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**Analysis of Cross Border and Domestic Mega-
Mergers & Acquisitions of European
Commercial Banks**

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Abstract

The study examined domestic and cross border mega Mergers and Acquisitions (M&As) of values over £1 billion in the EU banking industry during 1997 -2007. In contrast with popular views in the finance literature, we found that there are more cross border than domestic mega mergers. The result shows more significant returns for cross border M&As and confirms previous study by Campa & Hernando (2006). The abnormal returns to the cross border shareholders are higher and show more days with significant results after the announcement date in comparison with the few significant returns before the merger announcement. The total assets made a significant contribution to the high Cumulative Abnormal Returns (CARs). We found the dividend payout to be higher in domestic merged banks; which also have low operational costs while the cross border merged banks showed a low dividend payout and incurred higher operational costs. This indicates that operational efficiency of foreign acquirers remains higher than their domestic counterparts even in megamergers.

JEL classification: G21; G34, G35

Key words: mergers and acquisitions; domestic & cross border M&As; standardized abnormal returns, megamergers

1. Introduction

Merger and acquisitions in the European banking industry have been dominated by domestic deals. Many of the domestic M&As occur among small domestic banks and deposit institutions. Campa & Hernando (2006) opine that most European banks are more comfortable with the idea of domestic M&As as a bulwark to build a formidable force against their competitive environment. This phenomenon of domestic M&As among small banks in the EU contrasts with the novel idea of cross border M&As. A survey by the European Central Bank (2000) reveals that cross border deals usually involve banks outside the European Union.

The lure for cross border M&As has not been very appealing to most European banks. Despite the introduction of a unified currency among EU states, cross border activities have only accounted for 11% of all M&As in the continent compared with 42% of cross border mergers involving banks outside the EU (Campa & Hernando, 2006). In an earlier study, Campa & Hernando (2004) have found that higher value accrues to the shareholders in domestic mergers. However, this finding has been shredded in controversy and debates. Prager and Hannan (1998) reported a decrease in deposit interest resulting from domestic mergers while Corvoisier and Group (2002) could not establish any unique value to shareholders resulting from domestic deals.

This study takes a step further from the previous studies by focusing on mega banks involved in domestic and cross border M&As in the European banking industry. Our research differs from previous studies as it employs standardised abnormal return (SAR) compared with the traditional abnormal returns (AR) in estimating shareholders value. The use of the SAR is justified because of the discrepancy associated with the degree of event impact. Thus the AR is weighed against the standard deviation to standardise the returns. The study focuses only on large M&As where the value exceeds £1 billion.

Our finding corroborates contemporary studies that cross border M&As yield more abnormal returns than the domestic. It further reveals that cross border mega M&As deal are more in number than the mega domestic M&As and constitute 69% of all mega M&As in EU countries.

2. Literature Review

The dominance of domestic deals in the European banking industry has been attributed to various reasons. Study by Atunbas & Marques (2008) asserts that domestic deals are less cost effective as some of the merging bank institutions are very distinct in terms of their loan, earnings and size structures. On the other hand, the cross border mergers are perceived to be more strategic for growth and operational performance, cost structure and capital diversity remains an enigma to their performance.

The above however, contrasts with an earlier study by Campa & Hernando (2004) that found domestic mergers more wealth creating to the shareholders than cross border mergers, particularly in regulated firms. This assertion is supported by the work of Kane (2000) which shows, that in addition to the geographical factor, increased shareholders returns are more achievable where the target bank is a large deposit institution. While the geographical factor is an important factor in M&As, as there are significant differences in the returns of the domestic versus cross border mergers, the extent of its role in improving shareholders value is still contestable. For instance, Rad & Beek (1999) found mixed result; though the CARs for most periods were slightly higher for domestic M&As but were not significant. They concluded that both the domestic and the cross border have the same effect on the shareholders.

