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Value Creation through Cross-Border Mergers and Acquisitions

- An Empirical Study of UK Acquirers on BRIC Targets

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ABSTRACT

This paper analyzes corporate geographic diversification in an attempt to establish if cross-border deals involving UK acquirers on BRIC targets over the period 1997-01-01 to 2010-04-15 are value-enhancing for acquirers and to identify the variables that influence the result. Our findings suggest that acquisitions of BRIC targets by UK based firms are on average, value enhancing at the 5% significance level. Factors that contribute to value creation are acquirer's excess cash, a combined method of payment, a high market-to-book ratio and corporate control. Factors that contribute to value destruction are horizontal deals, the size of the deal, the strength of the bidder's currency and the cultural difference between the merging firms' countries. However, our results with respect to determining the explanatory variables of value creation are statistically insignificant which implies that we cannot make any firm and concrete conclusions.

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KEY WORDS   Cross-Border, Mergers and Acquisitions (M&A), Brazil-
                            Russia-India-China (BRIC), Event Study and Cumulative
                            Abnormal Returns (CAR)

PURPOSE   The aim of this thesis is to research corporate geographic
                            diversification to establish if cross-border deals involving UK
                            acquirers on BRIC targets are value-enhancing for acquirers
                            and to identify the variables that influence the result.

METHODOLOGY   This paper employs a quantitative deductive approach
                            leveraging on previously-mentioned theories to formulate
                            hypotheses that are derived from the purpose of this study.
                            Event studies and a multiple regression analysis are used.

THEORECTICAL VIEWS   This paper looks at the general motivations and factors behind
                            M&A as well as more specific motivations and factors for
                            cross-border deals.

EMPIRICAL BASIS   Cross-Border M&A between UK based firms and BRIC targets
                            were empirically studied between 1997-01-01 and 2010-04-15.

CONCLUSIONS   From a sample of 30 deals involving UK based acquirers on
                            BRIC targets we find that value has been created on average of
                            around 1% abnormal returns over the days around the
                            announcement. These results were statistically significant at a
                            5% significance level. Results with respect to determining the
                            explanatory variables of value creation bore no statistical
                            significance which means that we cannot make any firm and
                            concrete conclusions.

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1.0 Introduction

This first chapter provides a background on BRICs; presents and motivates the choice of research topic and gives delimitation of the thesis purpose. The chapter ends with a description of the audience and a thesis outline.

1.1 Background

BRIC which initials stand for the emerging markets Brazil, Russia, India and China was coined by Jim O'Neill a global economist at Goldman Sachs, in 2001. Ever since then, the immense economic potentials of the BRICs in the decades to come have been earnestly discussed in the economic, corporate and political world turning this Goldman Sachs's invention into more than just a brilliant marketing ploy. These countries are some of the largest countries that cover 25 % of the world's land mass, home to 40 % of the world's population, and are increasingly run as global market economies. (Hult, 2009)

Just as to why BRICs are creating quite a stir is due to their potential to be some of the largest and leading economies in the world in the near future. According to Hult (2009, pp1-2), between 2002 and 2007, annual GDP growth averaged 3.7% in Brazil, 6.9% in Russia, 7.9% in India, and 10.4% in China. Hult (2009, pp1-2) also mentions that numerous predictions have the combined economies of the four BRIC countries outperforming that of the G7 countries (Canada, France, Germany, Italy, Japan, UK, and the U.S.) within the next couple of decades. Even in the current financial and economic downturn, the BRIC countries have been impacted less and they pioneer the way in global recovery having led both advanced economies and the rest of the emerging world (Yamakawa et al., 2009). Hult (2009, pp1-2) states that this is mainly due to the fact that BRIC countries have large surpluses in international trade as well as reserves in foreign currency that create a buffer in economic downturns. The BRIC countries' governments are likely to use their reserves to increase spending which should in turn result in increased consumer confidence and demand. In fact, an economic crisis globally may be a good thing for BRIC countries as it is likely to remove potential inflation problems in these countries leading to the easing of interest rates and even more economic growth.

China's economy is estimated to overtake the US in around the year 2050 to become the world's largest economy. China would have grown to around 130% of the size of the US economy by 2050. India's economy is projected to grow to almost 90% of the size of the US economy by the same year. Brazil and Russia are projected to grow from only around 3-8% of the size of US economy to around 10-25% by 2050, although they are likely to remain significantly smaller than those of either China or India due to their much smaller populations. Brazil's economy could be larger than the Japanese economy by 2050. The Russian economy could be larger than the German, French or UK economies by 2050. (Hawksworth & Cookson, 2008)

BRIC countries themselves are starting to realise their own potential. The 16th of May 2008 bore witness to a landmark first independent meeting of foreign ministers of the BRIC countries in Yekaterinburg, Russia, in what could be the first of many more meetings to come in the future to signal the four countries' potential trade and political association (Hult, 2009).

Thus there seems to be a good reason behind all the hype about BRICs. They have the potential to not only be the leading economies but also even financial centres of the future if they can truly leverage on their potential. As will be seen later, there has already been an increase in trade and strengthening of economic relations amongst BRICs and the rest of the developed world. All in all, the general sentiment is that investors with long-time horizons should look to the emerging economies of the BRICs as the markets to invest in the form of Foreign Direct Investment (FDI), depending on the nature of the investment and the risk profile of the investor. Since cross-border mergers and acquisitions (henceforth referred to as M&A) is a big part of FDI, it is thus insightful and highly relevant to conduct research to determine what is at stake for investors in the form of acquiring firms on BRIC targets.

1.2 Problem Discussion

One of the greatest inquisitions that have been debated for years in the merger and acquisition world is the value creation, if any, conceived as a result. As both scholars and practitioners alike argue for and against value creation as will be seen later in the literature review, what is clear is that the ground is still soft and objective conclusions are yet to be set in stone as markets continue to remain sceptical.

A successful acquisition is often an acid test for any Chief Executive Officer and of grave concern for stockholders. The corporate world has been graced with numerous merger waves and bore testimony to many infamous corporate marriage failures such as HP Compaq, Alcatel Lucent, Vivendi, AOL Time Warner and Daimler Chrysler to name a few.

This current paper intends to contribute to past M&A literature by aiming to reveal whether corporate geographic diversification through cross-border M&A deals create value for shareholders of the acquiring/bidding firm and what determines that.

There have been numerous studies carried out in the recent past that showed contradictory results for returns to acquiring firm shareholders in cross-border deals. Earlier studies stated a significant positive relationship between the firm value and international diversification, e.g. Errunza and Senbet (1981, 1984) and Morck and Young (1991), but the results of the more recent empirical studies vary. For instance, Datta and Puia (1995) reported cross-border M&A creating adverse abnormal returns due to high cultural differences, but conversely Chari et al. (2004) established that cross-border M&A in the emerging countries resulting a significant value creation for the shareholders of both the target and developed acquirer. In the research made by Bodnar et al. (1999), geographical diversification was found to be value creating, while Dennis et al. (2002) using the same sample period and methodology report opposing results. On the whole, approximately half of the studies find small negative returns for acquires (e.g. Walker, 2000; Sirower 1997; Healy et al.,1992) whereas the other half reports cross-borders M&A having zero or small positive abnormal returns (e.g. Maquiera et al., 1998; Schwert, 2000; Loderer and Martin, 1990).

Interestingly, the literature on the effect on shareholder wealth for target firms in M&A transactions by country is unanimous in one conclusion: there is a large announcement effect for target firms (Goergen and Renneboog, 2003). According to Dodd (1980) and Franks, Harris and Titman (1991), most studies also show evidence that target firms show significant abnormal returns in mergers. Unlike bidding shareholders, the results from past empirical studies on the returns for target shareholders in merger deals have been far less inconclusive and conflicting in that targets share value increases (see e.g. Harris and Ravenscraft, 1991; Cebenoyan et al., 1992; Cheng and Chan, 1995). This outcome is consistent with a recent study of Dos Santos, Errunza and Miller, 2008 on corporate international diversification, who found that the announcement of an acquisition creates value for the target firms' shareholders.

In spite of the vast amount of research in the field of corporate value creation through international mergers and acquisitions, most studies focus on the US markets and there are very few, if any papers that focus on developed European companies acquiring targets from countries outside the European Union. There have been no recent empirical studies to our knowledge that have looked at developed country acquirers on BRIC target companies. This seems relevant especially given the huge potential these countries offer for acquirers to tap into as mentioned in addition to the attractiveness that the BRICs provide for the EU in terms of trade and foreign direct investment (FDI) flows as will be seen in chapter 2.We hope that the BRIC countries can give an insight to value creation for acquirers that no previous studies have.

Table 1.1 presents the total number of acquisitions by country made by developed European companies in BRIC countries during 1997 – 2008. A majority of 22.4% of M&A had UK firms as the acquirers suggesting extensive UK-BRIC economic relations. This study thus focuses on UK firms as acquirers as they are one of the major markets that invest in BRIC companies.

Table 1.1: Total number of M&A initiated by European acquirers on BRIC targets between 1997 -2008

Country	Number of M&A between 1997-2008	%
UK	203	22.4
France	151	16.7
Germany	90	9.9
Netherlands	79	8.7
Spain	73	8.1
Sweden	53	5.9
Finland	52	5.7
Italy	50	5.5
Switzerland	44	4.9
Norway	29	3.2
Austria	26	2.9
Belgium	19	2.1
Luxemburg	19	2.1
Denmark	17	1.9
Total	905	100

Data source: Reuters 3000 Xtra Database

1.3 Purpose

The aim of this thesis is to research corporate geographic diversification to establish if cross-border deals involving UK acquirers on BRIC targets are value-enhancing for acquirers and to identify the variables that influence the result.

1.4 Delimitation

This study does not investigate the effects of industrial diversification as it is largely accepted that it is value destroying (Dos Santos, Errunza and Miller, 2008; Denis, Denis and Yost, 2002; Moeller and Schlingemann, 2005). Due to lack of data and overwhelming evidence

from past research of large announcement effect and value creation for target shareholders, this study will only focus on the effects on acquiring shareholder value following cross-border M&A. Furthermore, greenfield investments are not studied as the focus of this research is not on overarching FDI but on cross-border M&A only.

1.5 Audience

This study will be engaging for both the academic and as well as the corporate world. For an academic perspective, this study would be of interest to both students and as well as researchers in the field of finance, economics or international business. For a corporate perspective, this study would also be of interest to managers, employees, investors and analysts alike.

1.6 Thesis Outline

The remainder of the thesis is divided into six chapters:

Chapter 2: This chapter reviews the trade and FDI dynamics between EU and specifically UK and BRIC countries to highlight the importance of and give relevance to studying cross-border M&A deals within this scope.

Chapter 3: This chapter presents the literature review and theoretical framework.

Chapter 4: This chapter presents the hypothesis to be tested based on the literature review and theoretical framework in chapter 3.

Chapter 5: This chapter details the methodological approach to this empirical study. The research approach as well as the data collection and validity are presented which is followed by the event study and the explanatory regression.

Chapter 6: This chapter details the empirical findings. We first present some sample distribution and deal characteristics followed by the results for CAR and then results for explanatory variables and lastly explain the results for the empirical multiple regression.

Chapter 7: This last chapter presents concluding remarks and offers possibilities for further research.

2.0 EU/UK-BRIC Countries

This chapter presents the trade and FDI dynamics between EU and specifically UK and BRIC countries to highlight the importance of and give relevance to studying cross-border M&A deals within this scope.

2.1 EU/UK-BRIC Trade and FDI Dynamics

It's crucial to understand that while the BRICs share many similarities in general and in their interactions with the UK and to a larger extent EU, they also possess significant differences due to their different models of economic development and resource endowments (Ghosh et al., 2009). This is vital in understanding the underpinnings of UK-BRIC ties in terms of international trade and FDI opportunities and respective policy implications.

Brazil's economy is one that hinges on domestically oriented services; Russia's economic development is heavily reliant on energy and raw material resources; the Indian economy is essentially service-led, supported by exports; and China's focus on manufacturing exports and investment drives its economic development. BRICs have been well known for their expertise, knowledge and comparative advantage in certain fields; Brazil in biofuels, Russia in energy supply, India in IT services and China in manufacturing. Albeit these differences, looking at the more recent policies and future development plans of the BRICs, a certain 'convergence' of strategies across all of them can be observed in an attempt to break away from traditional focuses. (Ghosh et al., 2009)

Ghosh et al., (2009, pp 68) states that these 'convergence' of strategies includes a greater orientation towards export and state-led industrial policies in Brazil; a greater industrial diversification and promotion of investments in Russia; larger emphasis on the development of other sectors than just services and higher expenditures on infrastructure investments in India; and moving away from export oriented to more domestic-market oriented growth with less dependence of manufacturing in China. In addition to this, Ghosh et al., (2009, pp 68) also states that all BRICs have a common goal to upgrade their industrial structures towards

higher value added and high-tech products respectively, with the aid of government programmes and increased expenditures in R&D.

It is in understanding the current BRIC countries profiles and imminent future developments and altercation of strategies that provides the UK with various opportunities for collaboration and international trade involving FDI in the form of greenfield investments in new assets or corporate cross-border M&A or both. The EU is among the main investors in each of the BRICs suggesting that EU firms are well positioned to compete with other multinational corporations in the BRICs (Hunya & Stöllinger, 2009). In fact according to Leal-Arcas, R. (2008, pp36), the EU is Brazil's, Russia's, India's, and China's largest trading partner. The UK as seen from table 1.1 is the largest acquirer in EU in terms of number of deals.

However one has to keep in mind the risks involved in trading with the BRICs. The institutional environment is of significant importance for cross-border M&A since they are affected by various regulations at the country or regional level, such as competition and trade policy, corporate and capital taxes, various restrictions to capital movements across borders and protection of certain industries (Coeurdacier et al., 2009).The major risk is policy obstacles to UK and to a larger extent EU FDI in the form of various restrictions imposed by respective BRIC countries such as caps to foreign ownership. FDI is limited in several industries important to EU/UK investors, such as finance or telecommunications. In our opinion, EU/UK trade policy should seek to eliminate such obstacles. The guidance for EU policy has thus been its strong commitment to open markets and fair competition and this may prevail over other concerns when dealing with investment issues of the BRICs. In order to eliminate such obstacles on both sides, the EU and more specifically the UK may thus be interested in a process of further mutual and balanced liberalization in the area of FDI. (Hunya & Stöllinger, 2009)

Sound macroeconomic environment and liberalisation of the markets are many times referred as fundamental drivers of FDI and M&A activity. Emerging economies have made significant attempts to enhance their setting for corporations to operate in. De-regulation of markets, reformation of their economies, privatization of state owned companies and other improvements in macroeconomic environment, e.g. controlled inflation, enhanced current account balances and increased demand, have shaped the markets and contributed to rising confidence within investors and thus remarkable growth in FDI since 1990's (Garabato,

2009). However, in comparison to develop economies there is still a higher political risk to be taken into account and, in case of BRIC countries, a considerable scope to make further commitments towards greater liberalization, especially in the service sector which still have limitations restricting equal competition for foreign businesses (Leal- Arcas, 2009). Nevertheless, from the perspective of the developed European economies, BRIC countries offer various opportunities for them to increase competitiveness.

