Cross Border Mergers And Acquisitions And The Exchange Rate

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Abstract
With globalization at large and trade liberalization in particular, mergers and acquisitions between companies situated in different countries have become widespread. A question that arouses practical concern is who gains more from mergers and acquisitions when judged in terms of domestic and cross border; acquirers of domestic targets or acquirers of foreign targets. While investigating on such gains, a question that requires attention is whether the strength of the domestic currency affects gains from these acquisitions and whether it can be considered as a deciding factor in determining if acquisition by a firm should be domestic or foreign. This study is an attempt to show the gains accruing to UK bidding firms involved in domestic as well as cross border mergers and acquisitions in relation with the strength of the domestic currency. It uses an event study method to calculate the abnormal returns experienced by the acquiring firms. With the help of simple regression, the influence of the Sterling Pound on the returns is examined. Although it fails to establish any statistically significant result, it appears that a strong value of the domestic currency can cause more returns for UK acquirers on an average, when compared against a weak domestic currency. Also, the number of bids is more during periods of a strong currency. It tries to establish a relationship between the returns of bidding firms with the exchange rate when taken along with the method of payment, technique of acquisition, target status and the industry of operation but fails to yield significant results. A possible limitation of this study is the time period, which is not long enough to capture fluctuations in the exchange rate

Keywords: Mergers and Acquisitions, FDI, Currency, Exchange Rate, Cross Border Mergers

Introduction

Objective
The concept of mergers and acquisitions has been an interesting area of study in the literature of finance. The whole process of a financial entity merging, and thereby aligning its operation and management, with another financial entity, indeed provides vast aspects to be studied. With globalization at large and trade liberalization in particular, mergers and acquisitions between companies situated in different countries have become widespread. The obvious questions that narrate the reasons behind such activities relate to the determinants of cross-border mergers and acquisitions. While that question answers the basic foundation of mergers and acquisitions, a question that arouses practical concern is who gains more from mergers and acquisitions when judged in terms of domestic and cross border; acquirers of domestic targets or acquirers of foreign targets. While investigating on such gains, a question that requires attention is whether the strength of the domestic currency affects gains from these acquisitions and whether it can be considered as a deciding factor in determining if acquisition by a firm should be domestic or foreign. This research has tried to measure and draw conclusions based on the gains from both domestic and cross border mergers and acquisitions. In this direction, an attempt is made to derive upon a suitable relationship and an explanation for the gains arising out of the takeover activities included under study with respect to the strength of the domestic currency of the acquiring country, thereby integrating the two bodies together.

FDI AND CROSS BORDER MERGERS AND ACQUISITIONS
The parent action that embodies cross border mergers and acquisitions into its wrap is foreign direct investment. Foreign direct investment is an essential form of investment and a productive flow of capital. As pointed out by Moosa (1998), it can be in the form of greenfield investment, cross border mergers and acquisitions and joint ventures. Since the concern of this research is cross border mergers and acquisitions, it would be pertinent at this point to highlight the fact that majority of FDI is in the form of cross border mergers and acquisitions. Some facts about cross border mergers and acquisitions are well explained by Moosa (1998). Cross border mergers and acquisitions have become rampant since the advent of 1990’s due to increased deregulation adopted by many countries and reduction of trade barriers. Greenfield investment takes the form of investing firms establishing
new production lines, distribution and other amenities in the host country. The other form, namely cross mergers and acquisitions has certain advantages over it. These include the fact that it is cheaper, especially if the bidding or the acquiring firm can take over loss making entities at a cheaper cost. Also, it enables the acquiring firms to gain quick access to other foreign markets where the target firms are domiciled. The importance of cross border mergers and acquisitions is intensified by the fact that such activities are politically sensitive and hence can have a significant influence on the political interests, of the host countries in particular.

Stated in economic terms, cross border acquisitions can be advantageous if the motivation for the acquirer is to harness the advantages of market imperfections, to overcome trade barriers, or to establish a globally well connected system of better economic performance. The concern of this research work is to analyse the benefits from mergers and acquisitions, both domestic and cross border. The comparison of returns of the firms who acquire domestic targets with the returns of firms who acquire targets overseas can indicate a suitable conclusion. However, the boundaries of this study can be expanded to evaluate the factors that influence gains from mergers and acquisitions.