The impact of mergers on profitability and operational performance of the merging banks has been examined. The contemporary study by Campa & Hernando (2006) examined the M&As performance of EU banks from 1998 - 2002 and found that most mergers usually involve targets with a history of low operational profits. However, their post merger results signify improvement in their financial performance and significant higher returns on shareholders'

equity of the target banks. The difficulties by an international bank in turning around ailing acquired banks have remained a veritable cause for the poor performance of foreign acquirers.

Buch and DeLong (2004) opine that cross border M&As have a record of limited success. This is understandable as domestic banks seem more formidable in competing aggressively against new international entrants in their domestic market. Infact, Amihud et al (2001) assert that cross border M&As exert no significant impact on the banking system of the host country.

Other studies such as Berger et al (2000) and Peek et al (1999) advance the argument that the failure of cross border M&As is attributable to the preconditions existing in the host country. Foreign owners often struggle to turn around their acquired banks especially in developed markets. This is different in developing economies where international acquirers easily turn around their acquired banks and outperform the existing local banks (Claessens et al, 2001).

Houston & Ryngaert (1994), in a study of US bank mergers concurred that shareholder of the target banks benefit from value creation as a result of the mergers. However, acquirer banks often experience a fall in their share price. Also, the study found a positive correlation in the value creation of the mergers and the past operating performance of the bidders and cash deals. This scenario is often found in M&As involving local banks. The abnormal returns attributable to international acquirers are often insignificant.

Pillof (1996) asserts that , shareholders' gain is a factor of economic efficiency. Higher returns are achieved when mergers achieve cost reductions as measured by the pre merger cost measures such as expenses and non interest cost of the target banks. Similarly, Beitel et al (2004) examined 98 EU bank mergers between 1985- 2000 and found that the overall returns for the M&As are higher for non-diversifying transactions, particularly by domestic bidders who are involved in less merger activities and when the targets show past poor performance.

The slow growth and lag success in the cross border M&As have been attributed to efficiency barriers such as geographical location, distance, language barriers, difference in cultures, legislative frameworks and supervisory structures (Berger et al, 2001).

3. Methodology

The study adopts the event study methodology using windows of -30+30 days and a 100 days estimation period to determine the abnormal returns to the shareholders. This was repeated for both the domestic and foreign acquisitions. The abnormal return (AR) is estimated using the market model as:

$$AR_{jt} = R_{jt} - \alpha_j - \beta_j * R_{mt} \text{-----} 1$$

Where

AR_{jt} = Abnormal return on share j for each day in the event window

β_j = slope term for stock j measured over the estimation period

R_{mt} = return on the market for each day in the event window

R_{jt} = return on share j for each day in the event window

α_j = intercept term for share j measured over the estimation period

The AR was standardised to cater for the different degree of event impact. This is done by weighting the abnormal returns by the standard deviation. The purpose of the standardization is to ensure that each abnormal return will have the same variance (Serra, 2002). Thus, by dividing each firm's abnormal residual by the standard deviation over the estimation period, each residual will have an estimated variance of 1 and thus defined by the equation:

$$SAR_{jt} = \frac{AR_{jt}}{\sqrt{S^2 AR_{jt}}} \text{-----} 2$$

Where SAR_{jt} = SAR for firm j at time t .

AR_{jt} = AR for firm j at time t .

$$\sqrt{S^2 AR_{jt}} = S^2 AR_{jt}$$

Square root of the variance of the AR for firm j at time t = the standard deviation of the AR for the firm j at time t .

And the variance is given by the equation:

$$S^2 AR_{jt} =$$

$$\sum_{t=-100}^{-31} \left[\frac{(AR_{jt(est. period)} - \bar{AR}_{j(est. period)})^2}{D_j - 2} \right] * \left[1 + \frac{1}{D_j} + \frac{(R_{mt(event window)} - \bar{R}_m(est. period))^2}{\sum_{t=-100}^{-31} (R_{mt(est. period)} - \bar{R}_m(est. period))^2} \right]$$

Where:

$S^2_{AR_{jt}}$ = variance of the AR for firm j at time t .

