model 2 | | Model 3 | |
Independent variables	OLS	GMM	OLS	GMM	OLS	GMM
Intercept	−0.5*** (0.2)		0.1*** (0.0)		−0.4*** (0.1)	
Lagged DOI (1y)	0.8*** (0.0)	0.7*** (0.0)	0.8*** (0.0)	0.8*** (0.0)	0.8*** (0.0)	0.5*** (0.1)
Deposit money banks to total deposits	0.6*** (0.2)	0.9*** (0.0)			0.6*** (0.1)	0.7*** (0.1)
Trade openness	0.1 (0.1)	0.1*** (0.0)			0.0 (0.1)	0.2** (0.0)
GDP per capita	−1.5 (4.0)	−6.5*** (1.0)			10.9*** (3.8)	0.4 (7.0)
Population	0.9 (2.5)	−1.1 (3.2)			−5.2* (−3.0)	−7.7 (11.1)
Capital account openness	0.6 (0.4)	1.5 (0.9)				
FDI outflow			0.1** (0.1)	0.1*** (0.0)	0.1* (0.1)	0.1 (0.1)
Real effective exchange rate			−0.1** (0.0)	−0.1*** (0.0)	−0.1* (0.0)	−0.1*** (0.0)
Bank deposits to GDP			−0.4 (0.5)		−3.7** (1.9)	0.5 (2.0)
Export of goods and services				0.3*** (0.1)		
n	825	45	759	40	826	45
Adj. R²	0.93		0.92		0.92	
Durbin-Watson	1.97		2.01		2.05	
Instrument rank		45				45
Hansen's J-statistic		39.46465		38.19995		36.282878
Prob(J-statistic)		0.449112		0.369776		0.476997

Notes: The table shows three models of fixed-cross sectional effects panel data regressions of structural factors on the bank degree of internationalisation (DOI) for the entire sample. Each model is estimated using OLS estimation, and a GMM estimation as in Arellano and Bond (1991). Standard errors in parentheses. Slope estimators and standard errors reported in percentage points. Lagged DOI was added to correct for autocorrelation. All macroeconomic indicators expressed in current USD, unless indicated differently. All data covering the 1980–2007 period (see Table 1 for individual bank coverage), except for the Swiss FDI data which was not available prior to 1983.FDI outflow and Export of goods and services measured as percentages of GDP. Per capita GDP in current USD100,000. Population in hundred millions. Trade openness (ratio of exports plus imports to GDP) as in Lane and Milesi-Ferretti, "Drivers of Financial Globaliation". Capital account openness is Chinn–Ito index of de jure capital account openess (Chinn and Ito, "New Measure of Financial Openness"). Real effective exchange rate is the nominal effective exchange rate (relative to a basket of several foreign currencies) divided by a price deflator, indexed 2005 = 100.Financial depth indicator (Bank deposits to GDP) as in Beck and Demirgüç-Kunt, "Financial Institutions and Markets". Relative bank size measure (ratio of deposit money bank assets to central bank plus deposit money bank assets) as in Beck, Demirgüç-Kunt and Levine, "New Database on Structure". Standard errors are heteroskedasticity consistent using White cross-section estimation. ***Significant at 1% level; **Significant at 5% level; *Significant at 10% level.

Table 4. Country effects of bank internationalisation.

	All countries		All countries minus USA		All countries minus Japan	
	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM
Intercept	−0.4***		−0.6*		−0.1	
	(0.1)		(0.3)		(0.4)	
Lagged DOI (1y)	0.8***	0.5***	0.8***	0.5***	0.8***	0.6***
	(0.0)	(0.1)	(0.0)	(0.0)	(0.0)	(0.0)
FDI outflow	0.1**	0.1	0.1*	0.1	0.1**	0.1*
	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)	(0.1)
Real effective exchange rate	−0.1*	−0.1***	−0.1*	−0.1***	−0.1**	−0.1***
	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
Deposit money banks to total deposits	0.6***	0.7***	0.6***	0.7***	0.3	−0.1**
	(0.1)	(0.1)	(0.2)	(0.1)	(0.4)	(0.0)
Bank deposits to GDP	−3.7**	0.5	−3.6*	1.8	−2.6	1.3
	(1.9)	(2.0)	(1.9)	(1.2)	(2.4)	(0.8)
Trade openness	0.0	0.2**	0.0	0.1***	−0.0	0.1***
	(0.1)	(0.0)	(0.1)	(0.0)	(0.1)	(0.0)
GDP per capita	10.9***	0.4	7.8	−3.0	9.8**	−1.2
	(3.8)	(7.0)	(6.5)	(4.7)	(4.1)	(1.9)
Population	−5.2*	−7.7	25.5	44.0**	−5.3	−1.9
	(−3.0)	(11.1)	(37.4)	(17.7)	(3.6)	(4.7)
N	826	765	693	638	712	657
adj. R²	0.92		0.92		0.94	
Durbin-Watson	2.05		2.06		2.05	
Instrument rank		45		39		39
Hansen's J-statistic		36.282878		31.47020		31.04678
Prob(J-statistic)		0.4769970		0.442709		0.463857

imply that particularly the deposit money banks internationalise, or that their funding in the home country is relatively cheap vis-à-vis their foreign competitors.[69] Another striking regression result is the fact that overall, 'Population' (as an indicator of the size of the home market) negatively correlates with bank internationalisation (which is conform the intuition). Yet, when excluding the US, the sign of the slope estimator flips to positive, and the statistical significance increases. This suggests that for the US banks in the sample the home market is seen as an *alternative* to internationalisation whereas for the other banks in the sample, the home market *facilitates* bank internationalisation. These two observations call for a more detailed analysis, which we will do below, when focusing on three case studies. First, however, we put any country-specific effects in an historical context by zooming in on a particular time period.

5.2   Time periods: 1980–1989, 1990–1998, and 1999–2007

In Tables 5a, 5b and 5c, we respectively analyse the time period effects of bank internationalisation for all countries, all countries except the US, and all countries except Japan. In Table 5a, we analyse the time period effects for all banks in the sample. There are at least four effects worth pointing out. First, it appears that the negative slope estimator for 'Population' in the overall regression results are particularly driven by the 1980–1989 period. In that period not only the size of the slope estimator is largest, but also it is the only period for which the slope estimator was statistically significant. This suggests that as far as the home market can be treated as an alternative to bank internationalisation, the argument predominantly holds for the 1980s. Second, the overall regression results suggest that 'per capita GDP' does not have a clear association with bank internationalisation.[70] We expected a positive relationship with bank internationalisation, the logic being that the higher the level of economic development of the home country, the larger the financial innovations in these countries, and thus the larger the comparative advantage over host countries.[71] The results of Table 5a, however, suggest that indeed there is a positive collection between per capita GDP and bank internationalisation, but only in the 1990s. For the other periods the overall regression results seem indecisive. A third observation from Table 5a is that 'Bank deposits to GDP' has a very strong importance only in the most recent years of the sample. This suggests that the relative importance of the financial industry to the home economy, and the level of financial development in the home industry particularly increased in the most recent years. To some extent this may be in line with the 'too big to fail' arguments, but the variable may also pick up the effect that over time, (financial) services have become more-and-more important to the countries in the sample. Lastly, we would like to highlight that 'Trade openness' has a positive relationship with bank internationalisation in general, but in the last time period this relationship suddenly becomes negative (whilst still statistically significant). This is unexpected and, as we will argue below, is explained by some country-specific effect.