RELATION BETWEEN CROSS BORDER Mergers AND THE DOMESTIC CURRENCY

When a firm ventures out towards announcing a merger or an acquisition deal of a foreign firm, it has to deal with various differences between the countries concerned, like economic conditions, tax regimes, corporate governance structure, legal procedures, along with the obvious cultural and historical differences in business management. The focus, of this research is the exchange rate that has the prospective power of influencing the gains from cross border mergers and acquisitions financially and thus prove to be a means that can provide incentives to potential acquirers towards acquiring targets, domestic and overseas. Based on the works of Aliber (1971) it is observed that, due to capital market relationship, foreign exchange risk and the preference to hold assets denominated in strong currencies, countries with strong currencies tend to be sources of FDI. Exchange rate is an important variable for FDI and correspondingly cross border mergers and acquisitions, because, as suggested by the work of Agarwal (1980), flow of capital in the form of FDI or cross border takeover activities can be perceived to be an alternative of exports. If the domestic currency of a particular country appreciates, then it becomes difficult for that country to export its products as they are at a competitive disadvantage in the world market. Thus, instead of exporting their products, countries with appreciating domestic currency can be sources of FDI. Over the years, this can be considered to be a reason for the rising level of cross border mergers and acquisitions. On the other hand, a country that faces a depreciation of its domestic currency may experience a position of competitive advantage as its domestic assets become more attractive to foreigners and foreign assets become more expensive for domestic consumers. In such a case, the inflow of FDI will increase for that country. This explains the reason to attract acquisition bids from foreign bidders. When a country faces an appreciating domestic currency, it can be motivated to acquire foreign companies. Thus cross border acquisitions are more active during periods of an appreciating domestic currency. The returns experienced from such an activity will definitely be higher as the acquiring firm has to give up less in terms of its domestic currency.

LITERATURE REVIEW

Mergers and acquisitions can be considered to be a very generic topic. It embodies a vast body of literature. The basic literature encompasses the gains that are attained by means of merging and acquiring other financial entities that answers the very basic question as to why do mergers and acquisitions take place. Some studies reveal that acquirers gain through mergers and acquisitions, while other studies reveal the opposite. But looking at the literature, its importance and the fact that it is widespread cannot be undermined.

MERGERS AND ACQUISITIONS: REASONS AND GAINS

Mergers and acquisitions can turn out to be major events that impart information into the market. Hence, this might result in an increase in trading activity for the firms involved in the merger. According to the research work conducted by Kyle (1985), Easley and O’Hara (1987) and Admati and Pfeiderer (1988), mergers might bring about an increasing course of trading activity, thereby providing positive support to this fact.

A study that dates back to as early as 1983 by Jensen and Ruback has indicated that takeover activities yield positive gains; while the shareholders of the target firms

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benefit, shareholders of bidding firms do not lose. That target firms are affected positively is a widely proven fact in the literature of finance. This is not confined to a particular country. In fact, this applies to countries that are geographically separated. Research work conducted by Draper and Paudyal (1999) for the UK, Conrad and Niden (1992) for the USA, Goergen and Ronneboog (2004) for the European countries and Cheung and Schum (1993) for Hong Kong have provided evidence of target firms facing positive gains through mergers and acquisitions. Empirical study by Draper and Paudyal (2008) has confirmed that undervalued firms can announce takeover bids to gain attention of investors as it reveals new information into the market. This finding, according to them, rests on the assumption of information asymmetry which means that managers have more information about the company which is not available to outside investors. Thus managers of undervalued firms can take up the announcement of takeover activity as a means to circulate new information and thus reassure the market about its position and positive growth opportunities and hence increase their share prices through revaluation. Such a finding had also been brought up previously by the research conducted by Officer et al (2006) who studied the role of information asymmetry resulting in increase in acquirer’s gains. Their argument lies in the fact that the assessment of information contained in certain variables is difficult to measure which leads to higher gains to bidders.

Previous empirical work has divided the analysis of gains from mergers and acquisitions depending upon the mode of acquisition. It has been shown by empirical and theoretical analysis that the method of payment that bidders offer in mergers and acquisitions mirrors what managers of the bidding company think about the value of their own company. The consideration offered by the bidding firm maybe in the form of cash deal, share deal or earn outs or a combination of each. A study by Loughran and Vihj (1997) point out that acquirer stock returns are greater when a tender offer is made and when cash is used as the mode of payment. On the other hand, they point out that acquirer stock returns are smaller when merger offer is made and when stock is used as a mode of payment. The difference, as they found, was quite significant, ranging from -25% for stock mergers and +61.7% for cash deals. According to Draper and Paudyal (1999), bidding companies face a decline in their share prices when share exchanges are offered as a means of payment. On the other hand, an offer of cash payment yields positive returns to the shareholders of the bidding firm. Their research also brings out the fact that trading activity around the event period for both the target and bidding companies increase depending upon the method of payment.

Another question that decides the gains accruing to bidding firms is whether the target companies are listed in any stock exchange or are unlisted. Various studies that have studied the gains accruing to firms involved in mergers and acquisitions have mostly concentrated on targets that are listed. According to Draper and Paudyal (2006), acquirers of unlisted targets gain more than acquirers of listed targets. According to them, acquirers of listed targets do not face any sizeable change in share price during the period around the announcement of takeover bids. On the other hand, acquirers who target private or unlisted firms experience a substantial gain in the period surrounding the announcement of the takeover bids. They also prove the fact that deals settled by means of shares lead to higher gains from acquisitions if the target company is unlisted but such share deals lead to a loss if the target companies are listed.

WHAT MOTIVATES CROSS BORDER MERGERS AND ACQUISITIONS?