$AR_{jt(est. period)}$ = AR for firm j at time t over the estimation period

D_j = number of observed trading day returns for firm j over the estimation period

$R_{mt(event window)}$ = return on the market at time t over the event window

$\bar{R}_m(est. period)$ = mean return on the market at time t over the estimation period

$R_{mt(est. period)}$ = return on the market at time t over the estimation period

To determine the significance of the standardized abnormal returns for each day in the event window, the Z-statistics is employed. This is given as:

Z-Statistics_t =

$$\frac{TSAR_t}{\sum_{j=1}^N \sqrt{\frac{D_j - 2}{D_j - 4}}} \dots\dots\dots 3$$

Where;

Statistics_t = Z- statistics for each day in the event window

TSAR_t = Total SAR for each day in the event window

D_j = number of observed trading day returns for firm j over the estimation period

N = number of banks in the sample

The Descriptive statistics are used to examine the changes in key variables such as return on total assets, dividend, return on equity, total staff costs, operating cost and total assets/ equity ratio over the period of 10 years for the two samples.

4. Data Collection and Results

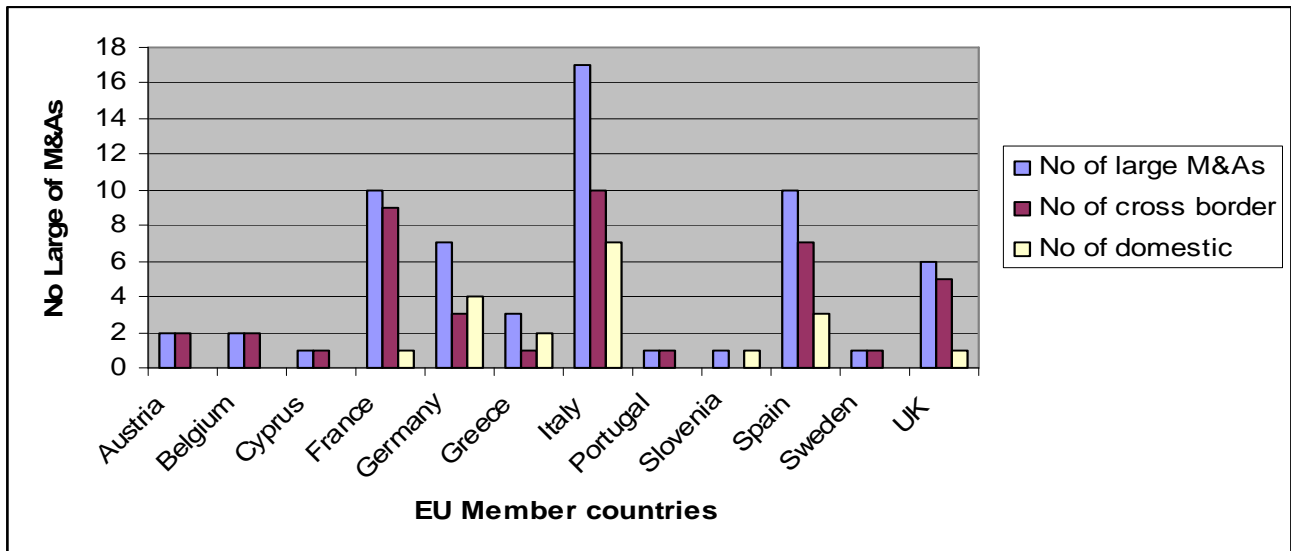
The starting point in the data collection was the compilation of a list of all large M&As in the European banking industry in the Zephyr, Bankscope, Thompson Financial and Bank Almanac databases. These were compared with those obtained from the Reuters database which contains a comprehensive list of all mega or large mergers and acquisitions.