In Table 5b, we repeat the analysis presented in Table 5a, but exclude the US. When dropping one country, we have too few observations to conduct a GMM analysis for the last time period. The number of observations does suffice for an OLS estimate. Since for most analyses the OLS estimates are in line with the GMM results, we take the OLS results as the proxies for the 1999–2007 period. As a first observation in Table 5b, we note that after excluding the US banks from the sample, 'Trade openness' consistently has a positive relationship with bank internationalisation. This suggests that the counterintuitive result that 'Trade openness' might *negatively* associate with bank internationalisation in the

Table 5a.   Time period effects of bank internationalisation (all countries).

	All countries, all years		1980–1989		1990–1998		1999–2007	
	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM
Intercept	−0.4***		1.4		−0.2		0.7*	
	(0.1)		(0.9)		(0.4)		(0.3)	
Lagged DOI (1y)	0.8***	0.5***	0.6***	0.1***	0.6***	0.4***	0.5***	0.4***
	(0.0)	(0.1)	(0.1)	(0.0)	(0.1)	(0.0)	(0.1)	(0.1)
FDI outflow	0.1**	0.1	−0.8**	−1.2***	−0.3	0.2	0.1	−0.0
	(0.1)	(0.1)	(0.4)	(0.2)	(0.3)	(0.3)	(0.1)	(0.2)
Real effective exchange rate	−0.1*	−0.1***	0.0	0.1**	0.0	0.1	−0.3***	−0.3***
	(0.1)	(0.0)	(0.0)	(0.0)	(0.3)	(0.1)	(0.1)	(0.1)
Deposit money banks to total deposits	0.6***	0.7***	−1.1	−1.5***	0.2	0.8***	−0.1	−0.9
	(0.0)	(0.0)	(0.9)	(0.2)	(0.1)	(0.1)	(0.1)	(0.1)
Bank deposits to GDP	−3.7**	0.5	8.0	5.3***	−0.9	−8.7	21.3***	23.2***
	(1.9)	(2.0)	(5.3)	(2.0)	(0.4)	(17.2)	(5.6)	(1.6)
Trade openness	0.0	0.2**	0.1	0.3***	0.5**	0.5***	−0.3***	−0.2**
	(0.1)	(0.0)	(0.2)	(0.0)	(0.2)	(0.1)	(0.1)	(0.1)
GDP per capita	10.9***	0.4	16.7	10.3	9.8	18.8**	2.8	−8.7
	(3.8)	(7.0)	(14.1)	(8.1)	(15.8)	(8.4)	(11.1)	(11.5)
Population	−5.2*	−7.7	−45.5**	−54.0***	−9.7	−9.5	−15.9	−27.1
	(−3.0)	(11.1)	(17.8)	(19.8)	(8.5)	(10.6)	(10.7)	(18.3)
N	826	765	301	262	283	266	242	224
adj. R²	0.92		0.94		0.94		0.94	
Durbin-Watson	2.05		2.1		2.16		2.16	
Instrument rank		45		36		38		32
Hansen's J-statistic		36.282878		27.26285		29.65639		24.09166
Prob(J-statistic)		0.476997		0.503971		0.483348		0.456366

Table 5b. Time period effects of bank internationalisation (all countries except USA).

	All countries minus USA		1980–1989		1990–1998		1999–2007	
	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM
Intercept	−0.6*		0.7		−0.9		0.0	:
	(0.3)		(1.1)		(0.9)		(0.7)	:
Lagged DOI (1y)	0.8***	0.5***	0.5***	−0.0	0.6***	0.4***	0.5***	:
	(0.0)	(0.0)	(0.1)	(0.0)	(0.0)	(0.0)	(0.1)	:
FDI outflow	0.1*	0.1	−0.9**	−0.9***	−0.3	0.1*	0.1	:
	(0.1)	(0.1)	(0.4)	(0.1)	(0.3)	(0.0)	(0.1)	:
Real effective exchange rate	−0.1*	−0.1***	−0.1	−0.1*	0.1	0.1	−0.3***	:
	(0.0)	(0.0)	(0.0)	(0.0)	(0.1)	(0.0)	(0.1)	:
Deposit money banks to total deposits	0.6***	0.7***	−1.5	−1.3***	0.0	−0.3***	0.0	:
	(0.0)	(0.0)	(1.0)	(0.0)	(0.5)	(0.0)	(0.4)	:
Bank deposits to GDP	−3.6*	1.8	4.6	11.2***	−2.9	−0.2	20.7**	:
	(1.9)	(1.2)	(7.4)	(1.6)	(3.3)	(3.0)	(8.2)	:
Trade openness	0.0	0.1***	0.1	0.0	0.4***	0.5***	0.3***	:
	(0.1)	(0.0)	(0.2)	(0.0)	(0.2)	(0.0)	(0.1)	:
GDP per capita	7.8	−3.0	10.2	−55.6***	−1.8	19.1***	−3.0	:
	(6.5)	(4.7)	(13.9)	(12.2)	(23.6)	(7.3)	(10.0)	:
Population	25.5	44.0**	152.6***	466.6***	115.3	−122.0**	77.6	:
	(37.4)	(17.7)	(54.1)	(30.4)	(105.2)	(61.9)	(49.6)	:
N	693	638	256	223	232	215	205	:
adj. R²	0.92		0.92		0.93		0.92	:
Durbin-Watson	2.06		2.00		2.16		2.17	:
Instrument rank		39		30		32		:
Hansen's J-statistic		31.4702		20.5		26.6		:
Prob(J-statistic)		0.442709		0.567498		0.32		:

Table 5c. Time period effects of bank internationalisation (all countries except Japan).