The literature available on mergers and acquisitions that spread out beyond national boundaries to qualify as cross border mergers and acquisitions is vast. The basic study about cross border mergers and acquisitions, which attracts obvious attention, is what motivates firms to merge or acquire companies that are located outside their own geographical boundary. The general literature on mergers and acquisition available, still hold for it when extended to cover cross border activities. However, a number of additional factors that are associated once it gains a cross border flag add to the body of empirical work.

Empirical work by Kang and Johansson (2000) examined the patterns or the trends and the drivers or the factors that propel cross border mergers and acquisitions. According to them, cross border mergers and acquisitions are impelled by a host of factors. These include excess capacity and increased competition in traditional industries, as well as new market opportunities in technologically advanced sectors. However, the main drivers as presented by them, is the need to acquire complemen-
tary intangible assets like technology, human resources, brand names etc. Furthermore, they state that the dividends that arise out of cross border mergers and acquisitions are revealed in terms of company performance and profits of the participating firms. A study published by Olivier, Jean-Louis, and Habib (2004) shed light on the location pattern or the choices that determine the location of cross border mergers and acquisitions between firms in OECD member countries. By using appropriate econometric models, they reveal that the supply of target firms that is captured by market capitalization and privatization activity restricts the location of mergers and acquisitions. However, they divulge that other determinants like size of the markets, cost of labour, accessibility to markets and financial openness play a positive and crucial role in deciding the location of cross border mergers and acquisitions. On the other hand, they also cite that, adverse corporate tax, cultural and geographic distances and differences in legal rules may exert a negative influence in determining the cross border merger and acquisition activities. As cited by Giovanni (2005), a number of financial variables and institutional factors play a significant role as determinants of the flow of cross border mergers and acquisitions. He mentions, in particular, that the size of financial markets as considered by the ratio of stock market capitalization to GDP, as well as the credit provided by financial institutions to the private sector to the GDP in the domestic country, have substantial positive impact in generating incentives for domestic firms to get involved in cross border mergers and acquisitions. Empirical work by Gonzalez, Vasconcellos and Kish (1998) has looked closely into the financial characteristics of firms involved in cross border mergers and acquisitions. Their study imposes on the validity of the theory that is named as the ‘Undervaluation Hypothesis’. They begin with the observation that the number of foreign firms acquiring US firms is larger than the number of firms that US firms have taken over. Their results, which explain a plausible motivation to undergo cross border mergers and acquisitions is that, in order to curtail the costs of penetrating into foreign markets, domestic firms will seek out firms beyond their domestic boundaries to find undervalued firms, and hence acquire them suitably.

ARE CROSS BORDER MergERS AND ACQUISITIONS BENEFICIAL?

Besides focusing on the factors that motivate firms towards cross border mergers and acquisitions, it is important to take into account the literature that examines whether cross border mergers and acquisitions yield positive returns. It would be inappropriate and inadequate to derive a conclusion without looking into the various research works conducted in this regard. Mergers and acquisitions have various motives and they are cited in various literatures available in finance. However, the gains from them, when compared in terms of acquisition of domestic targets relative to acquisition of foreign targets, have shown different results making it a controversial topic. It is important at this point to revive the literature on the gains from cross border mergers and acquisitions. According to a study conducted by Moellerr and Schlingemann (2005) on US firms that have acquired foreign targets as compared with domestic targets have experienced lower announcement stock returns and lower level of operating performance. According to them, stock returns have a negative association with increase in global and industrial diversification. Evidence from the works of Conn and Connel (1990) and Black et al. (2001) indicate similar results indicating a negative return for those who acquire foreign targets. Measures of pre and post acquisition abnormal accounting performance suggest a superior performance by domestic bidders (Eckbo and Thorburn, 2000). In contrast to these findings, a study by Conn, Cosh, Guest and Hughes (2001) on the performance of UK firms involved in cross border M&A, have not found any evidence of negative returns emerging from post-acquisition. Also, they found that domestic UK acquisitions influence share performance negatively. Overall, cross border acquisitions result in lower announcements and long run returns than domestic acquisitions (Conn, Cosh, Guest and Hughes, 2001). Doukas and Travlos (1988) based on their study of US bidding firms involved in international acquisitions show that shareholders of bidding firms experience positive returns when companies expand to new markets and industries.