The Reuters database archives contain data of mostly large M&As and is the source of the data used in the study. We eliminated all deals that are less than £1 billion. The sample was restricted to commercial banks for both the acquirers and the targets. Only EU banks were selected. This is because of the number of such mega banks in EU countries which is more than

elsewhere in the world including the US (Cybo-Ottone & Murgia, 2000). The share prices were taken from the Yahoo Finance website which gives the share prices of the targets and bidders. This includes the pre and post acquisition share prices.

Figure 1 presents the chart of large¹ M&As deals in EU member countries within the period of 1997 -2007. Italy tops the table with total of 17 megamergers followed by France and Spain with total of 10 each.

Figure 1 No of Large M&As in EU Member countries (1997 -2007)



The chart above raises a question on the popular view in M&As literature, that domestic deals are more popular than the cross borders. Of the 62 mega M&As sampled, only 31% are

¹ The study concentrated on major M&As deals where the value is above £1billion. The selected sample deals include such between Credit Lyonnais and Sacam Development both of France valued at US\$50billion, the National Westminster (NATWEST) bank and the Royal bank of Scotland in the UK valued at US\$39 billion, Abbey National bank (UK) and the Bank Santander Central Hispano SPA of Spain valued at US\$15billion and Sanpaolo IMI SPA and Banca Intesa SpA of Italy valued at US\$31billion.

domestic while 69% are cross border. This shows that although the number of domestic small M&As may be more than the cross border, but the latter are by far more in mega merger activities in the European countries.

Table 1 shows the range of the M&As sampled and shows that on average, the value of M&As from \$1 billion to \$17 billion. These M&As occurred within 1997 - 2007. Both the targets and the bidders are commercial banks in the EU member countries.

Table 1 Descriptive Statistics (Value of M&As deals in \$millions)

Year	No of M&As	Mean(£)	Std. Deviation
1997	2	1,407,231.00	405553.00
1998	6	4,097,761.00	2897554.00
1999	2	1,212,734.00	46858.00
2000	5	1,759,680.00	3117856.00
2001	7	3,762,230.00	309369.00
2002	5	2,163,284.00	265620.00
2003	4	4,122,661.00	591491.00
2004	10	17,012,874.00	8083640.00
2005	7	4,837,064.00	6322846.00
2006	9	4,358,766.00	9309091.00
2007	5	9,393,899.00	13184187.00

Table 2 shows the descriptive statistics of both the cross border and domestic M&As. The result shows that the total incomes for both the domestic and cross border samples rose significantly following the mergers. The increase grew almost at the same pace. None outperforms the other as the rate of growth is similar.

However, a sharp contrast is observed in the level of efficiency represented by the operational costs of both samples. The operational costs of the domestic banks increased by more than 79% whilst the foreign acquirers have a far less operational cost of about 43%. This can be explained by the high efficiency associated with international acquirers (Vander Vennet, 1996). High managerial skills are also fundamental to the reduction in their operational costs. The staff costs of the foreign acquirers also declined in comparison with the domestic banks. This raises concerns on the number of employment opportunities offered by foreign banks, particularly after M&As.

The dividend payout also shows interesting results. The cross border banks reduced their dividend payout by 29% after the mergers while the domestic acquirers increased dividend by 57% after the merger. Since dividend has a signal² effect on the performance of the firm, it is logical to infer that domestic acquirers outperform the foreign banks as their shareholders receive more dividends. Consequently, the fall in dividend is also followed by falls in ROE and ROA of the domestic banks. Although foreign acquirers maintained a steady ROE and ROA over the 10 years period, there is no significant increase in either variable.

²Studies have however revealed that increase in dividend does not necessarily indicate better performance of the firm. Management often sticks to a pattern of dividend payout. This can be explained by the signal conveyed by an alteration in dividend payment of the company particularly for new foreign banks. A cut in dividends will give a negative signal to investors on the future prospect of the company (Hutchinson, 1995). This might affect the share price of the company. Thus Chang and Rhee (1990) added that financial leverage is a crucial factor in dividend policy of firms. A firm that has a high financial leverage tends to have a high dividend payout ratio.