For instance, all BRIC countries have serious plans to increase investments in infrastructure – transport network in Brazil, Russia and China; increasing energy efficiency and environmental awareness in China; telecommunication and power generation in India. All of these are areas where EU-companies have expertise (Ghosh et al., 2009). Also the rising investments in R&D in the BRICs will result in not only higher levels of competition but also new opportunities for scientific co-operation and knowledge flows between the countries and companies. Fundamentally, advanced infrastructure, deregulated market and an enhanced macroeconomic environment create an attractive country to attract FDI.

As a whole, BRIC countries do not share the same characteristics, as mentioned earlier, and hence are likely to attract different forms of investments. Because of their rich natural resources, Brazil and Russia are pulling investments from businesses that rely on commodities and natural resources, while companies investing in China and India are seeking a growing market share in manufacturing and services as well as low cost labour respectively (Garabato, 2009). Taken BRICs as a group, their connection is rather symbiotic: greater demand for raw materials in China and India lifts the GDP of Brazil and Russia (The Economist online, 2008). The following section summarizes the factors and models for economic development in each country that may attract EU investors of which a majority are from the UK.

Brazil's incoming investments through M&A have been focused mainly on communications, financial and basic material sectors. Since 2004, the country has had a more pro-market approach on communications and other industries. It strives towards international competitiveness by encouraging technological development and promoting exports. In 2008, the government provided additional tax incentives for investments, exports and R&D (Garabato, 2009; Ghosh et al., 2009).

Russia, unlike rest of the BRIC, lacked investments in communication and financial sector but attracted investments in materials and utilities, which is not surprising taken its vast

natural resources, especially in the area of mining. Russia is also the only country that has first liberalized and then re-centralized its economy. However, a new long-term development program was launched, in 2007, with the aim of diversification of production structure towards more modern manufacturing by improving investment environment and infrastructure, but the current financial crisis have scaled back the plans. The country is largely dependent on the extraction and export of gas and oil (Garabato, 2009; Ghosh et al., 2009).

In essence, M&A in *India* as well as its economic development has been service-led and centred around communications. The liberalization in 2005, which increased the limit for FDI in the area of communications have increased the importance of the sector and a number of M&A deals soaring to 60 per cent as an average in 2004-2007 (22% prior 2004). The role of manufacturing is not significant and concentrated only to a few sectors. The major hurdle has been underdeveloped infrastructure, but a new government program has been launched in order to develop infrastructure and increasing funds for education (Garabato, 2009; Ghosh et al., 2009).

De-regulation of technology and communication sector in *China* have been major drivers for M&A activity. Furthermore, the country has allowed private banks to establish in China and, since 2001, expand their services. The previous have attracted foreign corporations to invest in China, and thus have an important role in the economy. The government has a new model of "qualitative" growth that emphasizes, for example, energy efficient technologies, higher value industries and domestically oriented growth. FDI should support all of these objectives (Garabato, 2009; Ghosh et al., 2009).

3.0 Theoretical Background

This chapter presents the literature review and theoretical framework. Section 3.1 lays the groundwork for motivations behind M&A and cross-border deals while Section 3.2 details the factors that influence M&A and cross-border deals. Both section 3.1 and 3.2 describe when and how value is created. Section 3.3 details who value is created for and section 3.4 discusses the empirical results of cross-border M&A as a means of value creation. Section 3.5 concludes with a summary and critical analysis of past literature.

3.1 Motivation for M&A and Cross-Border M&A

This section highlights the general motivations behind M&A as well as more specific motivations for cross-border deals.

3.1.1 Motives for M&A

Companies choose to grow through M&A for several reasons spurred on by various motives. In essence, there are numerous factors that explain these motives and in general it is a combination of factors rather than any one single factor that can explain merger and acquisition deals. According to the UNCTAD World Investment Report (2000), motives encompass the search for or exploitation of a fast growth opportunity, access to strategic intangible assets, new markets, increased market power or market dominance, efficiency gains through synergies, diversification, greater size in a globalizing economy, or financial benefits. In addition, personal motivations of executives can also be behind a transaction.

A survey of CFOs conducted by Mukherjee et al. (2004) on merger motives reveals that the respondents to that survey define synergy as the main motive for M&A, with operating economies as the most important source of synergy. The second most essential motive according to the CFOs questioned is diversification.

3.1.1.1 Shareholder and Management related motivations

According to Wübben (2007), motives that drive M&A can be classified as shareholder value related or management related.

Shareholder value related motivations: The synergy hypothesis purports that M&A are characterized by positive total gains when the combined value of the merged firm is greater than the sum of its individual firms (Seth et al., 2000). From UNCTAD World Investment Report (2000), synergies can arise from greater bargaining power with suppliers, economies of scale and scope (Gaughan, 2002) in production, avoidance of duplicate actions, pooling of management resources or matching complementary resources and skills to enhance innovative capabilities. The different sources of synergies are often described as financial, operational (Gaughan, 2002) or managerial (Trautwein, 1990). According to Berkovitch, et al., (1993), the synergy hypothesis is the reason behind the majority of M&A and results in positive gains. Gains in cross-border deals are primarily explained by the synergy hypothesis (Seth et al., 2000) and the sources of value creation in cross-border deals that are motivated by expected benefits from synergy are financial diversification, asset sharing and reverse internalization of valuable intangible assets (Seth et al., 2002).

Two additional theories on merger and acquisitions that are motivated by shareholder value creation are described by Trautwein (1990); monopoly theory and valuation theory. The monopoly theory argues that transactions are undertaken to attain market power which can be the motive behind horizontal or conglomerate M&A while the valuation theory assumes that transactions occur because managers have an information advantage, i.e. they have insider information about the target's value that is not readily available to the general public, which for instance, reveals that the target is undervalued. The valuation theory is based on the assumption that markets are not efficient.

Management related motivations: Management related motivations can be considered under the context of the principal-agent problem. According to Seth et al., (2000), the managerialism hypothesis argues that managers knowingly overpay in M&A and that the driver behind transactions is executives' pursuit of personal gains, maximizing their own utility at the expense of the shareholders of the acquiring firm. In a follow-up study, Seth et al. (2002) find two types of managerial motives that have received considerable attention:

empire building and risk reduction. They try to build an empire in order to enhance their own power and prestige or try to reduce risk by engaging in diversification activities at the expense of shareholder value. Seth et al. (2000), found evidence that cross-border transactions which result in a total loss for the combined firm (measured by abnormal returns based on changes in the share price) are driven by the managerialism hypothesis, confirming the results of a previous study conducted by Berkovitch and Narayanan (1993) on US takeovers. Seth et al. (2002) find evidence that the source of value destruction for transactions motivated by managerialism is managers' efforts to reduce risk by diversification activities when in an integrated capital market, firm-level diversification activities to reduce risk are generally considered non-value maximizing and redundant as individual shareholders may duplicate the benefit from such activities at lower cost.

Another hypothesis, the hubris hypothesis, proposes that managers engage in M&A because they inadvertently overvalue target companies believing their evaluation is correct (Seth et al.,2000). According to Roll (1986), hubris is the pride of managers in acquiring firms for their own personal motives and that the pure economic gains to the acquiring firm are not the sole or even the primary motivation in the acquisition. The hubris hypothesis assumes irrational behaviour on the managers' side, in contrast to the managerialism hypothesis that implies rational behaviour (Wübben, 2007). Evidence regarding the hubris hypothesis is provided by Mukherjee et al. (2004). In their survey of CFOs, they find that CFOs who identify a potential target, define merger cash flows as equity cash flows from the target but discount these cash at the acquirer's weighted average cost of capital instead of the target's cost of equity, which is questionable as a practice and can lead to overpayment. Moreover, Seth et al. (2000) test the hubris hypothesis in the context of cross-border transactions and reveal that it can explain value creating instead of value destroying cross-border transactions. Berkovitch and Narayanan (1993) find similar results in their study.

3.1.1.2 Free cash flow motivation

Yet another theory that explains management related motives of M&A is Jensen's (1986) theory of free cash flow. Jensen (1986) defines free cash flow as the cash flow in excess of that which is required to fund all positive net present value projects discounted at the relevant

cost of capital. He argues that firms which generate significant levels of free cash flow experience a conflict of interest between managers and shareholders over payout policies, because any distribution of free cash flows to shareholders would reduce the resources that managers control and therefore their power. This implies that managers have an incentive to minimize the distribution of free cash flows to shareholders. Accordingly, managers with free cash flows available also have an incentive to spend the free cash flow and are more likely to engage in transactions that are value destroying or of low benefit. Cross-border investments may be one such use of this free cash flow. According to Chen et al., the potential agency costs of cross-border investments are therefore higher for high-free-cash-flow firms while on the other hand, cross-border investments by low-free-cash-flow firms increase the chance the firm will seek new external financing which provides monitoring and thus reducing potential agency costs.

3.1.1.3 M&A as a strategic purpose

A company's strategy can also be a motivating factor if the company chooses to grow inorganically via M&A to meet a strategic objective. M&A deals can be categorized as vertical, horizontal or conglomerate. Vertical defines M&A in which two companies that are at different stages of the value chain (buyer-seller relationship) merge. Horizontal merger applies when the two companies are competitors. A merger is a conglomerate when a firm acquires another one from the different industry (Gaughan, 2007).

Earlier academic literature has evidenced conglomerate deals resulting to negative abnormal returns (see e.g. Maquieira et al., 1998; Bieshaar et al., 2001; Doukas et al., 2002). The previous can be explained, for instance, by hubris hypothesis or management's will to build an empire but more generally the conclusion is that synergies are just more difficult to identify when the acquirer is planning to expand out of its core business. The literature does not provide a clear distinction on the value creation between the horizontal and vertical M&A. Both deal types may create value by increasing the market power and thus profit margins and growth of the combined company. However, Walker (2000) establishes horizontal deals outperforming vertical M&A and argue that there might be similar issues with the vertical deals with regards to difficulty in identifying synergies as with the conglomerate deals.

3.1.2 Motives for Cross-Border deals

All motivations mentioned earlier also hold for cross-border/international deals; however this section highlights motives that are specific to those deals that involve geographic diversification.

One reason for companies to engage in cross-border M&A is to follow their clients overseas in order to continue and expand the business relationship (Weston et al., 2004).

Madura (2006) proposes three common theories which explain why companies expand their business internationally: the theory of comparative advantage, the imperfect markets theory and the product cycle theory. Another theory that explains international mergers is internalization theory which has its roots in Coase (1937) and advanced by Caves (1971), Dunning (1973), Williamson (1975), Buckley and Casson (1976), Hymer ([1960], 1976), Magee (1977), Rugman (1981) and Hennart ([1977], 1982).

Theory of comparative advantage: According to the theory of comparative advantage a company (country) is said to have a comparative advantage in the production if it can produce goods and services at a lower opportunity cost than another company (country). It further suggests that both companies (countries) could benefit if each company (country) specializes in the production of the good in which it has a comparative advantage in and if they transact (trade) those goods and services freely (Madura, 2006).

Imperfect market theory: The imperfect market theory argues that countries differ with respect to the resources available for the production of goods and services and that those resources are not freely transferable across countries. This implies that there are costs and restrictions related to transferring factors of production. If those factors were mobile and unrestricted, there would be no comparative cost advantages and no rationale for international business. However, since markets are imperfect, companies have an incentive to seek out foreign opportunities (Madura, 2006).

Product cycle theory: Finally, the product cycle theory proposes that while a firm will initially create products and services to satisfy the demand in their home country, as time passes and the home market becomes mature and saturated with increasing competition, the firm might decide to enter foreign countries to expand its market and enhance its competitive position by escaping the competition (Madura, 2006).

Internalization theory: In accordance with the internalization theory, the internalization is expected to be beneficial when a company is able to take advantage of valuable intangible assets, i.e. patents, superior knowledge, brand, marketing and managerial abilities, goodwill etc., which can be characterized by different imperfections, including limited information, monopoly and immobilities. These assets are similar to public goods in that their value is enhanced in direct proportion to the scale of the firm's markets. They are also based largely on proprietary information and thus cannot be exchanged easily for a variety of reasons. A firm can bypass these transactions difficulties by internalizing the markets for such assets and thereby increasing its value by expanding abroad. The implication is, thus, that firms that engage in cross-border deals are firms' that posses useful intangible assets, the value of which is proportional to the firms' degree of multinationality (Morck and Yeung, 1991). Caves (1990) also argue that internalization can be seen as rivalry among oligopolistic corporations to head off opportunities and emerging niches. Using the same theoretical perspective but considering US firms as targets instead of acquirers, Harris and Ravenscraft (1991) concluded that cross-border takeovers are more frequent in R&D intensive industries than are domestic acquisitions.

3.2 Factors influencing M&A and Cross-Border M&A

This section highlights all the factors that influence general M&A and those that specifically influence cross-border deals.

3.2.1 Factors influencing M&A

Besides motivations to engage in M&A, there are certain factors that can effect M&A as a source of value creation. In other words, these are all factors deemed to not be the reasons behind why M&A are pursued but yet still affecting the value creation process.

3.2.1.1 Method of payment

Mergers and acquisitions can be financed with various methods. Commonly, the transactions include cash, equities or a combination of both. In addition, the deal may include some sort of after merger payment in relation to performance. The past literature provide several evidence of the impact of the method of payment on M&A. Loughran and Vihj (1997) reported that complete stock mergers earn substantial negative excess returns of 25 per cent, whereas deals with complete cash offers had large positive excess returns of 61,8 per cent. They also argue the reason for complete stock transactions being an overvalued stock of the acquirer.

Information asymmetry is often an issue within M&A and companies can use equity as form of payment to reduce the level of the problem, especially when the target is expected to have proprietary information of its value. Overall, making the payment to the target shareholders is subject on the total value creation from the M&A (see Hansen,1987). As cross-border M&A are challenging to evaluate, it could be assumed that bidders prefer equity as form of payment. The equity is claimed to have contingent-pricing characteristics and hence could outclass cash transactions (Hansen, 1987). However, targets in emerging countries are often reluctant to accept foreign equity, which forces acquirers to cash payment (see Chari et al., 2004). On the other hand, Eckbo et al, (1990) argued that information asymmetry is two-sided, and hence deals with a combined payment method should represent equilibrium and outperform either complete share or cash deals as a method of payment.

3.2.1.2 Pre-bid performance of acquirer

Pre-bid market performance is often measured as market-to-book (MTB) ratios. High market valuation in relation to book value implies high expectations on future performance and is hence regarded as positive (Tuch and O'Sullivan, 2007). However empirical evidence suggests the contrary. Rau and Vermaelen (1998) find that lower MTB acquirers realize significantly higher gains than high MTB acquirers. This viewed is shared by Sudarsanam and Mahate (2003) as well. Roll's (1986) hubris hypothesis is often cited as the reason. When managers have tasted success previously, it is more likely that the get over-confident in the future. Past success can also increase the expectations that markets have for future performance. Furthermore, high MTB acquirers are argued to be overvalued because of their

previous successes which might hinder the evaluation of their deals while low MTB acquirers, due to their previous poor performance are obliged to evaluate their deals more earnestly (Sudarsanam and Mahate 2003).