A study by Bris, Brisley and Cabolis (2008) bring out the fact that cross border mergers allow firms to alter the level of protection that is provided to their investors as target firms often imibe the structure of corporate governance from the acquiring company under legal procedures. Thus they use this as a basis to analyse the effects on firm value that is brought about by changes in corporate governance. They conclude that firms that are better equipped to adopt better practices do so and the market assigns more value to protection. When the bidders and
targets are from different countries, then the differences in the corporate governance structure in the different countries involved play an important role in determining gains from cross border merger activities. According to Martynova and Renneboog (2008), when the bidder is from a country with strong shareholder orientation then a portion of the total value of the takeover may be because of the fact that a stronger focus on the shareholders of the acquirer will generate additional returns because of better management of the target assets. On the contrary, if the bidder has it’s origin in a country that provides less protection to its shareholders compared to the target country, then the anticipated gains by the bidder and the target will be less as a less efficient corporate governance structure will be imposed on the target assets. A specific study conducted by Kiymaz (2004) on the US bidders and targets involved in cross border mergers and acquisitions of financial institutions had shown that various macroeconomic variables that include the economic conditions of foreign and US, the level of economic development of the target country, volatility of exchange rate, the strength of the government of the target country, relative size of the participants (the bidders and targets) and control of targets can essentially explain the wealth gains to bidders and targets. Research work conducted by Cakici, Hessel and Tandon (1996) examined the wealth gains of the shareholders of foreign firms that had acquired US firms. After analyzing the abnormal returns of the foreign bidding firms, they found that Japanese, British, Dutch and Australian acquirers gain significantly by purchasing US firms. Against general anticipation, their study found that, in cross border acquisitions, there is no relation between the abnormal returns of the bidding firms to the relative size ratio of the target to bidder, or to the degree of their overseas exposure, or to the intensity of the target towards R&D. They provide support to the hypothesis that competition among bidding firms to acquire the same target leads to a decrease in the returns accruing to acquirers.

Empirical analysis conducted by Francis, Hasan and Sun (2008) find the existence of a positive effect for US acquirers that are involved in cross border mergers and acquisitions. They specifically draw attention on the fact that, when firms merge with or acquire target firms from segmented financial markets, then the abnormal returns realized by the acquirers are positively higher. On the other hand, they find that firms which acquire targets from integrated financial markets realize a comparatively lesser level of abnormal returns. Also, they bring out the fact following this, which is, acquirers in segmented financial markets experience an improvement in their operating performance. Mork and Yeung (1992) examine the outcome of cross border acquisitions on the US firms by observing their stock prices. They testify that the market value of a firm is positively associated to its multinational operations due to the information based intangible assets of the firm.

**CROSS BORDER MERGERS AND ACQUISITIONS WITH FDI**

To state empirically, majority of foreign direct investment flow is created by means of cross-border mergers and acquisitions (Kang and Johansson, 2000; Letto-Gilles, Meschi and Simonetti, 2001; Chen and Findlay, 2002). Clearly cross-border acquisitions now account for over 80% of all foreign direct investment by industrialized countries (UNCTAD, 2000). While FDI is a broad category, cross-border mergers and acquisition is somewhat narrow when compared to it, yet an extremely dominant form of it. The difference between these two can be stated as, in a cross-border mergers and acquisition, “control of assets and operations is transferred from a local to a foreign company, the former becoming an affiliate of the latter” (UNCTAD, 2000, p. 99). Understanding of cross-over takeover requires a marriage of the theoretical and empirical work on FDI and corporate acquisitions (Harris and Ravenscraft, 1991).

With increasing economic integration, the extent of cross border mergers and acquisitions has increased. Bjorvatn (2004) brings out the fact increase in economic integration should actually reduce the number of cross border mergers and acquisitions due to the ‘business stealing effect’. But, he proves that this concept does not necessarily have to be true. He states that economic integration can trigger cross border mergers and acquisitions by reducing the business stealing effect and, in his words, by reducing the reservation price of target firms. There exists a field of research where cross border mergers and acquisitions have been weighed against foreign direct investment. Young-Han Kim (2009) mentions that there are two ways of promoting regional economic integration, one is via Greenfield investment and the other by means of cross border mergers and acquisitions. According to him, in a market structure which is based on a model of oligopoly, preferential trades agreements in-
crease the intentions of a multinational firm to shift its mode of entry from greenfield investment to cross border mergers and acquisitions. Thus, just the way in which the strength of the domestic currency may influence flow of FDI; it will have a similar impact on cross-border mergers and acquisitions, as acquisition of a foreign company by a domestic company necessarily implies an outflow of capital. Some of the cross-border mergers and acquisition deals are so large that it can have a significant influence on a country’s position as a net acquirer or target (Brakman, Garretsen, Marrewijk, 2006). A basic analysis would be to know why a domestic company wants to acquire a foreign company. It entails the question whether cross-border mergers and acquisition can achieve greater gains as compared to domestic mergers and acquisition. The gains from M&A depend on a host of factors like mode of acquisition, method of payment, time of announcement etc. When foreign acquisition is taken into consideration, then factors like size and strength of the foreign economy, its tax and legal system etc come into play. A study by Harris and Ravenscraft (1991) points that the cross-border effect on wealth gains is not well explained by industry and tax variables, it is positively related to the weakness of the US Dollar indicating a significant role of exchange rate movement on FDI. However, it does not direct clearly towards an indication which domestic acquirers should take from the strength of the domestic currency.

THE EXCHANGE RATE AND MERGERS

The activity of cross border mergers and acquisitions has found its place in the arena of financial literature with respect to various additional factors that are attached to it owing to the encroachment into foreign countries. The exchange rate, noted from the side of both the bidding and the targets firms can impose an influence on the outcome of cross border mergers and acquisitions, thereby providing incentives to potential acquirers either positively or negatively. Most of the literature that bring together the body of cross border mergers and acquisitions with that of the exchange rate as an influencing factor, do so by bringing out the phenomenon of foreign direct investment. This, however, is not without valid justification.