	All countries minus Japan		1980–1989		1990–1998		1999–2007	
	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM	Model 3 OLS	Model 3 GMM
Intercept	−0.1		1.7**		−0.1		−0.2	..
	(0.4)		(0.8)		(0.5)		(0.6)	..
Lagged DOI (1y)	0.8***	0.6***	−0.6***	0.1**	0.7***	0.4***	0.5***	..
	(0.0)	(0.0)	(0.1)	(0.0)	(0.0)	(0.0)	(0.1)	..
FDI outflow	0.1**	0.1*	−0.6*	−0.5***	−0.3	0.1**	0.1	..
	(0.1)	(0.1)	(0.4)	(0.2)	(0.2)	(0.1)	(0.1)	..
Real effective exchange rate	−0.1**	−0.1***	0.0	0.1**	0.0	−0.1*	−0.3**	..
	(0.0)	(0.0)	(0.0)	(0.0)	(0.1)	(0.1)	(0.1)	..
Deposit money banks to total deposits	0.3	−0.1**	−1.2	−1.6***	0.1	0.0	0.9	..
	(0.4)	(0.0)	(0.9)	(0.3)	(0.4)	(0.2)	(0.5)	..
Bank deposits to GDP	−2.6	1.3	4.9	−2.9	−4.8	−3.2	19.2***	..
	(2.4)	(0.8)	(6.8)	(2.5)	(3.8)	(5.2)	(5.9)	..
Trade openness	−0.0	0.1***	0.1	0.3***	0.4**	0.3***	−0.3***	..
	(0.1)	(0.0)	(0.2)	(0.0)	(0.2)	(0.1)	(0.1)	..
GDP per capita	9.8**	−1.2	16.8*	26.7***	12.6	30.8***	1.4	..
	(4.1)	(1.9)	(9.4)	(6.8)	(27.3)	(3.6)	(10.9)	..
Population	−5.3	−1.9	−50.0***	−83.8***	−13.0*	−15.8**	−12.6	..
	(3.6)	(4.7)	(13.4)	(10.1)	(7.5)	(7.8)	(9.7)	..
N	712	657	261	227	240	224	211	
adj. R^2	0.94		0.94		0.95		0.92	
Durbin-Watson	2.05		1.99		2.11		2.15	
Instrument rank		39		31		34		..

Hansen's J-statistic	31.04678	25.9	25.2	:
Prob(J-statistic)	0.463857	0.305833	0.506902	:

Notes: Tables 5a, 5b, and 5c show the fixed-cross sectional effects panel data regressions of structural factors on the bank degree of internationalisation (DOI) for various samples. Each model is based upon Model 3 from Table 3, and is estimated using OLS estimation, and a GMM estimation as in Arellano and Bond (1991). Standard errors in parentheses. Slope estimators and standard errors reported in percentage points. Lagged DOI was added to correct for autocorrelation. All macroeconomic indicators expressed in current USD, unless indicated differently. All data covering the 1980–2007 period (see Table 1 for individual bank coverage) unless stated differently, and except for the Swiss FDI data which was not available prior to 1983. FDI outflow and Export of goods and services measured as percentages of GDP. Per capita GDP in current USD100,000. Population in hundred millions. Trade openness (ratio of exports plus imports to GDP) as in Lane and Milesi-Ferretti, "Drivers of Financial Globalisation". Real effective exchange rate is the nominal effective exchange rate (relative to a basket of several foreign currencies) divided by a price deflator, indexed 2005 = 100. Financial depth indicator (Bank deposits to GDP) as in Beck and Demirgüç-Kunt, "Financial Institutions and Markets". Relative bank size measure (ratio of deposit money bank assets to central bank plus deposit money bank assets) as in Beck, Demirgüç-Kunt and Levine, "New Database on Structure". Standard errors are heteroskedasticity consistent using White cross-section estimation. ***Significant at 1% level; **Significant at 5% level; *Significant at 10% level. '..' means that GMM estimates could not be obtained because of limited number of observations (underidentification problem).

most recent years, this effect is likely to be driven by the US banks in the sample. A second observation from Table 5b is that once excluding the US banks, 'Population' has a *positive* impact on bank internationalisation, but this counterintuitive overall result is driven by the 1980–1989 period. Hence, for the non-US banks in the sample a larger home market seemed an advantage for internationalisation in the 1980s, whilst in the 1990s non-US banks treated their home market became an interesting alternative to foreign markets. For the US banks, on the other hand, the limited home market was a very strong driver for internationalisation, but this effect is solely observed for the 1980s. Lastly, we note that in Table 5b, 'per capita GDP' has no significant overall effect, but it associates very *negatively* with bank internationalisation in the 1980s, and very *positive* in the 1990s. The negative slope estimator is counterintuitive, but it seems to be driven by one particular country, namely Japan.

In Table 5c, we again repeat the analysis presented in Table 5a, but this time we exclude Japan. Again, dropping one country results in too few observations to conduct a GMM analysis for the last time period. There is one result that stands out. When excluding Japanese banks from the dataset, suddenly per capita GDP *positively* associates with bank internationalisation for all time periods. We attribute this effect to the fact that the growth and decline patterns of Japanese per capita GDP (unmatched steep growth in the 1980s, and steady decline thereafter) are incomparable with the patterns of any of the other countries in the sample. Therefore, variation in per capita GDP cannot explain bank internationalisation in a similar manner as it can in other countries. We elaborate more on this phenomenon in the case study analysis.

6.   Three case studies

The statistical analysis in the preceding section suggests a mix of some country-specific and time-specific effects that call for further analysis. In the current section we do so by analysing the case studies of Bank of America and Sumitomo Bank, because their internationalisation patterns largely coincide with the average pattern for their respective home country. In addition, we analyse Deutsche Bank of which the internationalisation pattern matches with the average of the other banks in the sample. We have chosen these cases to better understand and interpret the results of the regressions. Accordingly, we will show that especially the regulatory environment has been an important factor for explaining the diverging patterns of internationalisation between US, Japanese and German banks since the 1980s.

6.1   United States: Bank of America

US banks became very international after Second World War and especially since 1960s.[72] This was due two main factors. After the war the US came forth as the main financial and economic power in the world economy. And as world trade and capital flows expanded, US banks followed their customers abroad. At the same time, US banks were limited in their domestic expansion because of restrictions on geographic expansion (McFadden Act 1927) and accepted activities of banks (Glass Steagall Act 1933). Moreover some changes in US laws even encouraged and facilitated overseas banking. For example Regulation Q and the Voluntary Foreign Credit Restraint Program restricted the ability of US banks to service their overseas clients. To avoid the impact of these domestic regulations they expanded in foreign markets, in particular to London to gain access to the Eurodollar market.[73] Because of these push and pull factors US banks' overseas operations

and foreign lending increased substantially. Whereas before 1960s the foreign expansion of most US banks was restricted to the financing of international trade, by setting up branches in important financial centres, much of the growth of US banks abroad occurred in the 1970s when they followed their customers to accommodate them abroad. They tried to internalise existing bank–client relations before foreign competitor banks might replace them.[74] Except for branches, subsidiaries became an important organisational form in this period.