3.2.1.3 Size of the deal

The previous literature on the effect of the size of the deal on acquirer returns have implied a negative relation between them if any. Beishaar et al. (2001) find no significance in that the size of the deal is argued to be positively related to abnormal returns since a bigger deal should have more synergies and thus create more value. They argue instead that the market expects the average deal to destroy value and hence the costs in a larger deal would outweigh the potential benefits. In addition, Sudarsanam et al. (1996) find that smaller deals create more value as the smaller the target the easier the integration process.

3.2.2 Factors influencing Cross-Border Deals

Factors affecting M&A also influence cross-border deals. However, this section highlights factors that are specific to cross-border deals.

Changes of external factors such as the regulatory and economic environment amongst others particularly affect companies' cross-border acquisition behaviour. As a result, cross-border M&A are a strategic response by companies to defend and expand their competitive positions in a dynamic and globalizing environment. In addition, the trend in the last few years has seen policies that govern cross-border deals undergoing significant liberalization. Today many countries try to draw foreign investment and thus remove restrictions on FDI and provide legal protection and guarantees. Cross-border deals are also triggered by deregulation and privatization programs in various industries as well as changes in capital markets towards higher worldwide integration (UNCTAD World Investment Report, 2000).

Other factors that influence cross-border deals are as follows.

3.2.2.1 Macroeconomic factors

Numerous studies have been done to determine the influence of macroeconomic factors on cross-border transactions.

In an empirical study of acquisitions made by 202 U.S. firms between 1975– 1983, Manzon et al., (1994) found that if the target firm has a high-tax system, U.S. acquirers have higher abnormal returns than if they acquire a target from a low-tax country.

Globerman and Shapiro (2005) specify and estimate econometric models of the determinants of the inward and outward M&A in a 154 countries sample, across the period 1995-2001. Leveraging data published by UNCTAD, the authors identify variables affecting M&A. They conclude, however, that in general, the most important variables which influence inward and outward M&A are the same that really influence the overall FDI. However, there are some differences in the structure of M&A and the models of aggregate FDI. In particular, the economic growth is an important determinant of aggregate FDI, but not of the M&A flows.

Rossi and Volpin (2004) reported the results of an econometric study of cross-country determinants of international and domestic M&A. They found that firms in countries with weaker investor protection are more likely to be acquired than those in countries with stronger investor protection, whereas acquirers are more likely to be from countries with relatively strong investor protection. Recently, there have been a number of studies that include financial variables as determinants of international M&A.

In his study, di Giovanni (2005) estimated the importance of several macroeconomic, financial and institutional variables in the explanation of international M&A. In particular, he realised that the size of the financial market measured by ratio of stock market capitalization to GDP has a strong positive correlation to M&A. Furthermore, he concluded that M&A flows tend to increase when directed to large economies with the same official language.

Aminian and Campart (2005) have analysed the macroeconomic determinants of all the M&A between Europe and Asia announced from 1999 to 2004. The authors identified some factors underlying the activity of M&A, such as the degree of openness, the exchange rates

and, just as di Giovanni (2005), the financial deepness, measured by ratio of stock market capitalization to GDP.

Countries that are more likely to attract FDI are countries where the local currency is expected to strengthen against the home currency of the investor (Madura, 2006). In an earlier study, contrary to Madura (2006), Froot and Stein (1991), propose that acquirers will have an advantage if their currency is stronger relative to the currency in the target's country. Kamaly (2007) studied the macroeconomic determinants of M&A in developing countries in the 1990s. In his study, Kamaly (2007) confirmed that depreciation in the domestic exchange rate affects strongly and positively M&A in developing countries. The results from his study also show that the international interest rate affects the M&A in the anticipated negative direction and the openness has a positive effect, but quantitatively its effect is minimal. Finally, the author concluded that a high level of activity and deepness of the stock market in developing countries reduces the amount of M&A directed to these same countries which contradicts the study by di Giovanni (2005).

In summary, macroeconomic factors that seem to have the biggest influence on wealth effects deriving from international mergers are level of investor protection, degree of openness, exchange rates, tax rates and the size of the financial market.

3.2.2.2 National cultural disparity

When any two firms merge, there is a need to understand and appreciate the different ways of working or work culture differences amongst the combined firms. This highlights the challenge in managing the disparity in culture when two firms from different countries merge and its influence on value creation in cross-border deals. Cultural disparity between two merging partners is often one of the usual suspects blamed for ruining M&A. Chatterjee et al. (1992) established that there is a negative correlation between shareholder abnormal returns of the firms involved in related mergers and the level of cultural distance between the combining companies. However in a later study, Chakrabarti et al. (2009) found conflicting results. According to their study, using a sample of over 800 cross-border acquisitions during 1991–2004, they found that, contrary to general perception, cross-border acquisitions perform

better in the long run if the acquirer and the target come from countries that are culturally more disparate.

3.2.2.3 Corporate control

In situations where enforcing or writing complete contracts is demanding, acquiring majority stake or control of the target can be highly important. Especially in emerging countries which are often subject to ineffective monitoring, insufficient protection and enforcement of the minority shareholders rights as well as incomplete contracting (Alexander and Zingales 2004; La Porta et al., 1998). By acquiring a controlling stake in a target, developed market acquirers may actually lengthen the boundaries of the business and to include the targets from emerging markets. Because of weak property rights in those markets, acquiring majority control might be the only incentive to transfer sufficient technology and capital to target companies. The results from Chari et al., (2004) established significant gains for both developed acquirers and targets from emerging markets in cross-border M&A. They suggest that the value gains from cross-border transactions arise from majority stake or more precisely, the transfer of control to developed market acquires from developing market targets. The joint returns were increased from 5.8 to 7.8 per cent in the cases were majority control was acquired. In addition, announcement returns for both the target and acquirer companies estimate the distribution of gains and had a statistically significant increase of 2.4 and 6.9 per cent respectively.

3.3 Value creation for shareholders

When and how value is created in M&A is crucial to understand but just as important is who value is created for. The discussion often sets shareholders apart from other stakeholders as most finance literature on mergers and valuation focus on shareholder value. Koller et al., (2005) argue that the objective goal of the firm is to maximize shareholder value. Pursuing shareholder value does not mean neglecting other stakeholder's interests and stakeholder value is consistent with shareholder value. Given this, value creation from M&A can be measured as changes in stock price.

In past studies and research, there have been numerous methods carried out to determine value creation from M&A. However, bidder performance is typically measured with the method of an event study. According to Tuch and O'Sullivan (2007), both long and short-run event studies have been frequently used. The use of event study research implies that the appropriate measure of performance should reflect changes in shareholder wealth. In using stock prices to reflect value and performance, the fundamental question is when value creation is realized in an M&A deal. This would depend on the level of efficiency of the market.

The effective market hypothesis theory developed by Fama (1965, 1970), purports three different levels of market efficiency; weak, semi-strong and strong. Under the weak form of market efficiency, today's stock price reflects all historical information. Under the semi-strong form, stock prices will immediately adjust to reflect publicly available information in addition to past information thus all public available information is reflected in security price. Such an example is a stock price adjusting to an acquisition announcement. Strong-form efficiency states that all information both private (including inside information) and public is reflected in stock prices. In this case, an acquisition announcement would not affect stock prices as this was already expected and incorporated in the stock price.

Previous studies on M&A value creation such the one done by Tuch and O'Sullivan (2007) have assumed semi-strong form efficiency to reflect reality and thus assume that share prices react in a timely and unbiased manner to new market information.

3.3.1 Acquirer performance – Cumulative Abnormal Returns (CAR)

As mentioned there have been many studies of shareholder value creation made in the past that varied in results and in research methods. However most studies focusing on acquirer returns have been event studies using CAR based on stock price changes around the announcement date.

Table 3.2 below shows some of the previous CAR studies made. As can be seen from the table, the majority of previous studies have been conducted within the UK and US with only one study looking at cross-border deals. The spread of both significant and insignificant results of both positive and negative abnormal returns concludes a lack of consensus.

Table 3.2: Summary of past CAR studies

Table 3.2 Summary of past CAR studies							
Year	Author	Period	Market	Number of deals	Event-window (Short run/Long run)	CAR (Short run/ Long run)	Satistically significant
1980	Firth	1969-1975	UK	642	Announcement month/ -48 to +36 months	-/-	Not reported
1989	Franks and Harris	1955-1985	UK	1058	-40 to + 40 days/ 0 to +24 months	+/-	Yes
1990	Mitchell and Lehn	1980-1988	US	232	-1 to +1 days/	-/	Yes
1991	Franks, Harris and Titman	1975-1984	US	399	-5 to +5 days/	+ -/	No
1998	Higson and Elliot	1975-1990	UK	1660	0 to +3 months/	+/	No
2000	Walker	1980-1996	US	556	-2 to +2 days/	-/	Yes
2003	Sudarsanam and Mahate	1983-1985	UK	519	-1 to +1 days/ +1 to +750 days	-/-	Yes
2005	Gregory and McCorriston	1984-1992	US/EU/NON-US/EU	197 bids by UK acquirers on US targets, 97 bids by UK acquirers on EU targets and 39 bids by UK acquirers on targets from countries other than US or EU	/ 0 to + 5 years	/+ -	Significant abnormal return of −9.36 and −27% over years +3 and +5 respectively in the US. No significant abnormal returns from EU bids, but positive gains from bids other than EU countries or the US.
2006	Ben-Amar and Andre	1998-2000	Canada	238	-1 to +1 days/	+/	Yes
Adapted from Tuch and O'Sullivan (2007)							

3.4 Do Cross-Border M&A create value?

In essence, cross-border M&A provide risk diversification, operational synergies and strategic benefits for a business, and thus create value for both acquirer as well as shareholders of the target firm (Caves, 1990; Kang, 1993; Markides and Ittner, 1994). Number of studies in relation to cross-border M&A have been made in the past two decades with the majority of them focusing on the US or UK markets. Earlier studies stated a significant positive relationship between firm value and international diversification (for instance, Errunza and Senbet (1981, 1984), and Morck and Yeung (1991), but the more recent empirical research have provided miscellaneous results. Hence, there is not any clear evidence whether cross-border investments create value or not.

Errunza and Senbet (1984) introduced various measures of the degree of international involvement and found a positive relationship between the global diversification and firm value. Kim and Lyn (1986), and Morck and Yeung (1991) found evidence for the hypothesis

that supports global diversification by stating that multinational companies can take advantage of the market imperfections for their intangible assets abroad. Morck and Yeung (1991) found positive and significant abnormal returns for US acquiring firms with characteristics suggesting the presence of information-based assets. These assets, represented by research and development (R&D), advertising and management quality allowed the bidders to internalize the assets of the target firms more efficiently.

The previously mentioned advantages lead to a discussion of the results from Datta and Puia (1995). In their research industry relatedness and cultural fit was taken into account. Their data sample provided an adverse return for shareholder value. The results from the industry relatedness were mixed but the high cultural differences were evidenced causing lower abnormal returns. Thus, they argued that cross-border M&A is not value creating for bidder's shareholders.

Denis et al. (2002) adopted excess value measure from Berger and Ofek (1995) and claimed that companies that are globally diversified trade at a statistically and economically significant discount in comparison to a portfolio of single-segment domestic companies acting in the same markets. The diversification reduces shareholder value by 18%. This might be due to that the costs of monitoring managerial decision making and coordinating corporate policies in globally diversified companies outweigh the benefits.

Conversely, Bodnar et al. (1999) using a comparable valuation method, argue that global diversification affects positively the shareholder value with the average diversification premium being statistically significant and equivalent to 2.7 per cent. For instance, single activity multinational had an MTB ratio of 1.976 as an average, whereas domestic single activity firm had a ratio of 1.636, thus opposing the Dennis et al. (2002).

A more recent study that adopted the same method was made by Des Santos et al. (2008), who did not find any evidence of significant decline in excess values of US based acquirers, however, with the condition that the foreign targets were "fairly valued" in relation to the industry-matched benchmarks. In addition, they stated that multinationals are valued at a premium in relation to industry-matched domestic benchmarks and that cross-border M&A does not lead to value destruction.

Gande et al. (2007) argued that international diversifications have a positive impact on the firm value. Their research results suggested that both financial and real effects create value

from global diversification, however, not from industrial diversification. They concluded that there is an indication that both financial and real drivers matter for international diversification.

In terms of this study, the results from Chari et al. (2004), who researched stock market's reaction to acquisition announcements from the emerging markets, were particularly interesting. Firstly, they motivated several reasons why investing in emerging markets could be beneficial, for instance due to economic potential, cost of labour and bargaining power but stated that the benefits of the M&A rise mainly from the change in corporate control or in other words, when the majority control from developing targets transfers to develop market acquires. Overall, they established that cross-border M&A in the emerging economies in the late 1990's resulted significant value creation for the shareholders of both the target as well as the acquirer.

3.4.1 Cross-Border versus Domestic deals

Moeller et al. (2005) researched the difference between domestic and cross-border transactions within US companies, and found evidence that cross-borders M&A experience significantly lower gains relative to the domestic M&A, e.g. lower announcement returns. Stock returns had a negative relationship with both industrial and international diversification. However, the results were affected by small number of failed acquisitions that were made by acquires with very high valuations. If these were excluded, the cross-border M&A would have created value for the shareholder on average. According to Harris and Ravenscraft (1991) using the internalization theory, they concluded when foreign buyers are involved in the mergers, US target firms have significantly higher abnormal returns than when bidders are from US.

The studies that have focused comparing the European cross-border and domestic deals provide mixed results. Previous literature provides evidence that due to market imperfections that cross-border M&A may exploit, the returns for international transactions exceeds the returns of pure domestic transactions (Lowinski et al., 2004). The argument is in accordance with the advanced theoretical explanations on market imperfections and their impact on value creation by Errunza and Senbet (1981, 1984). In contrast, Conn et al. (2003) and Campa and Hernando (2004) evidenced higher returns for domestic transactions. They argue that the

various obstacles in relation to cross-border transactions, e.g. legal, cultural, transaction barriers, have negative impact on the value created by the M&A. The result is similar with the previously mentioned Datta and Puia (1995), which stated that cultural differences were causing lower abnormal returns. Goergen and Renneboog (2003) shared the same results but also state that cross-border M&A do not tend to pay higher premiums than domestic ones. The premium paid has a relationship with location and institutional differences, such as, transparency, protection of shareholder, takeover regulation and corporate governance regime.

3.5 Summary and Critical Review of Past Research

This conundrum can be best underscored and summarised with the research done by Bodnar et al. (1999) and Denis et al. (2002).