Table 2 Descriptive Statistics of the Domestic & Cross Border M&As

Variables	Domestic(£)		Cross border(£)	
Pre mergers	Mean	SD	Mean	SD
Total assets	135,561,648,779	122,102,149,619	295,774,835,393	106,955,579,176
total capital ratio	10,069,861	568,318	11,282,374	764200
operating costs	4,624,813,417	1,207,330,582	4,809,115,581	2,434,091,402
total staff costs	2,410,751,803	2,549,228,501	3,173,842,287	435,890,172
total income	6,437,453,316	1,352,289,023	6,698,628,215	2,626,514,613
costs income ratio	77.71	4.14	73.94	3
return on total assets(ROA)	0.68	0.2	0.59	0.22
total assets/ equity	25.38	2.07	26.06	2.27
return on equity(ROE)	10.77	2.02	13.03	2
ordinary share dividend paid	33,977,266,058	25,031,718,298	859,613,856	351,911,837
Post mergers				
Total assets	301,910,012,219	122,074,328,871	403,465,081,180	186,452,988,452
total capital ratio	10,599,166	1,090,257	10,556,452	1,017,173
operating costs	21,558,159,909	20,909,312,686	8,422,234,559	4,393,688,341
total staff costs	5,107,105,530	2,528,288,658	4,835,666,496	1,770,799,598
total income	13,982,733,893	6,854,932,632	15,437,431,520	4,527,016,712
costs income ratio	75.45	4.28	76.32	5
return on total assets(ROA)	0.3	0.5	0.61	0.14
total assets/ equity	27.2	5.02	30.35	3.62
return on equity(ROE)	9.74	4.01	13.22	4
ordinary share dividend paid	24,142,874,917	21,882,102,078	10,845,025,764	11,577,130,666

Table 3 shows the result of the standardized abnormal returns of the domestic and cross border M&As. The returns were standardized to cater for the degree of event impact on the returns, thus the abnormal returns were weighted by their respective standard deviations.

The result obtained provides an empirical insight on the pattern of the returns. The cross border M&As show significant abnormal returns. Using 30 days pre-merger and 17 days post-merger window, we established that much of the significant returns of the cross border occurred after the announcement of the M&As. Only few significant returns occurred before

the mergers announcement date. The domestic banks show no significant returns throughout the period.

Some reasons can be adduced as to why the abnormal returns of the cross border banks became significant after the announcement date. The public confidence would have increased which may trigger increase in the share price of the banks. Since the sample is made up of large international banks, it is apparent that their acquirers would be similar banks with substantial market share. The news of their M&As would have built confidence in the public.

Table 3 Total Standardized Abnormal Returns of the samples.

Event days	Cum TSAR+	Z-Stat	P-Value	Event days	Cum TSAR+	Z-Stat	P -Value
-30	-12.25	-2.86	0.004*	12	-17.81	-2.66	0.008*
	(-0.74)#	(-0.16)	(-0.87)		(-8.5)	(-0.45)	(-0.65)
-26	20.78	2.17	0.03*	13	-18.6	-2.83	0.004*
	(-1.87)	(-0.38)	(-0.71)		(-12.9)	(-0.68)	(-0.5)
-25	29.02	2.76	0.006*	14	-17.32	-2.51	0.012*
	(-5.14)	(-0.91)	(-0.36)		(-11.43)	(-0.59)	(-0.55)
-12	-28.19	-3.11	0.0002*	15	-10.18	-2.79	0.005*
	(-6.01)	(-0.49)	(-0.63)		(-11.93)	(-0.66)	(-0.51)
-11	-15.38	-2.89	0.0004*	16	-24.66	-2.88	0.003*
	(-6.3)	(-0.33)	(-0.74)		(-11.61)	(-0.66)	(-0.51)
10	-16.3	-2.27	0.023*	17	-11.48	-3.42	0.0006*
	(-4.63)	(-0.33)	(-0.74)		(-8.6)	(-0.47)	(-0.64)
11	-6.03	-2.23	0.026*				
	(-5.57)	(-0.3)	(-0.77)				

+ TSAR (Total standardized abnormal returns). *significant at 0.05 and

Figures in parentheses are for domestic M&As. Only significant returns are shown in the table.