The loan debt crisis of 1981 formed a turning point however. Hereafter internationalisation of US banks decreased, as they refocused on the domestic market again. Another reason for this turn was changing legislation within the US. This development had already started in 1978, with a decision of the Supreme Court which led to a gradual removal of interest rate ceilings among different states. Important was that interstate banking gradually was permitted again, eventually leading to the adoption of the federal Riegle-Neal Interstate Banking and Branching Efficiency Act in 1994, putting an end to the McFadden Act of 1927.[75]

Since the 1980s, US banks diverged more in their strategies: some of them expanded abroad again while others focused mainly on the home market, e.g. J.P. Morgan and Citibank stayed active in foreign markets, while Bank of America turned to the home market. Interestingly, after more deregulation in the late 1990s – most importantly the Gramm-Leach-Bliley Act of 1999 after which banks were allowed to combine investment and commercial banking activities – mergers between the largest US banks took place, creating some enormous financial conglomerates. Thus J.P Morgan which had become a worldwide investment bank merged with Chase, which had developed into a retail bank. Citibank, which remained active in the international market, focused on worldwide consumer banking, and added international investment banking activities with the merger of Travelers.[76]

Thus whereas regulation formed an incentive to internationalise in the 1960s and 1970s, deregulation since the 1980s led to a refocus on the domestic market. Because interstate banking had been forbidden for a long time, the market was still rather fragmented giving ample opportunities for US banks to merge with, and acquire, other banks after the restrictions were lifted. In other words, the domestic market was attractive as the US banking system was still less consolidated compared to other countries. The refocus of US banks on the domestic market is well reflected by the international strategy of Bank of America since the 1980s. In 1981 Bank of America was the largest bank of the US and the bank had a degree of internalisation of almost 51%, while in 1998 the DOI had dropped to a mere 7%. The relative decline was a result of a refocus on the domestic market, which led to domestic mergers and divesture of foreign assets.

The history of Bank of America has its roots in California.[77] As the bank was not allowed to branch out to other states due to legislation, it built a strong bank in the state California. The impossibility to expand in the home market, pushed the bank to become active abroad. The bank's expansion drift shifted to the European market already in the 1950s. Compared to European banks the bank was large measured by assets (five times the size of Credit Lyonnais or Deutsche Bank).[78] During the 1960s and early 1970s the bank built up a presence in the important financial centres in Western Europe by opening branches. Since mid-1970s the bank also expanded to Latin America which witnessed rapid economic growth. The bank acted mostly as agent, or underwriter of long-term government debt or debt issued by companies.[79]

The relative decline of international activities was caused by a combination of the new possibilities in the home market and foreign divestments. As with other banks the asset

seeking strategies in the 1960s and 1970s led to imbalances so that the operating expenses were hard to control and foreign expansion had been too ambitious. The banks international activities in this time could be described as 'a hectic, disorganized expansion overseas.'[80] In the early 1980s problems came to the foreground with the loan debt crisis of the developing countries to which the bank had lent substantially. The bank lost more than 2 billion dollars in loan write-offs. In 1985 a restructuring program was announced in which one of the three goals formulated was to cut back international activities and to operate in selected countries rather than to desire to be present in many locations.[81] Instead, the bank's focus was put on retail and commercial banking in the home market.[82] Thus, while bad loans were restructured and foreign branches were sold, the bank expanded in the home market by buying thrifts, by which the bank expanded to seven other states in 1990, which by then was allowed. To increase market share in the home market further, it acquired Security Pacific, a Californian bank with a large presence in retail banking, in 1991 after which it bought many additional banks and mortgages businesses. Another important acquisition was that of Continental Bank in 1994, by which it expanded its corporate banking activities in the Chicago area.[83] After further deregulations of the late 1990s, other large mergers took place between US banks among them the one between Bank of America and Nationsbank in 1998. With this merger the bank obtained a countrywide presence.[84] The international presence of Bank of America had by then diminished substantially, as can also be seen in Figure 2.
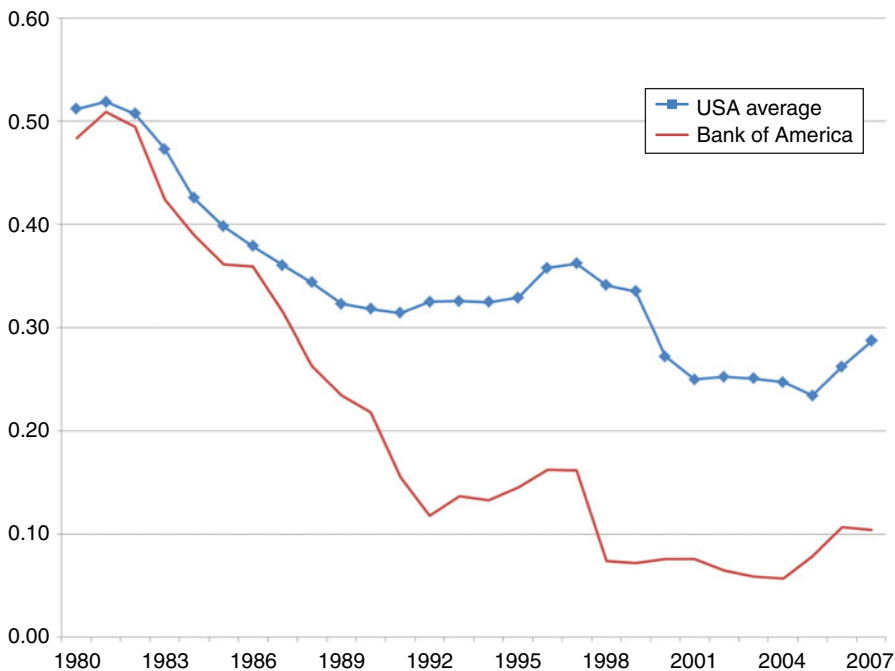

Figure 2.   Internationalisation pattern for Bank of America. The DOI for Bank of America over the sample period (1980–2007) relative to the average DOI for all US banks in our sample. The DOI is the unweighted average of foreign to total sales, foreign to total assets, and foreign to total employment.

6.2   *Japan: Sumitomo Bank*

Probably the three most distinctive aspects that have jointly shaped the Japanese banking industry for decades are the so-called 'main bank system', the shareholding interlockings, and a thin managerial labour market.[85] The Japanese main bank system is described as a situation where firms have heavily relied on direct bank finance (instead of issuing stocks or bonds) and where firms maintain close relationships with a particular bank.[86] In addition, the main banks have usually had shareholdings in the firms to which they lent out money.[87] By the end of the 1980s, the top-three Japanese banks (Nippon, Dai-Ichi, and Sumitomo Bank) held about 50% of all shares of all large Japanese firms.[88] As a consequence both the monitoring and control functions are held by the financial intermediary.[89] Being so neatly 'interwoven' with the producing firms, Japanese banks automatically became very sensitive to crises in the 'real' industries. In addition, the Japanese main banks have often behaved as if they were residual risk-bearers.[90] An often-cited example is the bankruptcy of the Ataka trading company in 1977, and where Sumitomo Bank (being Ataka's main bank) bore some 59% of Ataka's losses whilst only having a loan share of about 15% at the time of default.[91] Whilst Sumitomo Bank wrote off some 106 billion Yen (and Kyowa Bank some 46 billion Yen), foreign investors hardly lost anything.