While Bodnar, Tang, and Weintrop (1999) find that geographic diversification adds firm value, Denis et al. (2002) find that geographic diversification reduces firm value relative to the single-segment domestic benchmark firms. What is most perplexing is the fact that they find significantly different results even though both studies use the same sample period and methodology. A possible reason for this conflicting evidence may be related to the sample identification issue for geographic diversification and the econometric methodology, which do not correctly handle the endogeneity problem. In addition, if global diversification affects firm value, then the level of foreign involvement might drive the different results. While Denis et al. (2002) use foreign sales as a proxy for global diversification, Bodnar et al. (1999) include this sample while also including firms that report on foreign tax. Thus, Bodnar et al. (1999) include more globally-diversified firms in their sample. This difference might account for the different results. However, regardless of the possible reasons for these contradictory results, there is still no clear answer to the fundamental question: "Does global diversification create or destroy value for shareholders?" (Kim and Mathur, 2008)

To our knowledge, no empirical studies have been conducted yet on the most recent international M&A involving UK acquirer companies on BRIC country targets. In this paper,

we therefore aim to examine the effect of geographic diversification[1] on firm value via analysing the wealth-effect of these mergers on acquirer shareholders using a methodology based on CAR, explained in the following chapters. In addition, we test whether some of the previously established theories about the motivations and factors that influence the value creation of M&A hold for the cross-border deals in the BRIC countries as well.

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[1] Industrial diversification effect is not relevant as all acquirer/bidder and respective target are of the same or related industry.

4.0 Hypotheses

This chapter presents the hypothesis to be tested based on the literature review and theoretical framework.

4.1 Bidder performance – CAR

As mentioned in the literature review, assuming the market shows semi-strong efficiency a change in the fundamental value of a company should be immediately reflected in the share price. The share price should rise if an acquisition is deemed to be valuable or have a net present value greater than zero. However as seen earlier in table 3.2, the previous research on bidder performance measured in terms of CAR have shown mix results. There is no clear consensus if the average M&A deal creates value or not. However the one study done on cross-border M&A (Gregory and McCorriston, 2005) showed that there were positive gains and moreover short run event windows seem to show significant positive CAR. Therefore we state our hypothesis that UK-BRIC cross-border M&A have created value on average.

Hypothesis 1: CAR is positive

4.2 Determinants of Cross-border M&A success

This section lists the determinants or variables of value creation (destruction) for the shareholders of the acquiring firm.

4.2.1 Excess Cash

Jensen (1986) argued that firms with a significant level of free cash flow have an incentive to spend the free cash flow on negative NPV projects. They could spend on wasteful or value destroying merger deals instead of distributing any free cash flow to shareholders in an attempt to avoid losing managerial power. In other words, managers would make bad investments when they have too much cash at their disposal. Thus we state that:

Hypothesis 2: CAR is negatively related to high cash flow

4.2.1 Strategic purpose

Due to the fact that many theories argue against conglomerate deals and this study excludes industrial diversification, the focus is on the value creation of horizontal as opposed to vertical M&A. The topic is not widely researched but there is some indication that synergies are more difficult to identify in vertical deals and thus horizontal deals tend to create more value. We state hypothesis as:

Hypothesis 3: CAR is positively related to horizontal deals

4.2.2 Method of payment

From previous literature, there have been contrasting results for different methods of payment. Due to the information asymmetry, in some circumstances an equity transaction is claimed to have contingent-pricing characteristics. Nevertheless, targets in the developing countries are often reluctant to accept foreign equity. For the reason that information asymmetry can be two-sided, deals with combined payment methods should represent equilibrium and outperform either complete share or cash deals as a method of payment. Hence, we argue:

Hypothesis 4: CAR is positively related to a combined method of payment

4.2.4 Pre-bid performance of acquirer

As mentioned before, there have been numerous studies that support that high MTB companies experience significantly less positive abnormal returns than companies with low MTB ratios. Based on this, we state that:

Hypothesis 5: CAR is negatively related to MTB ratios

4.2.5 Size of the deal

The relative size of deal is suggested to have a negative relationship with CAR from previous literature. Thus it is stated that:

Hypothesis 6: CAR is negatively related to the size of the deal

4.2.3 Strength of acquirer's currency

It is interesting to note that the general consensus based on past literature is that an increase in exchange rates in favour of the domestic country would attract inward FDI. (E.g. see Madura 2006) However, studies exclusively on M&A have shown that more value is created for the acquirer when its currency is stronger than in target markets. Henceforth, we state that:

Hypothesis 7: CAR is positively related to strength of acquirer's currency

4.2.7 Cultural difference

As mentioned, Chari et al. (2004) find cross-border M&A between develop and emerging countries resulting in significant value creation for both acquirers and targets. However, in general, academic literature argues that cultural differences between the acquirer and target should have an inverse relationship with returns. Our aim is to test the impact of cultural differences on value creation by adopting one of the cultural measures, power distance index (PDI), from Hofstede (1980)[2]. Power Distance Index is a score derived from a questionnaire and it reflects national cultures on the index value. Variances between index values within countries are outcomes of differences in religion, political systems, ideological and philosophical thinking. It reflects the extent to which a culture considers how organizational and institutional power should be distributed (unequally or equally) (Hofstede, 1980). In other words, in countries with high power distance, people accept easier a larger status

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[2]Hofstede introduced four cultural measures: power distance index (PDI), masculanity index (MAS), individualism index (IDV) and uncertainty avoidance index (UAI) but the variables are stated to be highly collinear (Markides and Ittner, 1994).

differential than in low power distance cultures, e.g. UK. We believe that PDI is representative in this study as successful integration and an acceptance in the change in hierarchy would have an impact and determine value creation in M&A. Overall, the larger the cultural gap between the countries the more difficult the integration process will be and the less value created.

We measure cultural difference via the differences in PDI between the UK and the BRICs (acquirer vs. target) as shown in table 4.3 and determine its relationship to CAR. An absolute difference in PDI is used in the regression analysis. It should be noted that all of the BRICs have a significantly higher (positive) PDI in comparison to the UK. Henceforth, we state that:

Hypothesis 8: CAR is negatively related to a high difference in a culture

Table 4.3: Table of Power Distance Index and absolute differences between UK and BRICs

Country	Cultural Difference (PDI)	Absolute difference in PDI
Brazil	69	34
Russia	88	53
India	77	42
China	80	45
UK	35	

Source: Hofstede (1980,1986 and 1991); Elenkov,1998

4.2.6 Corporate Control

As mentioned before under corporate control theory, in situations where enforcing or writing complete contracts can be a challenge as may be the case in emerging BRIC countries, acquiring majority stake of the target can be highly important. We then conclude with:

Hypothesis 9: CAR is positively related to acquiring majority stake

5.0 Methodology

This chapter runs through the methodological approach to this empirical study. The research approach as well as the data collection and validity are presented. Following are the event study and the explanatory regression.

5.1 Research Approach

This study uses a deductive approach leveraging on previously-mentioned theories to formulate hypotheses that are derived from the purpose of this study.

The primary purpose of this thesis is to determine if cross-border mergers are value-creating for acquirers. The secondary purpose is to establish the influence of different factors mentioned in the previous chapter with regards to returns and value creation. Therefore, as different theories regarding mergers and acquisitions are being tested via the derived hypotheses in this study, a deductive approach will be employed.

Quantitative data is collected to test the hypotheses in an appropriate and objective way. Following this are the findings where it is decided if the hypotheses are to be rejected or not. In summary, this study deploys an empirical research strategy that is used to test if cross-border M&A are value creating for the acquirer and if this can be inferred to by some determinants.

This study does not investigate the effects of industrial diversification as it is largely accepted that it is value destroying (Dos Santos, Errunza and Miller, 2008; Denis, Denis and Yost, 2002; Moeller and Schlingemann, 2005) and to control for geographic diversification. Due to the lack of data, this study does not take into account if the firm establishes operations overseas for the first time or not.

5.2 Data Collection and Reliability

Reliability defined within the scope of this research paper is the ability to generate the same results again if the study is repeated. The data collected and methods used will now be explored in greater detail to ensure that the reader can follow and replicate the study to ensure reliability.

The initial sample of cross-border M&A deals along with certain firm specific variables are collected from the Bureau van Dijk Zephyr database. The information gathered from this database is deemed to be reliable as it is used as a resource in numerous thesis and articles. However since Zephyr did not disclose the method of payment for all deals, this information was sort after from Reuters 3000 Xtra as well as companies press releases of the acquisition.

Additional information is collected from both DataStream and Reuters 3000 Xtra which are reliable databases. From DataStream, information such as stock prices, indices, returns and firm specific information and as mentioned, from Reuters, additional information not found in Zephyr of cross-border M&A deals are gathered.

All regressions are run by using the econometric software EViews with SPSS also being used for several econometric tests and to ensure reliability and validity. Therefore statistical calculations using the data material should give correct results given the specifications.

5.3 Validity

Saunders et al. (2007) reminded that none of the research strategies is flawless but in spite of the limitations research should aim to make the study as credible as possible. Validity consists of two aspects: internal and external. Internal validity refers to the legitimacy of the results considering the way groups were selected, data collected, analysis performed. In this case, the study can be considered internally valid as the data were all collected from reliable databases even though some observations were disregarded because of lack of accounting or share-price information. In this research, the announcement bid is measured to determine if it is value creating or value destroying for the acquirer's shareholder. What is essential is to understand is if the changes in share prices are a fair reflection of the changes in value and based on this, a model is constructed to calculate the changes in the stock price both when the

event has or has not have taken place. Since this research follows similar studies in the past regarding measuring value creation for acquirers from an announcement, it is safe to claim that the chosen model is valid. In addition, this research also follows previous studies in specifying variables that would affect value creation in determining if there is a causal relationship between these firm or deal specific variables and the stock performance of the bidder thus confirming validity.

External validity also called "generalizability" assumes that the outcome of a study can be generalized to other groups, samples. On average the result of this research can be supposed to hold for UK acquirers diversifying in the BRIC. Even though this research can be easily replicated and be used in different countries during other periods, the result may differ due to different economic and financial conditions, cultural backgrounds or other circumstances.

5.4 Event Study

Leveraging on financial and economic data, an event study measures the impact of a specific event on the value of a firm based on the fact that the effects of the event will be reflected instantly in stock prices assuming rationality in the the market (MacKinlay, 1997).

Event Definition

Central to this empirical study is the measure of the effects of M&A on the stock value of the acquirer. Prior to that, is the measurement of the event day which is defined as the day of the announcement following most of the previous studies based on CAR in table 3.2. The announcement day is taken to be day 0. Secondly, the event window is demarcated around the event day. These are the days surrounding the announcement day to capture the changes in value of stock prices as a result of the announcement of M&A. The event window thus measures the impact of the acquisition on the acquirer in a relatively short period of time. The choice of an ideal event window is up to debate as table 3.2 serves testimony to the lack of consensus from past studies regarding the number of days to include in the event window.

As seen in table 3.2, there are studies that use a short event window, while others use a long term window and some using both with event periods within short or long event windows varying considerably between studies. Short term refers to days or months around the announcement of the bid, while long term refers to periods of months or years (Tuch and

O'Sullivan, 2007). Andrade, et, al. (2001) argue that the most statistically reliable results regarding M&A abnormal returns comes from short-window event studies while Tuch and O'Sullivan, 2007 mention that short-window event studies have less methodological problems than long-window event studies. We thus choose to use a short-window period. We then move on to determine the exact number of days within the short-window period.

We believe that the validity of the results would increase if we choose several different short term event window periods, leading us to use [-1, 1], [-3, 3] and [-5, 5] day event window periods. Including the day after the announcement day captures the price effects of the acquisition, which takes place after the stock market closes on announcement day (MacKinlay, 1997). Including more days after the announcement day will deal with problems of overreaction and subsequent correction while including more days before the announcement day will deal with problems of information leaking to the market prior to announcement.

Selection Criteria

The acquiring companies chosen for this study were all listed in the London Stock Exchange with an announcement date in at least one of the BRIC countries between 1997-01-01 and 2010-04-15. The time period for the sample was affected by the facts that Zephyr did not include data prior to 1997 and that most of the significant researches on cross-border M&A used a sample collected prior 2000 as seen in table 3.2. Hence, this research will provide an updated view on the topic area. For the initial sample, Zephyr database was used with the following restrictions on the data:

- The M&A is announced between 1997-01-01 and 2010-04-15

- The acquirer is listed in London Stock Exchange

- The target is based in Brazil, Russia, India or China

- The acquirer and target are in the same industry

- All deals with a known value

As this study measures the changes in the shareholder wealth of the acquirers, it was essential to obtain information of the acquirer's share price performance, and thus the acquiring firm had to be publicly listed. Another motive for choosing the London Stock Exchange was that

UK firms are one of the main markets that invest on BRIC companies as seen in table 1.1. The acquirer and target were required to be in the same industry as this research focuses on geographic diversification, and thus we wanted to control for (exclude) the influence from industrial diversification. As we are only interested on the value creation for acquirer's shareholders, the target company did not have to be publicly listed. These criteria derived an initial sample of 69 deals.

From this sample, we excluded deals with a relative size of less than 1%[3] in similar fashion to Walker (2000) and Conn et al. (2005) who had excluded deals sizes of less than 10% and 5% respectively and those which did not have sufficient share price information in Datastream. For instance, they might have been listed on the stock exchange just some months or weeks prior before the announcement of an M&A and thus not having enough data to adequately estimate normal returns. In addition, deals with illiquid stocks were excluded. This reduced our initial sample to a final sample of 30 deals from 1999 to 2009, from which 11 were based in Russia, 7 in Brazil, 7 in India and 5 in China. The major factor reducing our sample size was the size of the deal as the initial sample had many M&A deals with an insignificant relative size (< 1%).

Normal Returns

Normal return is the expected return that would occur if the announcement (event) would not have taken place. In this study, normal returns were calculated for each deal. In order to research an impact of a certain event, the actual return and normal return are compared within the event window via the abnormal return. There are several methods put forward by MacKinlay (1997) to measure normal returns. This study adopts market adjusted model and market model, which are explained in detail later. Both of the chosen methods for this study follow statistical assumptions concerning asset returns and do not depend on economic arguments. In addition, distribution assumption holds. In other words, it can be assumed that returns of asset are jointly multivariate normal and identically and independently distributed through time (Campbell et al., 1997, p.154).

The first step in estimating the parameters for normal returns is to choose the right index to use as an estimate of the market return. In this study, daily returns of the FTSE All-share

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[3] Following Walker (2000), where relative size can be defined as value of the deal divided by the acquiring company's market value three months prior the announcement date.

Index was chosen as the most adequate proxy for the estimation and will be used later together with the parameter estimates for the normal returns to calculate abnormal returns.

Models for measuring Normal Returns

There are several methods put forward by MacKinlay (1997) to measure normal returns. We choose two of the most common statistical methods; the market adjusted return model or the constant-mean return model and the market model or Ordinary Least Squares (OLS) market model.