The valuation of the domestic currency of the country where the acquiring country is domiciled might be influencing the gains from cross border mergers and acquisitions. According to Blonigen (1997), movement in the exchange rate may affect the flow of acquisition FDI because acquisition involves firm-specific assets which can produce returns in currencies other than the currency that had been used for purchase. Based on data comprising of Japanese acquisitions in the US, he provides support to the hypothesis that a depreciation in the real value of the dollar makes Japanese acquisitions more favourable in US industries, particularly for those industries that contain firm specific assets.

Goldberg (1993) cites that the pattern of exchange rate may set off firms to expand or contract their existing production operations, enter or exit foreign markets, modify the location of their facilities of production or consolidate their market power by means of mergers and acquisitions. Thus, it can be said that the exchange rate is an important factor in stirring firms towards the decision of exploring the possibility of undergoing cross border mergers and acquisitions. The level of exchange rate could affect decisions about where and how much to produce or sell, as well as internal transfers of intermediate goods (Itagaki, 1981; Cushman, 1985).

Thus, there is a considerable background to the concept that links the strength of the domestic currency with gains from cross-border mergers and acquisitions. Understanding of cross-over takeover requires a marriage of the theoretical and empirical work on FDI and corporate acquisitions (Harris and Ravenscraft, 1991). Under perfect mobility of capital, exchange rate should not affect the cost of capital of domestic and foreign investors (Moeller and Schlingemann, 2005). A research work by Froot and Stein (1991) examines the connection between exchange rates and foreign direct investment. They find that the FDI ratio in USA is significantly negatively correlated with the value of the dollar. According to them, a depreciation of the domestic currency can motivate acquisition of domestic assets by foreign companies. They argue that a strong dollar increases the relative wealth of US investors and therefore it reduces the need for costly external funding when acquiring foreign targets. Thus, a depreciation of the domestic currency results in an increase in prices of domestic goods. Following these discussions, a general conclusion that can be arrived at is that if foreigners can buy domestic goods at cheaper rates with an appreciating currency, then domestic consumers should have the option of borrowing the foreign currency in a free global capital market and make use of that currency. However this is argued against as “the
view that exchange rates are irrelevant to FDI is at odds with more than just casual empiricism” (Froot and Stein, 1991). A number of empirical studies by Caves (1989), Harris and Ravenscraft (1991) and Swenson (1993) have supported the fact that a depreciation of the US Dollar is positively related to a higher flows of FDI into the United States as well as a higher foreign takeover premia. Baker (2004) reveals that temporary “overvaluation” of source country capital promotes FDI while temporary “undervaluation” of host country assets has no significant impact on FDI flows. The extent of overvaluation or undervaluation of a currency may be captured by the deviations of that currency from Purchasing Power Parity (Moosa, 1998).

A study conducted as early as in 1988 by Caves states that the exchange rate affects FDI through two channels. Firstly, changes in the exchange rate lead to changes in the costs to be incurred and the revenues earned by the investors. Secondly, the expected short term exchange rate movements can affect FDI. If the depreciation of a currency is expected to be reversed, then this leads to an increase in FDI inflows to obtain capital gains from an appreciating domestic currency. However, there are empirical studies that failed to establish a connection between the exchange rate and the level of FDI. Bajo-Rubio and Sosvilla-Rivero (1994), based on their analysis of FDI in Spain could not successfully link the exchange rate and the exchange rate as dependent of each other. Again, Wang and Swain(1995) used the exchange rate as a variable in their analysis, but failed to establish a connection between the exchange rate and FDI. Yang et al. (2000) could not find a significant relationship between the effective exchange rate of the Australian Dollar and inflows of FDI. Thus, the fact whether the exchange rate affects FDI and cross border mergers and acquisitions for that matter may be debatable.

GAP IN THE LITERATURE

Much work has not been done in line of the exchange rate determining gains from cross-border mergers and acquisitions. All the previous work that have been conducted in this regard have either concentrated on the gains from cross-border acquisitions with exchange rate as a part of study by some, or the strength of the home currency as a determinant of inflow of foreign capital. There still lacks a body of well developed empirical work that establishes the connection between the two. This gap in the literature has appeared to be a motivation to undertake a dissertation on the strength of the domestic currency as a determinant of gains from both domestic and cross border mergers and acquisitions. Considering the importance of the UK in the participation in cross border acquisitions, there exists the importance of a thorough research on the strength of the Sterling Pound influencing the gains of UK acquirers, announcing bids for both domestic and cross border targets. The existing body of literature does not have a focused study of the strength of the Sterling Pound affecting both domestic and cross border mergers and acquisitions undertaken by UK acquirers. This is the reason why the UK has been chosen as the country of acquiring firms to fill the gap in the literature regarding the value of the domestic currency and takeovers.