After the Second World War, Japanese banks established themselves overseas. Especially activities in the US, in particular California, increased as the Japanese banks wanted to serve Japanese immigrants and trade. Many of them became large state-wide retail banks due to acquisitions, by then serving mostly non-Japanese clients. As a result, by the late 1980s almost half of the 10 largest banks in California were Japanese banks.[92] In addition, Japanese banks were extremely dominant in the US during the 1980s.[93] Strong ties with their clients had been an important reason for international expansion of Japanese banks. This was also reflected in the opening of branches in Germany, around the industrial area of Dusseldorf where many Japanese firms had located.[94] London was also attractive for Japanese banks as the major financial city, followed from the late 1980s by Frankfurt, for participation in growing capital market activities.[95]

The 1990s witnessed a withdrawal of Japanese banks from the international markets. On the one hand this retreat can be traced back to the poor performing loans in the home market. Probably much more important, but related, were the effects of the introduction of the 1988 Basel Accord, the increase in tax rates in 1988, and the 'Big Bang' deregulation of the Japanese financial system.[96]

From 1985 to 1989 Japan's economy witnessed a period of extreme speculation when land prices and share prices climbed sky high. The bubble burst in the early 1990s. The collapse of the economy resulted in the bankruptcy of many borrowers, which led to high asset-quality problems within banks. The Basel Accord of 1988 with its capital ratio requirements was a last blow to the international growth of Japanese banks, as it turned out that many Japanese banks did not meet the required bank's capital ratios defined by the Basel regulations.[97] The Japanese Ministry of Finance allowed banks without foreign offices to apply much lower security holdings in their bank capital.[98] This encouraged banks to concentrate on the domestic market. As the domestic market was rather segmented, banks could still gain from consolidation which were observed around the mid-1990s. Banks also felt pressure to increase profits from reforms in the late 1990s (the Japanese 'Big Bang') which opened up and modernised the Japanese banking system. Thus in 1998 legislation was introduced in Japan that resulted in a phased relaxation of restrictions on the emergence of universal banks. Under the new regime the government

was more willing to encourage mergers and acquisitions between banks.[99] Consequently the largest Japanese banks started to merge, creating some large financial institutions. Thus, the further decrease in DOI since the late 1990s was due to – comparable to the US case – a relaxation of restrictions, enabling Japanese banks to become universal banks and thus to grow in the domestic market.

Sumitomo bank was established in 1895 as part of the Sumitomo group of enterprises. This type of conglomerate, also known as *zaibatsu*, owned majorities of shares in each other. The bank is a good example of a Japanese bank that after the Second World War became internationally active, but then in the 1990s focused relatively more on the domestic market. After the war, Allied forces imposed antimonopoly laws, resulting in a breaking up of *zaibatsus* into many smaller companies. Also Sumitomo Bank was not allowed anymore to engage in cross-ownership of stock. Besides, it had to change its name into Bank of Osaka. This strict rule was soon relaxed, however, resuming use of its name and cross ownership.[100] Internationally, in the 1960s Sumitomo Bank rehabilitated its operations in California.[101] Also, branches were opened in New York, London, and Dusseldorf, close to the Japanese manufacturing clients that had established themselves in this region, then in the 1980s followed by one in Frankfurt and Paris, and by acquisition of European banks. In the 1980s the bank increased lending to non-Japanese clients and foreign national governments. The US became an important market as well, with branches in San Francisco, Chicago, Houston, Atlanta and Los Angeles. Apart from retail banking, capital market activities also became important aspect of international banking especially in the second half of the 1980s.
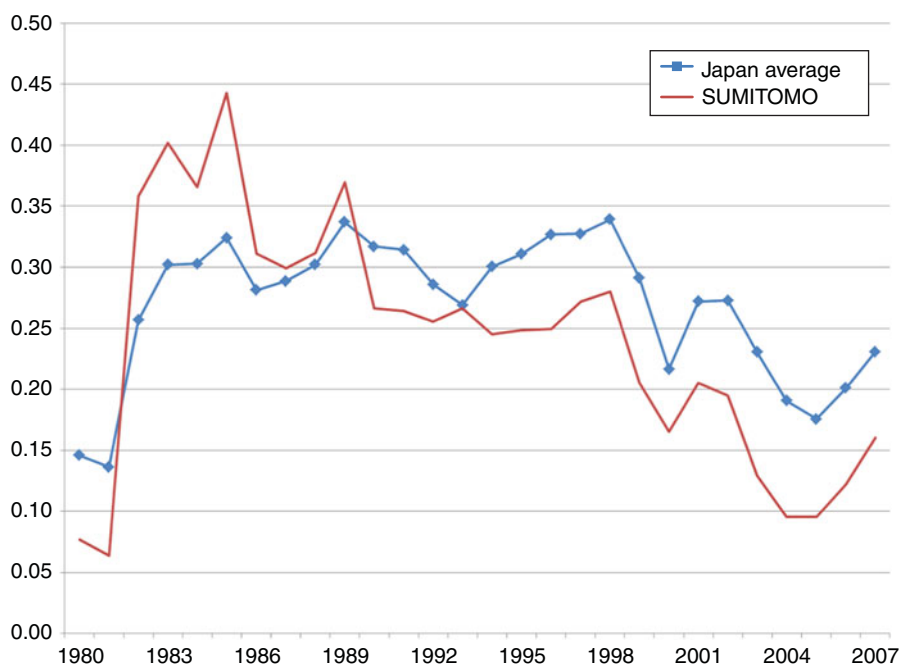

Figure 3.   Internationalisation pattern for Sumitomo Bank. The DOI for Sumitomo Bank over the sample period (1980–2007) relative to the average DOI for all Japanese banks in our sample. The DOI is the unweighted average of foreign to total sales, foreign to total assets, and foreign to total employment.

Late 1986, the Japanese Heiwa-Sogo Bank got into financial difficulty, and the Japanese Ministry of Finance pursued Sumitomo Bank to absorb Heiwa-Sogo.[102] Once the merger was completed, Sumitomo Bank had absorbed the (local Japanese) branch network in the metropolitan area, which explains part of the sudden drop in the DOI figure for the 1986–87 years.

Also Sumitomo Bank was hit by the bubble bursting in the early 1990s. In October 1990 Isodo resigned as Chairman, taking responsibility for the bank's involvement in stock manipulation scandal around Itoman & Co, which was an Osaka based trading company with longstanding ties with the Sumitomo group.[103] Two years later, in January 1993, the bank wrote off 100 billion yen in bad loans, some of them related to the Itoman affair. Still, the Japanese economy continued to stagnate. For the fiscal year ending March 1995, the bank showed a net loss of 335 billion yen, due to another writing off of 826 billion yen in bad loans. The following years the bank had to write off more bad loans. Other reasons were the Asian crisis of 1998, which saddled the bank with more bad loans from nations such as Indonesia and South Korea, and new disclosure rules to write off bad loans as part of Japan's Big Bang.[104]

Another result of the Big Bang was the bank's increasing activities in investment banking and asset management, and its withdrawal from international retail banking. Thus in 1998 the bank sold Sumitomo Bank in California, mainly active in retail banking, to Zions Bancop.[105] Also, the bank decided to apply for public money, after the government had passed legislation allowing regulators to inject public money into banks that had worn-out their capital via writing off bad loans. The bank announced at the same time a restructuring program by which staff would be cut, but also overseas branches would be closed.[106] The beginning of the twenty-first century, in 2001, Sumitomo Bank merged with Sakura Bank, until 1990 known as Mitsui Bank. The merger was part of the broader merger wave that hit the Japanese banking sector. The new bank was named Sumitomo Mitsui Banking Corporation (SMBC). The increasing focus on the home market is reflected in the very low DOI measured by then.