The market adjusted return model assumes that the mean of a specific stock is constant through time while the market model assumes a stable linear relation between the market return and the stock return (MacKinlay, 1997). Brown and Warner (1980, 1985) find that the market adjusted return model is perhaps the simplest model but often yields similar results to more sophisticated models. However, according to MacKinlay (1997), the advantage of the market model over the market adjusted return model is that by removing a portion of the return that is related to the market's return variation captured in the stock's beta, the variance of the abnormal return is reduced.

Again, to increase validity, we choose to apply both models. Generating similar results via both models would imply that returns are valid and reliable.

The market adjusted return model and the market model are as follows:

Market adjusted return model,

$$Re_{i,\tau} = R_{m,\tau}$$

Market model,

$$Re_{i,\tau} = \alpha_i + \beta R_{m,\tau} + \varepsilon_{i,\tau}$$

Where $Re_{i,\tau}$ is the expected return for an individual asset *i* on day τ, expressed as a function of the returns on the market $R_{m,\tau}$ on day τ calculated over the event window.

Abnormal Returns

The abnormal return is the ex post return of the stock over the event window minus the return that would be expected if the acquisition did not take place. Similarly to calculating the

normal returns, we employ both the market adjusted return model and the OLS market model to estimate the abnormal return:

$$AR_{i,\tau} = R_{i,\tau} - R_{m,\tau}$$

$$AR_{i,\tau} = R_{i,\tau} - \hat{\alpha}_i - \hat{\beta}_i R_{m,\tau}$$

Where $AR_{i,\tau}$, $R_{i,\tau}$ and $R_{m,\tau}$ are abnormal returns for share i on day τ, actual return for share i on day τ and return for the market index on day τ respectively. $\hat{\alpha}_i$ and $\hat{\beta}_i$ are OLS parameter estimates from a pre-event estimation period.

Estimation Period

In order to calculate the abnormal returns via the market model, there is a need to estimate the OLS parameters using historical pre-event data. Before this, a choice must be made with regards to the measurement period for estimation and the frequency of measurement as this would affect the beta values.

In his study, Merton (1980) argued that beta estimations improve with the frequency of returns measured. On the other hand, Scholes and Williams (1977) argued that there are problems encountered with frequently measured betas due to non-trading or non-synchronous trading. This could result in biased estimates; downwards for assets with infrequent trading and upward for assets with frequent trading. As a solution, they instead proposed to use less frequent data such as weekly or monthly instead of daily. Another alternative if frequent daily returns are used is to use the Bloomberg adjusted beta[4] where beta is modified by the assumption that a security's true beta will move toward the market average of one, over time (Koller et al., 2005).

However, Brown and Warner (1985) countered the results from Scholes and Wiliams (1977) by arguing that their results do not imply that non-synchronous trading will result in misspecification of an even study using OLS estimates of alpha and beta. Thus using frequently measured betas would not result in errors in an event study since the test statistics converge to their asymptotic distribution rather quickly. Following the logic and motivation behind Brown and Warner (1985), alpha and beta estimation periods are defined using daily returns for 239 days before the event window or in other words [-244, -6]. This pre-event

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[4] The Bloomberg formula for adjusted beta is : (2/3)*Raw Beta +(1/3)*1

estimation period in addition to the maximum of 11 days for the event window period of [-5, 5] would sum up to 250 days equalling an average trading year.

Hypothesis Testing

To conclude if abnormal returns exist, the average of the individual CAR which is defined for the event window $[\tau_1, \tau_2]$ is determined by doing the following. The abnormal returns for every period in the event window $[\tau_1, \tau_2]$ are aggregated to form the CAR deal by deal and then aggregated across all deals. Alternatively, the average abnormal return for every period across all deals in the window is calculated, and then aggregated over the event window $[\tau_1, \tau_2]$. The formulas are as follows:

$$\text{CAR}_i(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} AR_{i,\tau}$$

$$\overline{\text{CAR}}(\tau_1, \tau_2) = \frac{1}{N}\sum_{i=1}^{N} \text{CAR}_i(\tau_1, \tau_2)$$

Alternatively,

$$\overline{AR\tau} = \frac{1}{N}\sum_{i=1}^{N} AR_{i,\tau}$$

$$\overline{\text{CAR}}(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} \overline{AR\tau}$$

$\overline{\text{CAR}}$ for the periods, [-1, 1], [-3, 3], and [-5, 5] around the announcement date are calculated.

Next we formulate the null hypothesis and the alternative hypothesis to test:

H_0: $CAR_\tau = 0$

H_1: $CAR_\tau \neq 0$

The hypothesis is tested with a two-sided t-test since past empirical studies have resulted in conflicting results for CAR as shown in table 3.2. The first step is to estimate the variance of returns in our sample. Following Campbell et al, (2008, pp. 167-168) we use a cross sectional approach to estimate the variance where past returns in estimating variance is not relied upon. This ensures that only the mean effect is tested and not the variance effect.

Variance is estimated as:

$$\widehat{Var}[\overline{CAR}\,(\tau_1, \tau_2)] = \frac{1}{N^2}\sum_{i=1}^{N}\left(CAR_i\,(\tau_1, \tau_2) - \overline{CAR}\,(\tau_1, \tau_2)\right)^2$$

In order for this variance estimator to hold, an assumption of uncorrelated abnormal returns is needed. Brown and Warner (1985) show that this assumption is valid when the event day is not the same for all firms in the sample which holds for our study. Given the variance, we can test our null hypothesis using the confidence interval approach at 95% confidence interval. According to Brooks (2008, pp.59), due to our sample size, the problem that a 5% significance level leads to the rejection of any null hypothesis is averted. We formulate the test statistic as:

$$t = \frac{\overline{CAR}\,(\tau_1, \tau_2)}{\sqrt{\widehat{Var}[\overline{CAR}\,(\tau_1, \tau_2)]}}$$

5.5 Regression Analysis

This study aims to test whether the previously introduced hypotheses has a relationship with the CAR for each security. Cross-sectional regression analysis is adopted as a method to test

whether these different variables influence the CAR of the firm around the announcement date. The following dependent and independent explanatory variables are included:

5.5.1 Dependent variable

CAR was chosen as a dependent variable in the regression analysis. The explanatory regressions were run with the CAR from the market model with event window of [-3, 3] as will be explained later.

5.5.2 Explanatory variables

Method of Payment

The hypothesis stated regarding method of payment was that the combined payment method should outperform all cash or all equity transactions. Hence, the transactions were classified as complete cash, complete equity or combined method of payment. We state the following dummy variable as:

METPMTDUM = Value 1 was assigned if the transaction included a combination of cash and equity and 0 if otherwise

Strategic Purpose

This study excluded industrial diversification and thus the deals were classified as vertical or horizontal. Horizontal deals were assumed to be more value creating and therefore the following dummy variable was created:

HORIZDUM = Value 1 was assigned if the deal was horizontal and 0 if otherwise

The strength of the acquirer's currency

It was assumed that value is created when the acquirer's currency is stronger than in target markets. The strength of the acquirer's currency is also expressed as a dummy variable. Figure 5.4 illustrates the pattern of exchange rates in the period 1997-2010. No obvious correlation between currencies can be observed. The only mutual factor is the depreciation of

the pound against all the four currencies in 2007-2008 due to the financial recession that occurred in and around that time. The pound is regarded as strong and valued higher when the exchange rate GBP/XXX increases where GBP/XXX is how much GBP fetches in terms of other currencies.

CURRDUM = Value of 1 is assigned when the pound is regarded as strong and 0 if weak. Table 5.5 demonstrates the method with an example of GBP/RUB.

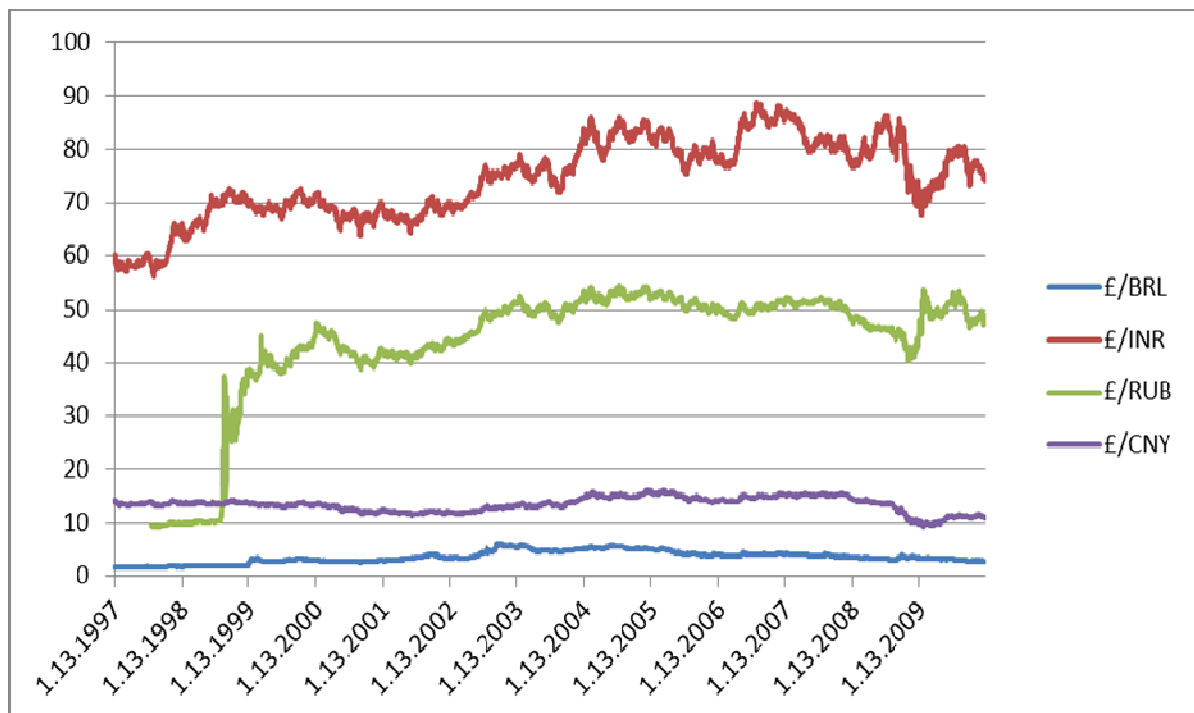**Figure 5.4** Pattern of Exchange Rates (Source: Datastream)

Table 5.5 Strength of GBP relative to RUB - dummy variable

GBP/RUB	
Date	**Dummy**
1999-01-01 - 2005-01-01	1
2005-02-01 - 2008-12-01	0
2009-01-01 - 2010-01-01	1

Pre-bid Performance of Acquirer

Market-to-Book ratios were used as a proxy for pre-bid performance. The companies with high MTB ratios were assumed to receive less abnormal returns than companies with low MTB. The acquirers' MTB ratios were collected from the last year ended prior to the announcement of the bid (in accordance with Conn et al. (2005)).

MTB_i = Bidder's market-to-book ratio in deal i

Size of the Deal

CAR was assumed to have a negative relationship with the size of the deal. In order to test this, a ratio of the size of the deal and acquirer's market value was calculated for each deal. A market value three month prior the announcement was used (Walker, 2000).

$DEALSIZE_i$ = The calculated ratio of the deal value to the market value of the bidder in deal i

Excess Cash

High cash flows are assumed to be negatively related to CAR. In order to test this, we adopted cash flow ratio from Chen et al., (2001) and calculated it for each acquiring firm. The cash flow ratio was defined as operating income before depreciation/amortization minus taxes, interest expense, common dividends, and preferred dividends for the fiscal year prior the announcement, divided by the book value of total assets.

HCF_i = Cash flow ratio of the bidder in deal i

Cultural Difference

High cultural difference is assumed to have a negative relationship with CAR. The cultural difference is defined as the absolute difference in power distance index between the UK and target's country.

CD_i = Absolute difference in PDI between the UK (acquirer's country) and target's country in deal i

Corporate Control

Acquiring majority stake of the target is highly important in the emerging markets. In this study, a firm is regarded as having a majority stake in cases where it acquires > 50% stake of the target. Henceforth we state the dummy variable as:

CONDUM = Value 1 was assigned when the firm acquired > 50% stake of the target and 0 if otherwise

Table 5.6 Expected signs for all the variables

Variable	Expected sign
CAR	+
HCF	-
HORIZDUM	+
METPMTDUM	+
MTB	-
DEALSIZE	-
CURRDUM	+
CD	-
CONDUM	+

Table 5.6 illustrates the expected results for each explanatory variable based on the stated hypotheses in chapter 4.

5.5.3 The Regression Model

We now test the above independent explanatory variables against the dependent variable CAR using the following multiple regression model.

$$CAR_i = \alpha + \beta_1 METPMTDUM + \beta_2 HORIZDUM + \beta_3 CURRDUM + \beta_4 CONDUM + \beta_5 MTB + \beta_6 DEALSIZE + \beta_7 HCF + \beta_8 CD + \varepsilon_i$$

The parameters α and β_i of the model will be estimated using the OLS method.

6.0 Empirical Findings

This chapter presents the empirical findings. We first present some sample distribution and deal characteristics followed by the results for CAR and then results for explanatory variables and lastly explain the results for the empirical multiple regression.

6.1 Sample Distribution and Deal Characteristics

As mentioned earlier, the final sample included 30 deals. Table 6.7 illustrates the descriptive statistics of the deals for the total sample. As an average, the deal value of a cross-border M&A in the BRIC was 538.46 million GBP with the median value being 38 million GBP. Evidently, the mean values were greatly affected by a small number of very large deals, especially in the cases of Brazil and India as seen in table 6.9. The largest deal was valued at approximately 5.47 billion GBP while the smallest acquisition was 4.98 million GBP.

Table 6.7 Deal Value Characteristics

	Mean	*Median*	*Max*	*Min*
Deal value in GBP (Millions)	538,46	38,00	5471,80	4,98

The distribution of the deals over the period of time is demonstrated on Table 6.8. It can be observed that M&A are closely related to economic climate. The aftermath of the Dot-Com crash was probably one of the factors for low M&A activity at the beginning of the decade and the current financial crisis, in most probability, contributed to the small number of cross-border M&A in 2009.

Table 6.8 Deals over the period of time

Year	Deals	% of Total	Mean value in GBP (Millions)
1999	3	10,00 %	212,98
2000	1	3,33 %	250,42
2001	1	3,33 %	247,00
2002	1	3,33 %	2411,48
2003	4	13,33 %	1099,45
2004	2	6,67 %	10,12
2005	5	16,67 %	142,20
2006	2	6,67 %	29,78
2007	5	16,67 %	1137,39
2008	5	16,67 %	376,45
2009	1	3,33 %	97,40
Total	30	100,00 %	538,46

Table 6.9 shows the distribution of the deals by the target countries. The UK based acquirers were most active in Russia with 11 announced transactions. However, the average deal value was the smallest. Brazil and India shared the second place with 7 deals each, with the average values being approximately 1.3 billion GBP (Brazil) and 1 billion (India) respectively. Five acquisitions were announced in China and the average deal value was approximately 96 million GBP. However, the mean values were influenced by a few significantly large deals, e.g. Vodafone's 5.47 billion GBP in India. In general, Brazil had more large deals than the other countries (See Appendix 6).