We further examined the contributions of the variables to the high cumulative abnormal returns (CARs) of the cross border M&As using their individual beta. The CARs were regressed against a set of selected variables. The betas of the variables are shown in Table 4.

The result shows that the total asset (LgTASSETS2) is the most significant and thus made the highest contribution to the high CARs of the cross border M&As. It has a high beta result of 0.611 which is significant. This is corroborated by the variance inflation factor (VIF) of 1.192. A VIF of more than 10 would be unacceptable.

Table 4 Standard Regression of the CARs and the set of variables

		Coefficients ^a						
Model		Standardized Coefficients	Sig.	95% Confidence Interval for B		Correlations		Collinearity Statistics
		Beta		Lower Bound	Upper Bound	Partial	Part	VIF
1	(Constant)		.030	-101.089	-5.675			
	ROTA2	.056	.765	-19.907	26.813	.056	.053	1.116
	COSINCR2	.302	.111	-.126	1.153	.292	.288	1.098
	ROE2	.044	.805	-.995	1.271	.046	.044	1.017
2	(Constant)		.422	-565.084	1303.878			
	ROTA2	-.028	.861	-22.018	18.544	-.037	-.024	1.337
	COSINCR2	.307	.066	-.038	1.084	.373	.265	1.343
	ROE2	.144	.341	-.508	1.410	.199	.134	1.159
	LgTINCOME2	-.071	.656	-6.247	4.007	-.094	-.062	1.292
	LgTASSETS2	-.611	*0.000	-13.133	-4.280	-.647	-.560	1.192
	LgTOTCAPRATIO	-.027	.869	-55.700	47.374	-.035	-.023	1.363
	LgOPCST2	-.135	.410	-6.901	2.920	-.172	-.115	1.363
	TOTALEQ2	-.019	.906	-.911	.811	-.025	-.016	1.287
	LgSTAFF2	-.173	.253	-9.086	2.513	-.237	-.161	1.152

a. Dependent Variable: CROSSBorder * significant at 0.05%

(ROTA2= return on total assets, COSINCR2= cost to income ratio, ROE= return on equity, LgTINCOME2= log of total income, LgTASSETS2= log of total assets, LgTOTCAPRATIO2 = log of total capital ratio, LgOPCST2= Log of operating costs, TOTALEQ2= total equity, LgSTAFF2= log of staff costs).

4. Conclusions

The study has established that megamergers are more common in cross borders than in domestic mergers and acquisitions. Most M&A literature opines that domestic mergers have dominated M&A activities in the EU over the years. This study has found a contrary result in mega M&As, particularly among commercial banks in EU member countries. Our sample consisted of mega deals worth over £1billion.

We also found that domestic mergers have high dividend payout compared to the low dividend paid by the cross border merged banks. The high dividend payout by domestic acquirers can be attributed to the quest to impress the shareholders and maintain their presence. This is because of the signaling effect of dividend. However, cross border acquirers are more operationally efficient than the domestic banks. This leaves them with enough free cash flow for expansion.

The pattern of the abnormal returns is also remarkable in the cross border merged banks. The significant returns occur mostly after the merger announcement date triggering higher increase in the share price of the cross border merged banks. The standardized abnormal returns of the domestic banks remain insignificant throughout the period. Thus, the study also reaffirms Campa & Hernando (2006) that cross border mergers yield more abnormal returns than the domestic.

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