OBJECTIVE AND RESEARCH QUESTION

A profound study on the literature that is available in the field of cross border mergers and acquisitions and foreign direct investment, and the role of the strength of the domestic currency that can be an influencing factor, can provide the motivation to arrive at an interesting research question. Considering the association that exists between gains from cross-border mergers and acquisitions and the role of exchange rate, the objective of this research is to merge the two bodies of study together and contribute in bringing up a connection or a relationship between the two. To state more precisely, the research question is to find out the gains from acquisition of domestic targets and the gains from foreign targets and to establish how the gains from such cross-border acquisition can be influenced by the strength of the domestic currency. The value of cross border acquisitions carried out by UK companies accounts for a significant part of all cross border acquisitions worldwide. By 2000, the UK was the largest acquiring country worldwide accounting for 31% of the total value of all cross border acquisitions (UNCTAD, 2000). Thus UK firms would be appropriate for this study. The study will be of benefit to firms in deciding whether the acquisition of domestic targets will be more profitable or foreign targets, taking into consideration the strength of home currency. If a successful connection can be established, then this study may guide firms to take advantage of a depreciating or an appreciating domestic currency appropriately in acquiring domestic or foreign targets accordingly.
DATA AND METHODOLOGY

SAMPLE

This research has taken into account all the acquisition activities undertaken by UK firms between the periods 2000 to 2008. The target companies are located in the UK (domestic targets) as well as all around the world (foreign targets). The criteria of sample selection have tried to cover as many deals as possible within a feasible limit. The feasibility in this regard relates to the time scale, the resources available and the knowledge gained throughout the research process. The sample selection has been directed to include and utilize all the mergers and acquisition deals announced by acquiring firms domiciled in the UK during the years 2006, 2007 and 2008.

The main source of data to obtain the sample is Thomson One Banker which is an exhaustive database of financial data. A total of 137308 bids on merger deals were announced by UK firms between 01/01/2006 to 31/12/2008. The UK bidders who are listed on the London Stock Exchange are included. All the unlisted bidders are excluded from the sample. The targets are located in the United Kingdom as well as countries all around the globe. No specific criteria have been used to select the targets depending on their geographical location. Also, the status of the target, i.e. whether it is listed on any stocks exchange or not is not used to filter the target firms from the sample. It was seen that a majority of the target firms are not listed on any stock exchange. Many of the deals that were announced were incomplete or pending. This study has filtered out all such deals and includes only those mergers that are complete. Furthermore, the total value of the deal has been limited to cover only those deals that are either worth 15 million Pounds or are above this value. The use of 15 million Pounds as a benchmark in terms of the value of the deal is quite unconventional. But, considering the large size of the data, it was necessary to do so. This limit has not been raised to avoid further omission of deals. The next criterion for sample selection is to include those deals in which the percentage of shares acquired after acquisition is 50% or more. Also, the other criterion that correspondingly follows this is to include the deals where the percentage of shares owned after transaction is 50% or more. The total numbers of deals that remain after following this procedure of sample criteria comes out to be 504 deals. There are a few mergers that were announced on weekends. The number of such deals is 12. These 12 deals are removed from the sample as stock prices and market index prices on weekends are not available. Taking all these into account, the final sample that survives after satisfying all the conditions comprises of 492 mergers and acquisitions deals announced by UK bidders during 2006-2008. The main objective of this research is to obtain a comprehensive and adequate list of deals that will help towards arriving at a reliable result. Thus, procedure of sample selection as described in this section has taken care of this fact and has tried to avoid any anomalies in data collection.

After a successful selection of the sample, the stock prices of the companies included in the final sample have been accessed from Datastream. Also, to calculate the market returns, FTSE 100 has been chosen as the market index and the daily market prices of this index for the time period under consideration is also obtained from Datastream.

An important variable for this study is one that can capture the value, variations and the strength of the domestic currency, which, for this particular research, is the Sterling Pound. The best measure of the exchange rate as a variable for this study is to include the effective exchange rate of the Sterling Pound. According to various accepted definitions, the effective exchange rate is a weighted average of the currency of a country measured against other major currencies. This rate is adjusted for changes in the rates of inflation to capture the strength of the currency in terms of purchasing power of the consumers. For this research, daily values of the effective exchange rate have been used. This also justifies being another reason to exclude the merger deals that were announced on weekends as the corresponding value of the effective exchange rate is not available for weekend days. Bank of England is the primary source of the effective exchange rate of the Sterling Pound. Therefore, the Bank of England Statistics, which includes all the published information on the currency and interest rates of the UK, has been used to gain access to the effective rates during the time period under consideration. Thus this gives a reliable and unfaltering measure of the domestic currency of the bidding firms which is crucial for the analysis of this research.

To expand the analysis further, variables that explain factors which influence gains from mergers are required. The factors considered for this study are the method of payment, technique of acquisition, status of target firms...
and the industry of operation of the acquiring and target firms. For all the firms included under the sample, information on these variables is obtained from Thomson One Banker.

**METHODOLOGY**

The methodology for this research demands an appropriate measure to track the returns from mergers and acquisitions, whether domestic or cross border, to enable a proper analysis of the gains arising out of this activity. The correct and the most common way to do so is to calculate the cumulative abnormal return (CAR) of the firms around the date of announcement. This brings us to event study methodology.