Table 6.9 Deal (value in GBP Millions) distribution by the target countries

Target country	Number of deals	% of Total	Mean value	Min value	Max Value	Median Value
Brazil	7	23,33 %	1297,05	8,11	4028,44	618,75
Russia	11	36,67 %	57,75	4,98	250,42	21,56
India	7	23,33 %	914,75	6,62	5471,80	119,63
China	5	16,67 %	95,71	14,60	287,14	56,92

6.2 CAR Findings

This study adopted two different methods, market adjusted return model and market model, to calculate abnormal returns. For each company, abnormal returns were calculated over the

maximum of eleven days including the event. Both the market adjusted return model and market model resulted in similar results as shown in Figure 6.10 and Figure 6.11 of abnormal returns. The abnormal returns varied greatly within the event window and interestingly the returns were highest the day before the announcement, t-1 and slightly negative on the announcement day, t. This might indicate that information regarding the deals could have leaked out the day before the announcement demonstrating investors' actual reaction to the deal and then adjusting for it on the actual announcement day. As often mentioned:

"Buy the rumour, sell the news"

-Old Wall Street saying

Furthermore, a statistical paired t-test was executed with SPSS-software to determine if there is a statistically significant difference between the models. The results from the paired t-test can be seen in Table 6.12.

Figure 6.10 Market Adjusted Return Model – Average Abnormal Returns
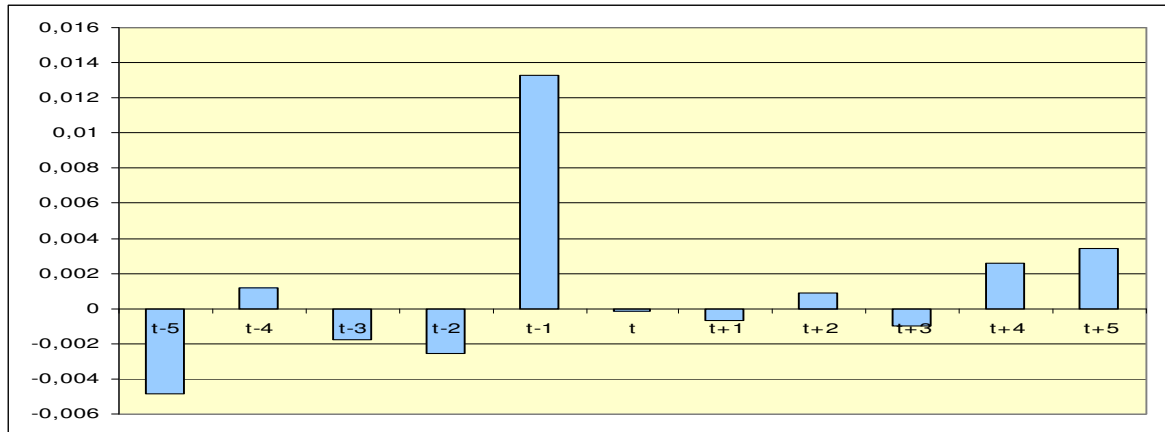
Figure 6.11 Market Model – Average Abnormal Returns
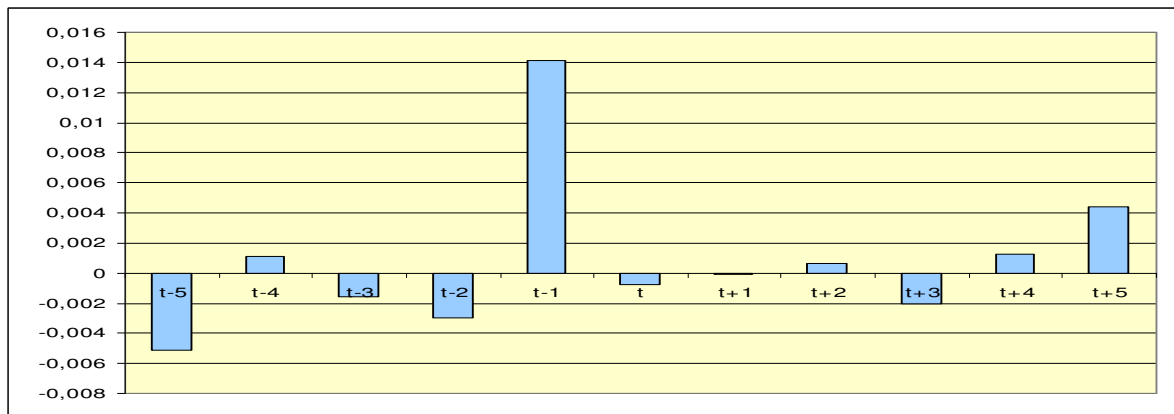
Table 6.12 Paired Sample T-Test for Market Model and Market Adjusted Return Model

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	Df	Sig. (2-tailed)
Pair 1	market model - market adjusted model	-,00011	,00512	,00028	-,00066	,00045	-,389	329	,697

It can be seen from the output, there is no statistical difference between the market model and market adjusted return model as the p-value is larger than 5%, p = 0.697 > 0,05. Consequently, both models yield approximately the same results. The results are in accordance with Brown and Warner (1985) who stated that simple models (market adjusted return model in this case) often yield the same results as more advanced methods. However, to enhance validity this study adopted both of the models and as the results are approximately the same, the estimates are stated to be reliable and stable.

Table 6.13 CAR results and Hypothesis test

		Event Window		
		[-5, 5]	[-3, 3]	[-1, 1]
T-test	Market Adjusted Return Model	(1.02%) 0.793	(0.79%) 0.704	(1.24%) 1.376
	Market Model	(0.9%) 0.634	(0.74%) 0.637	(1.33%) 1.396
Critical Values	Lower	-0.020	-0.016	-0.006
	Upper	0.038	0.031	0.033

CAR values are displayed in parenthesis

Table 6.13 shows the CAR results for both the market adjusted return model and the market model over the three event window periods. We can conclude that we have abnormal positive returns of around 1% for all periods for both methods at a 5% significance level. From the table it can be seen that both models have t-test values greater than the upper critical value limit which infers that the null hypothesis; H_0: $CAR_\tau = 0$ is rejected.

Assuming semi-strong form efficiency to reflect reality and thus assume that share prices react in a timely and unbiased manner to new market information as mentioned earlier and also keeping in mind the likelihood of an information leak the day before the announcement, we choose the event window [-3, 3]. A shorter event window will also result in less noise that is unrelated to the acquisition than a longer event window (Andrade, et, al., 2001). We also choose the market model as the variance of the abnormal return is reduced. Thus in the end we will use the returns from the market model with the event window [-3, 3] for the regression analysis.

6.3 Explanatory variable Findings

The first step is to analyze the determinants or independent explanatory variables. We first look at the dummy variables. Only the data for majority stake is extremely skewed. As seen in table 6.14 (See Appendix A.1 for the Histogram of dummy variables for an alternative view), only two out of the 30 observations in the sample do not have majority stake. This means that it would not make sense to include the majority stake dummy variable; *CONDUM* in the regression. Henceforth, we will not be able to test hypothesis 9. Following, we state the final regression model by adjusting the earlier model for the *CONDUM* variable:

$$\text{CAR}_i = \alpha + \beta_1 METPMTDUM + \beta_2 HORIZDUM + \beta_3 CURRDUM \cancel{+ \beta_4 CONDUM}$$
$$+ \beta_4 MTB + \beta_5 DEALSIZE + \beta_6 HCF + \beta_7 CD + \varepsilon_i$$

Table 6.14: Dummy variables

Year	Deals	METPMTDUM Mixed	Cash	HORIZDUM Horizontal	Vertical	CURRDUM Strong	Weak	CONDUM > 50%	Otherwise
1999	3	2	1	1	2	2	1	3	0
2000	1	1	0	1	0	1	0	1	0
2001	1	0	1	0	1	1	0	1	0
2002	1	0	1	1	0	1	0	1	0
2003	4	1	3	1	3	4	0	3	1
2004	2	2	0	2	0	1	1	2	0
2005	5	0	5	4	1	3	2	5	0
2006	2	0	2	1	1	0	2	2	0
2007	5	0	5	3	2	0	5	5	0
2008	5	0	5	4	1	0	5	5	0
2009	1	0	1	0	1	0	1	0	1
Count	30	6	24	18	12	13	17	28	2

Next we look at the non-dummy explanatory variables. We look at the scatter plots of each non-dummy explanatory variable and search for outliers in the sample.

Figure 6.15 MTB Scatter plot
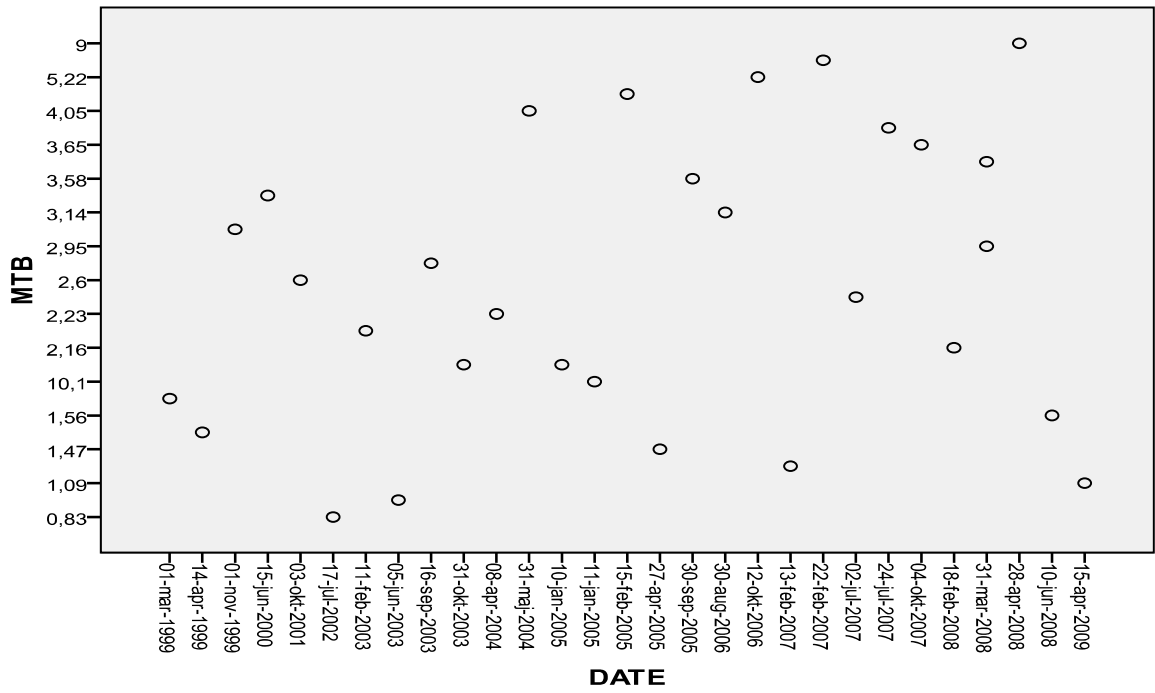
Figure 6.16 DEALSIZE Scatter plot
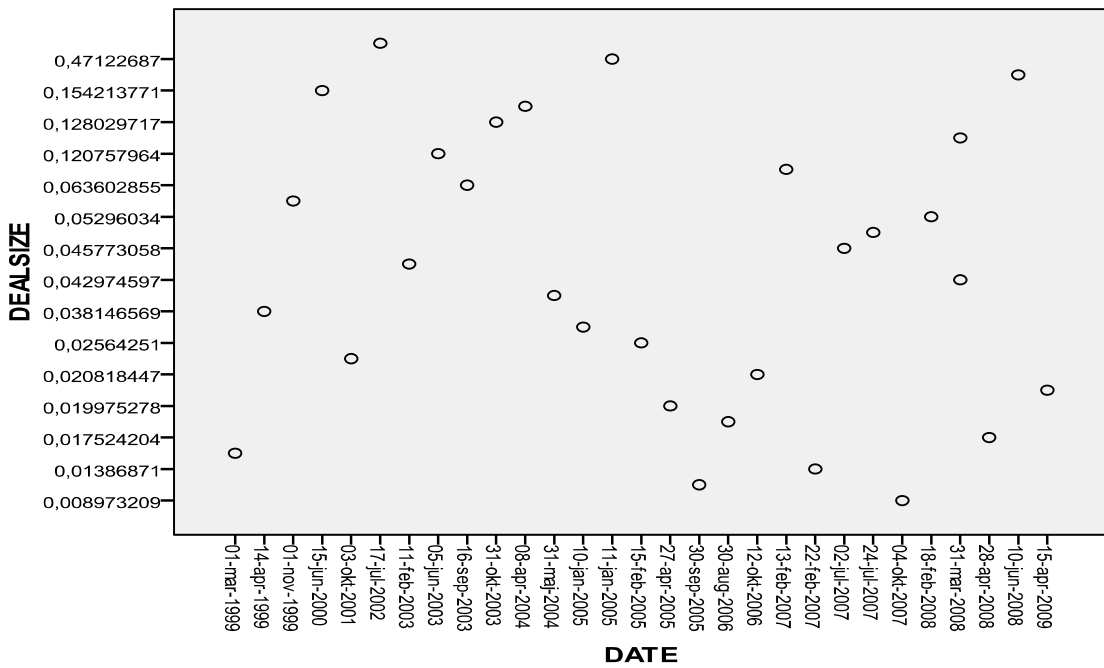
Figure 6.17 HCF Scatter plot
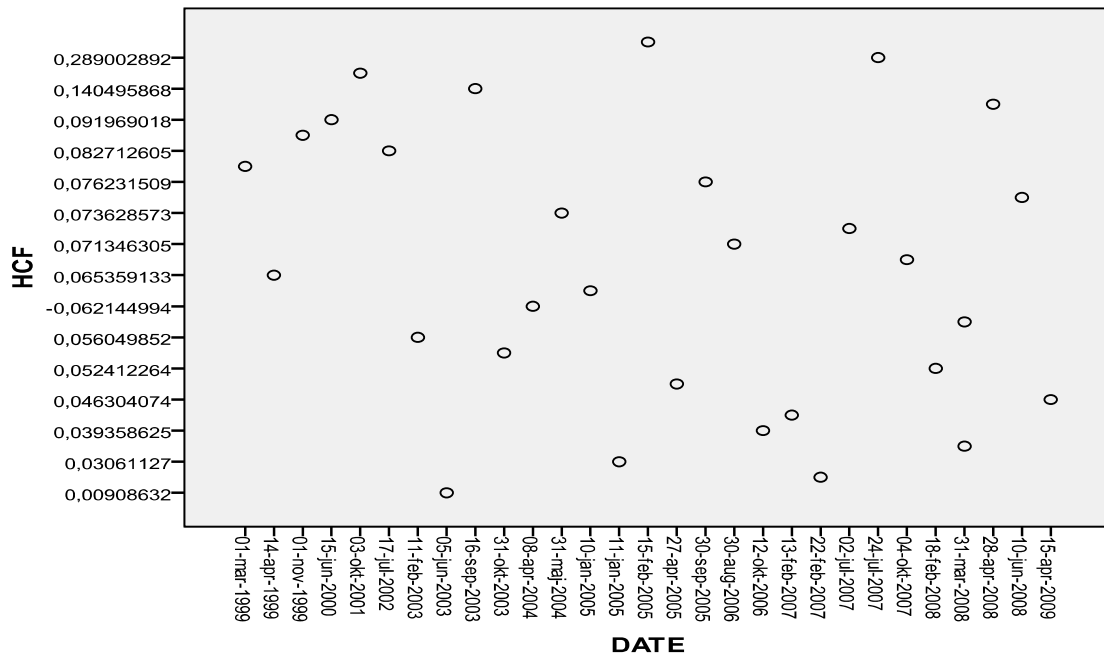
As seen from figures 6.15- 6.17, there were no clear outliers and thus no observations were removed.