6.3 Germany: Deutsche Bank

After the Second World War German banks were active abroad via consortia, just as many other European banks. International trade increased in the 1960s and 1970s due to European integration among other things – the Treaty of Rome was signed in 1958. The Eurodollar market developed and restriction of the movement of capital was increasingly diminished.[107] One reaction of European banks was to intensify cooperation between banks and to open up branches together. An important motive was the expected high costs of expanding abroad individually. Consortia turned out to be not so efficient though, and soon various partners started activities in foreign market via own branches, especially in the financial centres. Interestingly Luxembourg in particular became important for German banks in the 1970s, inter alia to avoid German taxation. In the 1980s German banks mainly wanted to gain a presence in the important financial centres worldwide. Contrary to the US, there was no strict regulation for German banks. Because of this, German banks are known for their active participation in manufacturing industry. They granted loans and also participated in the share capital of these firms. These clients, which were very important for the banks' businesses, were followed abroad.

In the 1990s the main focus of German banks was the European market. One important reason was the growing importance of Central and Eastern Europe as trade partners. In the mid-1990s this region had become more important for German exports than the US. The

banks followed this trend to mainly three countries – Poland, the Czech Republic and Hungary – where economic reform was most profound. At the end of the 1990s the German banks slightly refocused on the domestic market. This refocus was due to diminishing profitability in the international capital markets, combined with the expectation that a consolidation wave would hit the rather fragmented German banking sector.

The still fragmented German banking sector in the 1990s was rather exceptional compared to other countries. Deutsche Bank, Dresdner Bank and Commerzbank were the three most important commercial banks in Germany. All three had a subsidiary network covering the whole country. Other important players in the German banking landscape were the cooperatives and the savings banks of which some (e.g. Westdeutsche Landesbank) were also active in international markets. The Landesbanken in particular, owned and often subsidised by the state, were important competitors for the commercial banks, the main issue being that the state guaranteed the system of bank funding. Because the banking sector remained rather stable between 1980 and 2000 the density was very high, meaning that compared to other countries the market was fragmented. Only in 2000, under pressure from the European Commission, was the system being examined carefully.

Deutsche Bank is a good example of a bank searching for a global presence over a prolonged period. The internationalisation of the bank goes as far back as 1870 when it first entered the US market.[108] It functioned to finance German foreign trade with offices in London, Shanghai and Yokohama. After the Second World War, when the bank had been re-amalgamated, it first became active abroad via a consortium, as did many other German banks.[109] In 1963, Deutsche Bank announced together with Amsterdamsche Bank (The
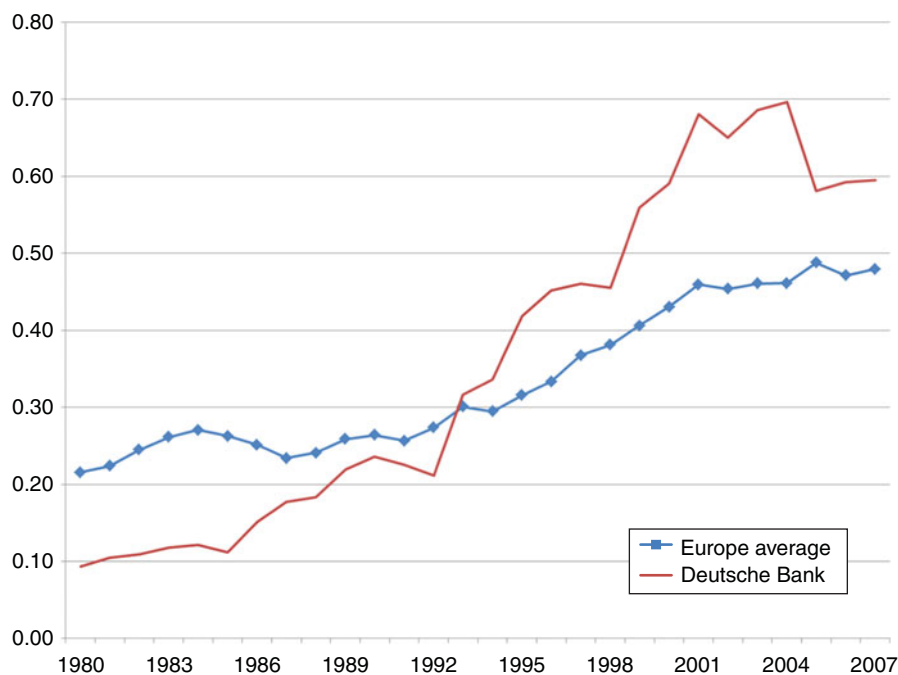

Figure 4.   Internationalisation pattern for Deutsche Bank. The DOI for Deutsche Bank over the sample period (1980–2007) relative to the average DOI for all European banks in our sample. The DOI is the unweighted average of foreign to total sales, foreign to total assets, and foreign to total employment.

Netherlands), Midland Bank (UK) and Societe General (Belgium) the cooperation named European Advisory Council (EAC). In 1970 they decided to transform the informal cooperation into a more institutionalised form by creating the European Banks' International Company (EBIC).[110] In the course of the 1970s EBIC consortia started to vanish. It turned out to be difficult to 'develop a joint policy' and 'it ignored the competitive relations between the partner banks'.[111] Deutsche Bank for example opened up itself a branch in London, by which it started to compete with Midland Bank. Thus since the mid-1970s Deutsche Bank reformulated its strategy and expanded its foreign activities by itself.[112]

During the 1970s the bank built a worldwide network of branches, and continued to do so in the 1980s. The US market played an important role in the bank's international activities. The goals which the bank formulated in 1986 reflected the strategic goal of becoming a global bank active in many aspects of banking. Thus it was stated that the bank had to increase its position in securities trading, further develop its commercial banking activities, also in new high-growth international markets, and strengthen its position in retail banking.[113] An increase in the DOI of the bank after 1985 suggests that the bank succeeded to accomplish its goals. Retail activities were mainly expanded in the European market (Italy, Spain, and Belgium). Also, after 1989, Deutsche Bank started to expand in Eastern and Central Europe mainly via new subsidiaries, whilst investment banking activities were mainly extended by acquisitions. With the acquisition of Morgan Grenfell in 1989, Deutsche Bank was one of the first European banks to buy an investment bank. Almost 10 years later, in 1998, it bought the US Bankers Trust. Bankers Trust was the eighth largest bank of the US and the largest acquisition by a foreign bank. This acquisition explains the rather large increase in DOI between 1998 and 1999.