**EVENT STUDY METHOD**

To begin with, event study methodology, as the name suggests, studies the effect of an event on economic parameters. Defining it in a more specific way, it may be stated that empirical investigations that are conducted for the codetermination of security prices and economic events are called event studies (Thompson, 1985). According to Brown and Warner (1980), “event studies focus on the impact of particular types of firm specific events on the prices of the affected firms’ securities.” They also mention that the primary purpose of event study method is to gauge the extent to which the performance of security prices around the time of the event is abnormal. In other words, it tries to assess the extent to which the returns from securities are different from the returns that would have existed otherwise, given the equilibrium expected returns.

It should be noted here that the process of methodology for event study described in this section derives all the information from Brown and Warner (1985). The steps included in this method, which can be attributed to Brown and Warner (1985) involves the following:

i) **Identifying the event of interest.**

In this case, the event of interest is the announcement of mergers and acquisition deals, which includes both domestic and cross border.

ii) **Identifying the sample companies**

This is basically the selection of the firms that are going to be included in this study based on the sample criteria and the necessary selection procedure as mentioned before in the previous chapter under Sample.

iii) **Identifying the event date.**

In this research, the event date is the announcement of the mergers and acquisition deals during the sample period.

The next step is the determination of the ‘Event Period’ which means the time period surrounding the event date during which the share prices of the acquiring companies are affected by the announcement of the mergers and acquisition deals. It is useful to mention here that the event study procedure for this research is without estimation period. Hence, it does not involve the determination of the estimation period during which the share prices of the sample companies are unaffected by the announcement of the mergers and acquisition deals; nor does it involve the determination of the post event period. For this study, the event window is chosen as (-5 to +5 days) thereby covering 11 days.

Following this, is the stage of data collection which includes the collection of share price, which in our case is the daily share price of each sample firm and the corresponding market index, which is FTSE 100 for this study, surrounding the event date. From the share prices thus obtained, the corresponding observed returns are calculated for the acquiring firms in the sample and the market returns are also calculated for FTSE 100. There are two alternative methods for the estimation of returns, the arithmetic return and the Log return. The method of Log return is used which is given as

$$
\text{Ln}(P_t) - \text{Ln}(P_{t-1})
$$

Alternatively, the arithmetic returns can also be used which is given by

$$
(P_t - P_{t-1})/P_{t-1}
$$

The next step is to measure the excess returns. Given simply, the abnormal return is given as

**Abnormal return = Actual Return – Expected Return.**

As mentioned before, this study has adopted an event study method without estimation period. For such a case, the excess return or the abnormal return is calculated in this research using a method know as Market Adjusted Return. To quote from Brown and Warner (1980), the market adjusted return takes into account the movements
in the market which occurred at the same time as the event. It calculates the difference between the return on a sample security and the corresponding return on the market index (Brown and Warner, 1980). This method can be mathematically expressed as

\[ A_{i,t} = R_{i,t} - R_{m,t} \]

where, \( A_{i,t} \) is the excess return for security \( i \) at day \( t \).
\( R_{i,t} \) is the observed arithmetic return for security \( i \) at day \( t \).
\( R_{m,t} \) is the market return (of FTSE 100).

The average abnormal return, which gives the excess returns for the event period, is estimated as

\[ \overline{A}_t = \frac{1}{N} \sum_{i=1}^{N} A_{i,t} \]

\( N \) is the number of sample stocks.

\( \overline{A}_t \) is the average abnormal return on day \( t \).

**Test for statistical significance:**

After successfully calculating the mean, the statistical significance of the average abnormal return is tested using the t statistic.

The null hypothesis to be tested is that the mean day ‘0’ excess return (for example, the simple average of market model excess returns) is equal to zero, and thus concerns the average affect of an event on returns to shareholders. The test statistic is the ratio of the mean excess return over day ‘0’ to its estimated standard deviation. The standard deviation is estimated from the time series of mean excess return (Brown and Warner, 1985).

The statistical significance of \( \overline{A}_t \) is tested using the t test, as explained above is expressed as

\[ T = \frac{\sum_{t=-5}^{+5} \overline{A}_t}{\left( \sum_{t=-5}^{+5} S^2(\overline{A}_t) \right)^{1/2}} \]

A statistically significant positive value of \( \overline{A}_t \), in our case, would mean that UK acquirers earn excess returns from mergers and acquisitions around the day of announcement.

**METHODOLOGY FOR THE EXCHANGE RATE**

The objective of this study is to measure and compare the gains arising out of domestic and cross border takeover activities, when weighed with respect to the strength of the domestic currency. It has been mentioned previously that the effective exchange rate for the Sterling Pound has been chosen for this study to capture the strength of the domestic currency. The movement of the effective exchange rate covering the time period of the sample has been monitored and to relate it with the announcement of deals, the specific value of the effective exchange rate has been marked corresponding to the dates of announcement for each deal. Now, since the value of cumulative abnormal returns has been calculated for an event period of -5 to +5 days around the event date, it would be inappropriate to consider the value of the effective exchange rate corresponding to the event date without any adjustments. To solve this problem, the value of the effective exchange rate for each deal is calculated by taking the logarithm of the 11 day average value of the effective exchange rate.