6.4 Regression Findings

This section details the results of the OLS assumptions and other tests as well as the analysis of the regression and the hypotheses.

6.4.1 OLS Assumptions and Other Tests

We begin by checking the appropriateness of the OLS regression model by testing the OLS assumptions.

I.   Average value of error term is 0; E (εi) = 0. Since there is a constant intercept term α included, this assumption is never violated (Brooks, 2008).

II.   The variance of errors is constant - homoskedastic; Var (εi) = σ^2 < ∞. To test heteroskedasticity, we employ the White's heteroskedasticity test (White, 1980)

which is a test of the null hypothesis of no heteroskedasticity (homoskedasticity) against heteroskedasticity of unknown, general form. We do not account for cross-product terms due to the large number of variables given our sample size (Brooks, 2008). We find that there is evidence of heteroskedasticity as seen in Appendix 2. We thus correct for this using White's modified standard error estimates in EViews to estimate the new regression with heteroskedasticity-robust standard errors (Brooks, 2008, pp. 138). The results are seen in table 6.18.

III. The errors are normally distributed; $\varepsilon \sim N (0, \sigma^2)$. We check if the residuals are normally distributed by using a Jarque-Berra test (Jarque and Berra, 1987) seen in Appendix 3. Jarque-Bera test is a goodness-of-fit measure of departure from normality, based on the sample kurtosis and skewness. From our results of the Jacques-Bera test, we find no apparent non-normality in residuals.

IV. Explanatory variables are non-stochastic. Provided that the error term and the explanatory variables are independent, this assumption will be fulfilled.

V. When using OLS, an implicit assumption is made; the explanatory variables are not correlated (Brooks, 2008). If they were highly correlated the multi-collinearity problem would occur, leading to inflated R^2 and high standard errors for the coefficients. As a consequence, the variables will not be significant, the coefficients will be very sensitive when adding or removing a variable and significance test will not give appropriate conclusions. We test for multi-collinearity by computing the correlation matrix as seen in Appendix 4. Our results show that all correlations are much lower than 0.8 which is the level at which we can assume that the multi-collinearity becomes an important problem (Brooks, 2008).

VI. Another implicit assumption when using OLS is that the correct model is linear in the parameters. We use the Ramsey RESET test (Ramsey, 1969), which is a general test for misspecification of the functional form to determine if the linear model is suitable. As seen in Appendix 5, the Ramsey RESET test shows no apparent non-linearity.

6.4.2 Regression Analysis

Table 6.18 Regression Results using White's modified standard error estimates

Dependent Variable: CAR				
Method: Least Squares				
Date: 05/20/10 Time: 11:01				
Sample: 1 30				
Included observations: 30				
White heteroskedasticity-consistent standard errors & covariance				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.083165	0.07409	1.12249	0.2738
CD	-0.0013	0.001472	-0.88285	0.3869
CURRDUM	-0.031412	0.037044	-0.84798	0.4056
DEALSIZE	-0.03907	0.071499	-0.54644	0.5903
HCF	0.159675	0.315939	0.5054	0.6183
HORIZDUM	-0.052312	0.03494	-1.49722	0.1485
METPMTDUM	0.018392	0.046644	0.39431	0.6971
MTB	0.004952	0.003753	1.31956	0.2006
R-squared	0.192855	Mean dependent var		0.00735
Adjusted R-squared	-0.063964	S.D. dependent var		0.06429
S.E. of regression	0.066316	Akaike info criterion		-2.3656
Sum squared resid	0.096751	Schwarz criterion		-1.99195
Log likelihood	43.484	Hannan-Quinn criter.		-2.24607
F-statistic	0.750938	Durbin-Watson stat		2.28963
Prob(F-statistic)	0.63275			

Looking at the p-values or Prob seen from table 6.18, we find no statistically significant relationship between CAR and any of the independent explanatory variables at the 90%, 95% and 99% confidence levels. The R^2 and the adjusted R^2 as seen are low. The negative adjusted R^2 is due to additional variables added having no additional predictive capability when R^2 stays the same. These results were probably due to the fact that we did not include all the possible explanatory variables. In other words, realistically our study was not exhaustive. Another reason is that there could be better explanatory variables that we did not include.

Although our sample size was relatively small, it was exhaustive as it captured every single deal in the given time period where the relative deal size was above 1%. Thus, we are confident that even with statistical insignificance, our research methods were appropriate to capture value creation of the deals.

6.4.3 Hypotheses Analysis

Table 6.19 Summary of Findings against Expected results

Variable	Expected results	Findings
CAR	+	+
HCF	-	+
HORIZDUM	+	-
METPMTDUM	+	+
MTB	-	+
DEALSIZE	-	-
CURRDUM	+	-
CD	-	-
~~CONDUM~~	+	

Looking at table 6.19, we can see that not all the findings are in line with what was expected. We will go through each hypothesis and discuss the results in context to the theoretical framework presented before. Only the first hypothesis is found to be statistically significant from the earlier hypothesis testing.

Hypothesis 1: CAR is positive. The results confirm our hypothesis that CAR is positively related to cross-border M&A in BRICK countries when the acquirer is a UK based company. The results were statistically significant at a 5% significance level and show approximately 1 per cent abnormal returns for acquirer's shareholders. Hence, we state that UK-BRIC cross-border M&A have created value on average. This is in line with past research (e.g. Maquiera et al., 1998; Schwert, 2000; Loderer and Martin, 1990) having zero or small positive abnormal returns. This study sheds further light on this topic area as past researches had provided miscellaneous results and cross-border M&A in emerging countries have not been widely researched, especially from the European perspective. The results are consistent with Chari et al., (2004) who found positive abnormal returns for both the acquirer and target when the M&A included a develop country acquirer and an emerging country target. In addition this study provides evidence to support previous literature in relation to cross-border M&A and geographical diversification in general (Errunza and Senbet, 1981, 1984; Morck and Yeung, 1991; Harris and Ravenscraft, 1991; Bodnar et al., 1999; Lowinski et al., 2004) This study, however, did only focus on returns for the acquirer's shareholders due to the lack of financial data of the targets.

The results suggest that cross-border M&A in BRIC are creating synergies on an average and investors are able to receive positive returns despite the cultural differences and information asymmetry between the develop acquirer and emerging BRIC target. In addition, positive CAR may indicate that the high potential or expected potential of the BRIC countries is realized by the investors.

Hypothesis 2: CAR is negatively related to high cash flow. This hypothesis tested Jensen's (1986) theory of free cash flow, where managers are said to have an incentive to minimize the distribution of free cash flow to shareholders due to the conflict of interest between the management and shareholders, and thus contribute to non-value creating investments. This study did not find any negative relationship between the CAR and high cash flows and the results are not in line with the expected coefficient. However, the results were not statistically significant and no generalizable conclusions can be made. In general, the unexpected positive sign from the regression analysis of this hypothesis may indicate that free cash flow theory does not apply to cross-border deals in BRIC countries and that management have pursued M&A fundamentally for the expected value creation of the deal. This explanation is supported by the positive CAR from hypothesis 1.

Hypothesis 3: CAR is positively related to horizontal deals. The previous literature have provided support for the hypothesis that horizontal deals are positively related to CAR as the synergies are captured easier when the companies are in the same industry. Unexpectedly, this study did not find evidence to support this hypothesis. As seen from table 6.18. HORIZDUM has a negative coefficient. Though unexpected, the results are not surprising. Walker (2000) has stated horizontal deals outperforming vertical deals but essentially the literature does not provide a clear distinction on the value creation between the horizontal and vertical M&A. Thus, the results may indicate that in the BRIC countries, acquisition of companies at different stages in the value chain (buyer-seller relationship) may result in more value created than acquiring a competitor. Taking into account the characteristics of the BRIC, e.g. vast natural resources, manufacturing capabilities, the negative sign for this hypothesis can be reasonably explained. Nevertheless, no statistically significant result was achieved.

Hypothesis 4: CAR is positively related to a combined method of payment. The regression results reinforce hypothesis 4 as seen in table 6.18, the coefficient for METPMTDUM is positive. This result supports the theory put forward by Eckbo et al, (1990) as mentioned

earlier. Past literature has shown that both acquirers and targets have different preferences in terms of method of payment. It is assumed that acquirers prefer equity while targets in emerging countries prefer cash. Due to information asymmetries and the inherent difficulty in evaluating cross-border deals, it appears that a combination of some sort of both cash and equity is the best solution for cross-border deals involving emerging markets. This is shown from our regression model though we do not have any statistical significance.

Hypothesis 5: CAR is negatively related to MTB ratios. Our findings with regards to MTB ratio serves in contrast to Hypothesis 5 as seen from table 6.18 that CAR is positively related to MTB ratios. This positive coefficient value supports the theory put forward by Tuch and O'Sullivan (2007) and serves in contrast to past empirical evidence presented by Rau and Vermaelen (1998) Sudarsanam and Mahate (2003). If this is true than this would oppose Roll's (1986) hubris hypothesis as to why high MTB would hinder future performance and as well as result in poor evaluation of deals (Sudarsanam and Mahate 2003). According to Tuch and O'Sullivan (2007), a high market valuation in relation to book value implies higher market expectations on future performance thus translating to positive CAR as the market foresees a successful M&A deal. However since we find no statistical significance for our result, we cannot make any firm conclusions.

Hypothesis 6: CAR is negatively related to the size of the deal. In line with what we expected, the relative size of the deal seems to be negatively related to CAR as shown in table 6.18 from the negative coefficient of DEALSIZE. Our results support the study of Sudarsanam et al. (1996) where smaller deals create more value as compared to larger deals because a smaller target would result in an easier integration process. Beishaar et al. (2001) found in their study that the average deal destroys value which translates to a risk of greater value destruction for a larger deal. Our results are in line with previous research here but due to the fact that there is no significance, we cannot draw any concrete conclusions.

Hypothesis 7: CAR is positively related to strength of acquirer's currency. Our result for the effect on CAR due to strength of acquirer's currency is contradictory. As seen in table 6.18, we have a negative coefficient for CURRDUM. This would infer that a decrease in strength of the target's currency vis-à-vis the acquirer would have a negative effect on CAR. This supports the FDI theory proposed by Madura (2006) where the strength of the target country's currency attracts FDI. A possible reason for this result could be that in emerging countries, a weakening of the currency could have a negative signalling effect for the target

country's economy and thus have a negative impact on CAR. The small negative coefficient could imply that this negative signalling effect could outweigh the advantage that acquirers would have in having a stronger currency as proposed by Froot and Stein (1991) and Kamaly (2007). However, not much can be read into this result as it is statistically insignificant.

Hypothesis 8: CAR is negatively related to a high difference in a culture. It was clear that all the BRIC countries had an obvious difference with respect to culture when comparing to the UK. However, the "distance" between the cultures varies and it was essential to research the significance of cultural difference and its impact on the success of a M&A deal. The results from the regression analysis provided a negative coefficient for the hypothesis and thus are in accordance with some of the literature, which argue cultural disparity between two merging partners as often being one of the reasons for value destruction in cross-border M&A creating adverse abnormal returns (Chatterjee et al., 1992; Datta and Puia, 1995). However, the results in this study were not statistically significant and taking into account the positive CAR, this paper will state that cultural difference may have negative impact on the success of the deal but no significant evidence exits.

Hypothesis 9: CAR is positively related to acquiring majority stake. Since our sample consisted almost entirely of deals with a majority stake and lacked deals involving a minority stake, we could not test hypothesis 9. We can however draw on this fact and as an implication from the results of the first hypothesis that CAR is positive, we could say that acquiring a majority stake in emerging BRIC targets by UK firms on average creates value. As mentioned by Alexander and Zingales (2004) and La Porta et al., (1998) in the case of cross-border deals with emerging markets where enforcing or writing complete contracts could be a challenge, acquiring majority control is crucial. Our results contribute to an extent to the results from Chari et al., (2004) which established significant gains for both developed acquirers and targets from emerging markets in cross-border M&A arising from majority control which serve as testimony for the case of corporate control. However, our results are insignificant.

7.0 Conclusions and Suggestions for Further Research

This last chapter presents concluding remarks and offers possibilities for further research.

7.1 Conclusions

The aim of this thesis is to research corporate geographic diversification to establish if cross-border deals involving UK acquirers on BRIC targets are value-enhancing for acquirers and to identify the variables that influence the result.

From a final sample of 30 deals involving UK based acquirers on BRIC targets between the periods of 1999 to 2009, we find that value has been created on average. Employing two statistical models and three different event windows, we found that deals realized around 1% abnormal returns over the days around the announcement. These results were statistically significant at a 95% confidence interval or at a 5% significance level. Our results contribute to previous research in terms of adding consensus.

When trying to identify the variables that influence value creation, our results are interesting in the sense that they are mixed respective to expectations based on previous research. Half of our results matched previous expectations while the other half were contradictory. It seems that when it comes to predicting which UK-BRIC M&A deals would succeed or fail and which would be value enhancing for acquiring shareholders, it is not too straightforward.

Our sample mostly included deals involving a majority stake and an implication that can be drawn from this is that acquiring a majority stake seems to be associated with value creation in UK-BRIC cross-border acquisitions. This is in line with previous research that states the importance and value in acquiring majority control with specific implications to cross-border deals with emerging markets.

However, our results with respect to determining the explanatory variables of value creation bore no statistical significance which means that we cannot make any firm and concrete conclusions.

7.2 Suggestions for Further Research

Numerous studies and research on value creation in M&A and in particular cross-border M&A have been presented over the years that detailed various determinants in an attempt to explain the source of value creation. There is still much room for more research especially in the area of developing markets as targets of cross-border deals.

In our study, we have excluded numerous variables that could have been interesting to examine. There are other variables that influence the dependent variable. Future research may take into account factors such as bargaining power of the acquirer, growth and profitability of target countries, access to capital and even cost of labour in target countries. Still, other factors that can be looked at include differences between tax systems, interest rates, investor protection, size of the financial market or financial deepness, degree of openness and legislation between acquirer country and target country.