Deutsche Bank, being one of the most well-known and largest German banks, shows an increasing DOI rate over the last decades, reflecting the general development of large German banks which seemed to have increased their foreign presence over time, without a clear refocus on the domestic market again, as was the case for US and Japanese banks.

7. Conclusion

In this article, we questioned whether banks from different regions converged to internationalisation strategies in times of financial globalisation. Also, we wanted to detect factors that might explain possible differences across regions and across time. Therefore, we analysed some determinants of bank internationalisation for 46 of the world's largest banks in the period 1980–2007. We found that European banks become more internationally oriented whereas American and Japanese banks, unexpectedly, refocused on the domestic market. The evidence is based on a combination of quantitative and qualitative research, also known as the mixed-method. This article shows the usefulness of taking such an approach.

Our empirical analysis shows that whilst on average the European banks in the sample steadily continue to internationalise during the sample period, the US and Japanese banks exhibit exactly the opposite pattern since the early 1980s. We tried to explain this by means of some macroeconomic variables. Earlier research suggests that bank internationalisation can be explained by variables such as the size of the home country, its level of economic and financial development, and by exports and FDI to the rest of the world. Overall our regression analyses confirm these earlier findings.

However, determinants of bank internationalisation can change over time, which encouraged us to analyse time period effects. The analyses show that on average for all countries in the sample, particularly in the 1980s, the home market formed an alternative for

internationalisation. Another outcome is that especially in the very recent period (1999–2007) the level of financial development of the home country is associated with internationalisation. We suggest that this might be in line with the too-big-to-fail argument, or that it has to do with the fact that financial services have become more important.

The notion that the US and Japanese banks showed a contrary development motivated us to analyse these US and Japanese banks in more depth by excluding them (one country at a time) from the analysis as a 'dominant group' analysis. When it comes to the US, we find the striking result that the size of the home market has a totally different impact on internationalisation as opposed to the other countries in the sample. Overall, namely, we find that the larger the home country, the lower the degree of bank internationalisation. This suggests that the home market could be a substitute for bank internationalisation. Yet, once we excluded the US banks from the sample, the relationship appeared to be the opposite (and statistically very significant). Hence, for all other countries in the sample, a larger home market actually facilitates bank internationalisation. To understand the dissimilar results for the US, we argue that we should include the case-study method in the analysis. This method enables us to show that whereas regulation formed an incentive to internationalise in the 1960s and 1970s, deregulation since the 1980s led to a refocus of some major US banks on the domestic market again, after which consequently their DOI decreased substantially.

It appears that for the Japanese banks, the internationalisation strongly associates with the importance of deposit money banks, whilst for the other countries this impact is hardly important. Also, when we excluded Japan and included the time context, it turns out that GDP per capita, as a measure of economic development of a home country, is positively associated with bank internationalisation. This is in contrast to the negative relationship between GDP per capita and DOI in the overall regression (including all countries) for the 1980s. Again the case-based method helps us to interpret this counterintuitive finding. The retreat from internationalisation of Japanese banks coincided with the Japanese macroeconomic slowdown, but the focus on the home market increased even further after deregulation since the mid-1990s.

From a methodological viewpoint this article shows that the mixed-method, combining qualitative and quantitative approaches, allows us to give more comprehensive insights. We argue that this results from the two approaches being complementary. Variables-based research allows us to test assumptions, based on economic theory, for a larger set of banks. Yet these statistical analyses show some country-specific and time-specific effects, which demonstrate the boundaries to making generalisations. The case study method enables us to interpret these specific effects, by offering the broader institutional context.

In this article, we related differences in bank internationalisation to macro-economic variables and the institutional context. Therefore, it tends to assume that banks only react (passively) to institutional changes, such as alterations in legislation. Regulation is not just external and independent from banks' strategies though, as individual banks and their bankers are important agents that decide on goals and strategies influencing the context in which they operate.[114] Because of the chosen approach – combining quantitative analyses and case studies based on existing literature – the article did not address these processes and transformations within banks.[115]

Funding

Notes

1. Jones, *Banks as Multinationals*.
2. Ibid., 10.
3. For example see Berger, Buch, DeLong and DeYoung, "Exporting Financial Institutions"; Buch and DeLong, "Cross-border Bank Mergers"; Focarelli and Pozzolo, "The Patterns of Cross-border Bank Mergers."
4. Gorton and Metrick, "Securitized Banking."
5. Mullineux and Murinde, "Globalization and Convergence," 6.
6. Ibid., 11.
7. Larson, Schnyder, Westerhuis, and Wilson, "Strategic Responses."
8. See Quinn, "The Correlates of Change"; Stulz, "The Limits of Financial Globalization."
9. Guillén and Tschoegl, "At Last."
10. Buckley, "Business History," 320.
11. Jones and Khanna, "Bringing History (Back)".
12. Buckley, "Business History,"319.
13. It is not our intention to recapitulate the extant literature on international business theory. We refer to Buckley, "Business History," for an excellent overview of theories on multinational enterprises.
14. Howcroft, ul-Haq, and Carr, "An Examination."
15. Zaheer, "Overcoming the Liability"; Ghemawat, "Distance Still Matters".
16. Tschoegl, "International Retail Banking"; see also Guillén and Tschoegl, "At Last," for the internationalisation of Spanish retail banking in Latin America,
17. Grubel, "A Theory of Multinational Banking"; see also Gray and Gray, "The Multinational Bank."
18. See Williams, "Positive Theories" for an extensive description of the two.
19. Transaction costs as defined by Coase, "The Nature of the Firm."
20. Gray and Gray, "The Multinational Bank"; Ball and Tschoegl, "The Decision to Establish"; Boldt-Christmas, Jacobsen, and Tschoegl, "The International Expansion."
21. See also Focarelli and Pozzolo, "Where do Banks Expand Abroad?"
22. Kindleberger, "International Banks," 592.
23. See Choi, Tschoegl, and Yu, "Banks and the World's Major,"; Choi, Park and Tschoegl, "Banks and the World's Major Financial Centres, 1990"; Choi, Park and Tschoegl, "Banks and the World's Major Banking Centres, 2000."
24. See Laeven and Levine, "Bank Governance."
25. See Dunning, "Trade, Location."
26. Williams, "Positive Theories," 79.
27. Ibid., 95.
28. See Cattani and Tschoegl, "An Evolutionary View," for this view on the internationalisation of Chase Manhattan Bank
29. Johanson and Vahlne, "The Internationalization Process."
30. Ibid.
31. Forsgren, "The Concept of Learning."
32. Johanson and Vahlne, "Commitment and Opportunity."
33. Focarelli and Pozzolo, "The Patterns of Cross-border Bank Mergers."
34. Berger, "International Comparisons".
35. Lane and Milesi-Ferretti, "The Drivers."
36. Tschoegl, "Who Owns."
37. Westerhuis, *Conquering the American Market*.
38. Lane and Milesi-Ferretti, "The Drivers."
39. See Westerhuis, *Conquering the American Market*, for Dutch banks entering the US; see Lu, "The US Government Dual Banking," for HSBC acquiring Marine Midland Banks Inc.
40. Jacobsen and Tschoegl, "The Norwegian Banks"; Engwall, Marquardt, Pedersen, and Tschoegl, "Foreign Bank Penetration."
41. Dunning, "Trade, Location."
42. Tashakkori and Teddlie, *Handbook of Mixed Methods*; Creswell, *Research Design*; Johnson and Onwuegbuzie, *Mixed Methods Research*.
43. King and Levine, "Finance and Growth." They also proposed two more indicators of financial development that measure to whom the financial sector is allocating credit.