Alternatively, a different time period or different emerging countries can be looked at such as the Middle East or Eastern Europe that may give a better inside and shed further light into whether or not acquiring a target in a developing market is value enhancing for acquiring shareholders.

Lastly, these suggestions are non-exhaustive and the possibilities, scope and range for future research are extensive.

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Appendices

Appendix 1 Histogram of Explanatory Dummy Variables
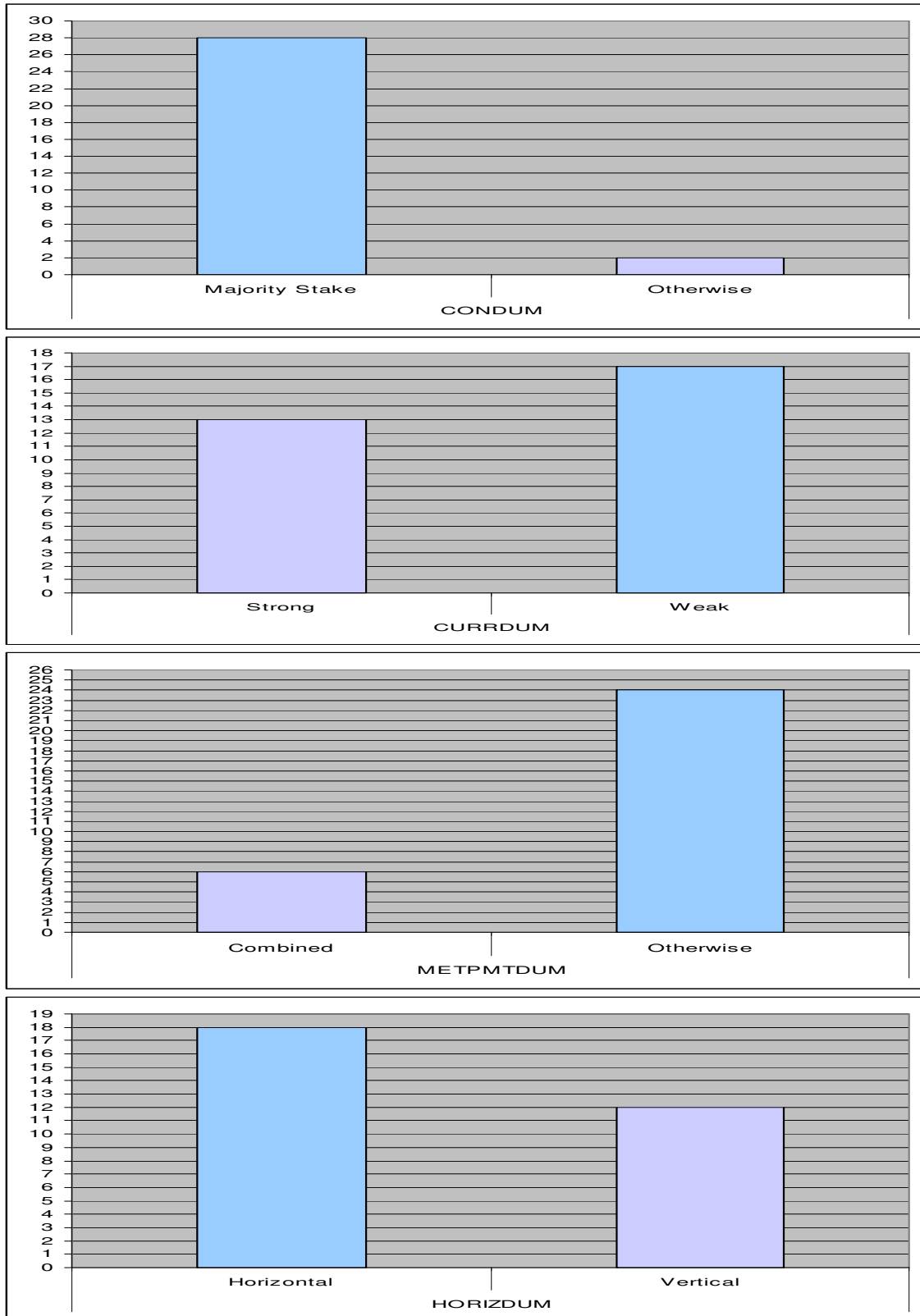
Appendix 2 Heteroskedasticity Test: White

F-statistic	5.949515	Prob. F(7,22)	0.0006
Obs*R-squared	19.63024	Prob. Chi-Square(7)	0.0064
Scaled explained SS	9.243853	Prob. Chi-Square(7)	0.2356

Test Equation:

Dependent Variable: RESID^2

Method: Least Squares

Date: 05/20/10   Time: 10:38

Sample: 1 30

Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.006495	0.002445	2.655848	0.0144
CD^2	-1.08E-06	9.34E-07	-1.159792	0.2586
CURRDUM^2	-0.004440	0.001515	-2.931874	0.0077
DEALSIZE^2	0.005827	0.004601	1.266324	0.2186
HCF^2	0.162778	0.025730	6.326461	0.0000
HORIZDUM^2	-0.004546	0.001518	-2.994467	0.0067
METPMTDUM^2	0.005327	0.001724	3.089478	0.0054
MTB^2	2.70E-05	2.63E-05	1.025245	0.3164

R-squared	0.654341	Mean dependent var	0.003225
Adjusted R-squared	0.544359	S.D. dependent var	0.004341
S.E. of regression	0.002930	Akaike info criterion	-8.604369
Sum squared resid	0.000189	Schwarz criterion	-8.230716
Log likelihood	137.0655	Hannan-Quinn criter.	-8.484834
F-statistic	5.949515	Durbin-Watson stat	2.395832
Prob(F-statistic)	0.000567		

Appendix 3 Histogram-Normality Test

Series: Residuals	
Sample 1 30	
Observations 30	
Mean	-1.05e-17
Median	0.001202
Maximum	0.109482
Minimum	-0.120260
Std. Dev.	0.057760
Skewness	-0.188068
Kurtosis	2.751276
Jarque-Bera	0.254178
Probability	0.880655
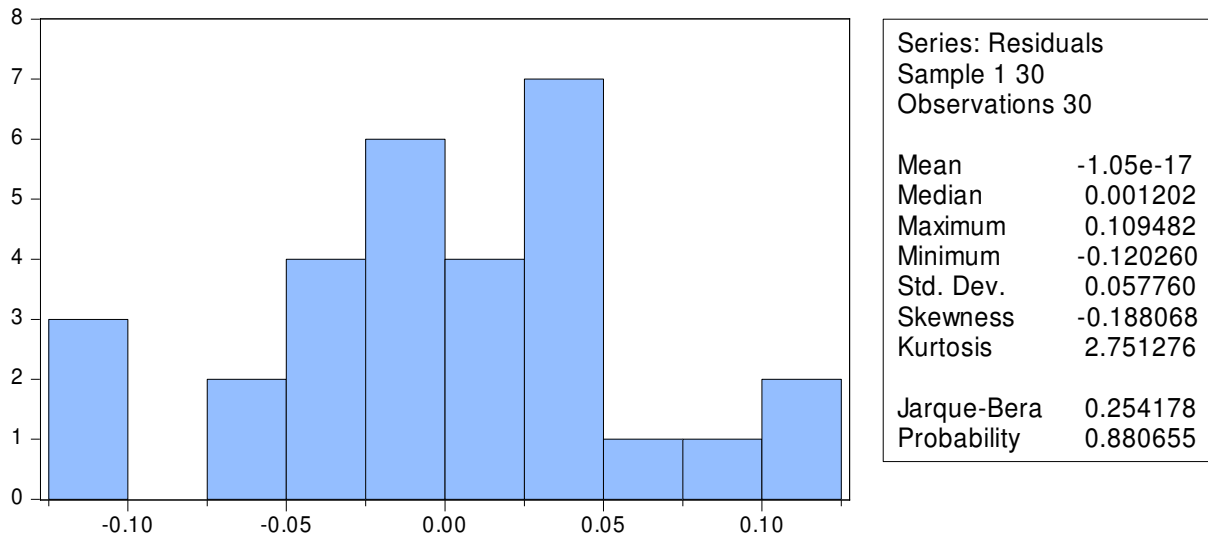
Appendix 4 Correlation Matrix

	CAR	CD	CURRDUM	DEALSIZE	HCF	HORIZDUM	METPMTDUM	MTB
CAR	1.000000	-	-	-	-	-	-	-
CD	0.014691	1.000000	-	-	-	-	-	-
CURRDUM	-0.085531	-0.354976	1.000000	-	-	-	-	-
DEALSIZE	0.262545	-0.312472	0.312010	1.000000	-	-	-	-
HCF	0.091152	0.128227	0.216769	-0.108686	1.000000	-	-	-
HORIZDUM	-0.290092	-0.04643	-0.247156	0.232329	0.062591	1.000000	-	-
METPMTDUM	0.118587	-0.079611	0.235435	-0.077923	-0.19704	0.238145	1.000000	-
MTB	0.132507	0.061124	-0.144638	-0.025466	0.074761	0.165926	-0.327666	1.000000

Appendix 5 Ramsey RESET Test

Ramsey RESET Test
Equation: UNTITLED
Specification: CAR C CD CURRDUM DEALSIZE HCF HORIZDUM METPMTDUM MTB

Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	1.254880	21	0.2233
F-statistic	1.574723	(1, 21)	0.2233
Likelihood ratio	2.169252	1	0.1408

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	0.006749	1	0.006749
Restricted SSR	0.096751	22	0.004398
Unrestricted SSR	0.090002	21	0.004286
Unrestricted SSR	0.090002	21	0.004286

LR test summary:

	Value	df
Restricted LogL	43.48400	22
Unrestricted LogL	44.56862	21

Unrestricted Test Equation:
Dependent Variable: CAR
Method: Least Squares
Date: 05/21/10   Time: 11:02
Sample: 1 30
Included observations: 30
White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.075040	0.074150	1.011995	0.3231
CD	-0.001592	0.001494	-1.065831	0.2986
CURRDUM	-0.018068	0.039432	-0.458199	0.6515
DEALSIZE	-0.138855	0.099458	-1.396120	0.1773
HCF	0.047565	0.337005	0.141141	0.8891
HORIZDUM	-0.026811	0.031641	-0.847325	0.4064
METPMTDUM	-0.002739	0.051604	-0.053084	0.9582
MTB	0.006491	0.003473	1.868956	0.0756
FITTED^2	22.38110	15.44524	1.449061	0.1621

R-squared	0.249158	Mean dependent var	0.007354
Adjusted R-squared	-0.036877	S.D. dependent var	0.064291
S.E. of regression	0.065466	Akaike info criterion	-2.371241
Sum squared resid	0.090002	Schwarz criterion	-1.950882
Log likelihood	44.56862	Hannan-Quinn criter.	-2.236765
F-statistic	0.871076	Durbin-Watson stat	2.384958
Prob(F-statistic)	0.555413		

Appendix 6 Table of all deals in sample

DATE	Acquirer	Target Country	CAR	METPMTDUM	HORIZDUM	CURRDUM	CONDUM	MTB	HCF	CD	DEALSIZE	Transaction value (in millions)
01/03/1999	BPB	C	0.082513	1	1	0	1	1.57	0.07628	45	0.014486492	15.21 GBP
14/04/1999	BG	B	0.142817	1	0	1	1	1.52	0.06536	34	0.038146569	618.75 GBP
01/11/1999	ITE	R	0.024158	0	0	1	1	3.12	0.08486	53	0.056660861	4.98 GBP
15/06/2000	Gallaher	R	0.048316	1	1	1	1	-3.48	0.09197	53	0.154213771	250.42 GBP
03/10/2001	BG	I	-0.028724	0	0	1	1	2.6	0.1846	42	0.024131887	247 GBP
17/07/2002	Corus	B	-0.007495	0	1	1	1	0.83	0.08271	34	0.870438417	2,411.48 GBP
11/02/2003	BP	B	0.057443	1	1	1	0	2.22	0.05605	34	0.044398503	4,028.44 GBP
05/06/2003	Peninsular	I	0.011778	0	0	1	1	0.94	0.00909	42	0.120757964	119.63 GBP
16/09/2003	Sygen	B	-0.001145	0	0	1	1	2.7	0.1405	34	0.063602855	8.11 GBP
31/10/2003	Rexam	B	0.006765	0	0	1	1	2.13	0.05424	34	0.128029717	241.61 GBP
08/04/2004	Kewill	I	-0.092140	1	1	0	1	2.23	-0.0621	42	0.14154065	6.62 GBP
31/05/2004	Peter Hambro	R	-0.021940	1	1	1	1	4.05	0.07363	53	0.040838951	13.63 GBP
10/01/2005	Laird	C	0.001553	0	0	1	1	2.13	0.06329	45	0.026276479	14.6 GBP
11/01/2005	Aegis	I	-0.008341	0	1	1	1	10.1	0.03061	42	0.47122687	533.00 GBP
15/02/2005	Burren Energy	I	0.057908	0	1	1	1	4.56	0.33091	42	0.02564251	13.77 GBP
27/04/2005	Kingfisher	C	-0.007825	0	1	0	1	1.47	0.04746	45	0.019975278	143.50 GBP
30/09/2005	Peter Hambro	R	0.001034	0	1	0	1	3.58	0.07623	53	0.012543847	6.13 GBP
30/08/2006	Inchcape	R	0.009522	0	1	0	1	3.14	0.07135	53	0.019043324	38 GBP
12/10/2006	Peter Hambro	R	0.130122	0	0	0	1	5.22	0.03936	53	0.020818447	21,56 GBP
13/02/2007	Vodafone	I	-0.016558	0	1	0	1	1.11	0.03961	42	0.076354732	5,471.80 GBP
22/02/2007	Aegis	B	-0.018011	0	1	0	1	7.23	0.02739	34	0.01386871	21.00 GBP
02/07/2007	Rexam	R	0.068979	0	0	0	1	2.46	0.07293	53	0.045773058	149.00 GBP
24/07/2007	JKX	R	-0.080178	0	1	0	1	4.03	0.289	53	0.051607605	24.15 GBP
04/10/2007	Inchcape	R	0.058893	0	0	0	1	3.65	0.0702	53	0.008973209	21 GBP
18/02/2008	Inchcape	R	-0.049872	0	0	0	1	2.16	0.05241	53	0.05296034	228.02 GBP
31/03/2008	Anglo American	B	0.027238	0	1	0	1	3.6	0.03115	34	0.042974597	1,749.99 GBP
31/03/2008	Fortune Oil	C	0.035823	0	1	0	1	2.95	0.0615	45	0.123413205	16,43 GBP
28/04/2008	ITE	R	0.026765	0	1	0	1	9	0.09558	53	0.017524204	6.01 GBP
10/06/2008	Renold	I	-0.018487	0	1	0	1	1.56	0.07498	42	0.210584547	11.42 GB
15/04/2009	Pearson	C	-0.042728	0	0	0	0	1.09	0.0463	45	0.020451057	97,4 GBP