44.   See Chinn and Ito, "Capital Account."
45.   Dunning, *Multinational Enterprises*.
46.   King and Levine, "Finance and Growth."
47.   King and Levine, "Finance, Entrepreneurship, Growth"; Levine, Loayza, and Beck, "Financial Intermediation."
48.   Claessens, Klingebiel,and Schmukler, "Stock Market Development."
49.   Buckley, "Business History."
50.   See for example Westerhuis, *Conquering American Market*; Kobrak, *Banking on Global Markets*; Cattani and Tschoegl, "An Evolutionary View"; Engwall et al., "Foreign Bank Penetration"; Boldt-Christmas et al., "The International Expansion"; Jones, *Banks as Multinationals*.
51.   Cf. De Haas and Van Lelyveld, "Internal Capital Markets."
52.   Levine, "Bank-Based or Market-Based."
53.   King and Levine, "Finance, Entrepreneurship, and Growth."
54.   See for example: Knack and Keefer, "Does Social Capital"; Rajan and Zingales, "Financial Dependence and Growth"; Borensztein, Gregorio and Lee, "How does Foreign Direct Investment"; Lane and Milesi-Ferretti, "The Drivers."
55.   IMF, "Global Financial Stability Report."
56.   Gall, Feldman, James, Holtfrerich, and Buschgen, *The Deutsche Bank*; Kobrak, *Banking on Global Markets*.
57.   Canals, *Universal Banking*, 88–89 and 254–255.
58.   Jones, *Banks as Multinationals*, 1
59.   See Contractor, Kundu, and Hsu, "A Three-stage Theory"; Gomes and Ramaswamy, "An Empirical Examination"; Sullivan, "Measuring the Degree."
60.   Hejazi and Santor, "Foreign Asset Risk Exposure"; Focarelli and Pozzolo, "Where do Banks Expand Abroad?" Alternative measures of bank internationalization predominantly focus on the number of foreign branches and offices (see for example Tschoegl, "Size, Growth, and Transnationality"; Buch, Koch, and Koetter, "Should I Stay"). Though that data can be relatively easily obtained, and is free of differences accounting practices, it has the major drawback that counting offices irrespective of their size and contribution to the overall sales is a very crude measure (see Brealey and Kaplanis, "The Determination Foreign Banking," for a discussion).
61.   We use bank in a broad sense to cover a wide range of financial institutions, including commercial, investment and universal banks. The reason for restricting ourselves to five banks per country is to avoid dominance by, e.g. the US and UK.
62.   For some firms at the start of the sample, we could not obtain foreign employment figures, or foreign sales. As a consequence, these firms exhibit unstable DOIs in the earliest one or two years of the sample period.
63.   Tschoegl, "Size, Growth, and Transnationality."
64.   Tschoegl, "Size, Growth, and Transnationality."
65.   The DOI variable has a strong autocorrelation of order 1. This autocorrelation requires a different model specification. At higher lags this autocorrelation is absent.
66.   Arellano and Bond, "Some Tests of Specification". This method is based upon the generalised method of moments (GMM) which is an econometric estimation method.
67.   The presented OLS estimates are biased and inconsistent.
68.   Cliff, "Dominance Statistics."
69.   Deposit savings are a cheap source of financing for banks.
70.   In Table 3, it appeared that for Model 1 per capita GDP had a negative and statistically significant correlation with bank internationalization (in the GMM estimates). Yet, in Model 3 (which was used as our reference for Tables 4 and 5) the relationship was statistically insignificant for the GMM estimates.
71.   See the findings of Lane and Milesi-Ferretti, "The Drivers."
72.   Based on Key, "The Internatonalisation of U.S. Banking," in Benston, "US Banking."
73.   Williams, "Positive Theories."
74.   Casson, "Evolution of Multinational Banks."
75.   See for example Calomiris, *US Bank Deregulation*; Calomiris, "Banking Approaches"; see Sherman, *A Short History*, for a summary.
76.   Slager, *Banking Across Borders*.
77.   http://about.bankofamerica.com/en-us/our-story/our-history-and-heritage.html
78.   Battilossi and Cassis, *European Banks*.

79. Canals, *Universal Banking*, 254.
80. Ibid., 89
81. Ibid., 89.
82. Ibid., 89.
83. Ibid., 89; http://about.bankofamerica.com/en-us/our-story/our-history-and-heritage.html
84. http://about.bankofamerica.com/en-us/our-story/our-history-and-heritage.html
85. Berglöf and Perotti, "The Governance Structure."
86. See for example Hodder and Tschoegl, "Some Aspects."
87. Berglöf and Perotti, "The Governance Structure."
88. Hodder and Tschoegl, "Some Aspects."
89. Sheard, "The Main Bank System."
90. Ibid.
91. Ibid.
92. Slager, *Banking Across Borders*, 385.
93. Grosse and Goldberg, "Foreign Bank Activity."
94. Ibid., 387.
95. Ibid.
96. LeBel, "Asset Bubbles."
97. Honda, "The Effects of Basle Accord."
98. Ibid.
99. Drake, "Cost and Efficiency."
100. http://www.referenceforbusiness.com/history2/75/Sumitomo-Mitsui-Banking-Corporation.html
101. Ibid.
102. Hanazaki and Horiuchi, "A Review Japan's Bank Crisis."
103. http://www.referenceforbusiness.com/history2/75/Sumitomo-Mitsui-Banking-Corporation.html
104. Ibid.
105. Ibid.
106. Ibid.
107. Benink, *Financial Integration*; Berger, DeYoung, Genay, and Udell, "Globalization of Financial Institutions."
108. Kobrak, *Banking on Global Markets*.
109. Gall et al., *The Deutsche Bank*, 741; Kobrak, *Banking on Global Markets*.
110. Zanden and Uittenbogaard, "Expansion, Internationalisation, and Concentration,"366–367.
111. Gall et al., *The Deutsche Bank*, 785.
112. Ibid., 747.
113. Slager, *Banking Across Borders*, 313.
114. See for example Kipping and Westerhuis, "The Managerialization of Banking."
115. See for example Bátiz-Lazo and Wood, "Strategy, Competition and Diversification" for an analysis of the influence of management styles on diversification strategies within bank markets.

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