**UNIVARIATE ANALYSIS**

To conduct a univariate analysis, the main sample for this study has been divided into appropriate groups or sub samples depending on the analysis. The univariate analysis for this research work essentially comprises of calculation of the popular measures of location like the mean to see if the cumulative abnormal returns for each category is significantly different from zero, and also the calculation of the median and the mode to see how representative they are of the entire list of cumulative abnormal returns.
Firstly, in order to compare the gains accrued from domestic mergers and acquisitions with those accrued from cross border, the sample has been divided into two groups. During the sampling process itself, the cross border status or flag for each deal was noted as classified in Thomson One Banker as ‘Y’ for cross border and ‘N’ for domestic deals. Based on that, the sample is first divided under two groups. For each group, the mean values of the cumulative abnormal returns are calculated to see if they are positive or negative and significantly different from zero. Other measures of location, such as the median and the mode have also been calculated to see how representative they are of the entire list of CAR’s. Finally, an t test is conducted to test the statistical significance of the value of abnormal returns surrounding the event date.

The second criterion for dividing the total sample into sub samples is according to the strength of the domestic currency. Looking at the daily values of the effective exchange rate of the Sterling Pound, the sample could be divided into six sub samples. The mean, median and mode of the cumulative abnormal returns of the firms that fall under each sub sample is noted to point the differences that are observed in the gains arising out of mergers and acquisitions once the exchange rate is introduced as an influencing variable. As typically observed for exchange rates, fluctuations are common and for the time period under study the exchange rate displays an upward sloping trend owing to an increase in the strength of the currency, subsequently reaching up to a very high value which is then followed by a downward sloping trend owing to a decline in the strength of the currency. To make a clearer and more useful analysis, the sample has been divided into two groups, depending on the strength of the effective exchange rate, categorized as ‘strong domestic currency’ and ‘weak domestic currency’. The highest values of the exchange rate are brought under the group of ‘strong domestic currency’ and the declining values are clubbed under the ‘weak domestic currency’ group. To see the behaviour of the returns accruing to firms under each group, the mean values, the median and the mode of the cumulative abnormal returns of each group is calculated. The number of deals for each group is also noted which helps in the required analysis.

**OLS REGRESSION**

The method of Ordinary Least Square is used to test the extent of variability in the abnormal returns accruing to firms that have announced takeover bids that are influenced by the variability in the strength of the domestic currency. The equation takes the form of a simple regression model, with the cumulative abnormal returns of the firms under consideration as the dependent variable and the effective exchange rate of the Sterling Pound as the independent variable. This can be presented as follows:

\[
\text{CAR} = \alpha + \beta \ln (\text{Average Effective Exchange Rate of 11 days}) + e
\]

Here, CAR is the cumulative abnormal return, which is the dependent variable and the independent variable is the strength of the domestic currency captured by the effective exchange rate of the Sterling Pound. It is mentioned before that the methodology adopted for the exchange rate leads to the application of logarithm of the average of the effective exchange rate values during the event window for the sample firms. And, e is the error term.

To complete the process of relating the effective exchange rate of the Sterling Pound with the cumulative abnormal returns of the sample firms, the OLS regression method is conducted for:

a) the entire sample  
b) domestic as well as cross border mergers and acquisitions, and  
c) The two groups classified as ‘strong’ and ‘weak’ domestic currency.

To test for the statistical significance of the exchange rate as an influencing variable, a t test is used for the coefficient of the exchange rate obtained from the OLS equation. If the value of the t test is above the critical value at 5 % level of significance, then the exchange rate is considered significant under the 95% confidence interval, otherwise not.

**MULTIVARIATE ANALYSIS**

The gains from mergers and acquisitions, whether domestic or cross border, is influenced by many other factors. These factors, when considered along with the strength of the domestic currency can give a broader picture that can influence the decisions of acquirers. To
do this, an OLS regression with multiple variables is used. The factors considered are, the domestic currency, method of payment, technique of acquisition, status of target firms and the industry of operation of the acquiring and target firms. Besides the currency, the other factors are qualitative and hence a dummy variable is used in an appropriate way. The equation takes the following form:

$$\text{CAR} = \alpha + \beta_1 (\text{CURRENCY}) + \beta_2 (\text{METHOD}) + \beta_3 (\text{TECHNIQUE}) + \beta_4 (\text{STATUS}) + \beta_5 (\text{INDUSTRY}) + \text{error}.$$  

CAR : Cumulative Abnormal Returns experienced by the sample firms.

CURRENCY : The strength of the domestic currency, given by the effective exchange rate of the Sterling Pound.

METHOD : Method of payment used; 1 if payment is made in Cash, 0 if others.

TECHNIQUE: Technique of Acquisition; 1 if tender offer is made, 0 if others.

STATUS : Status of the target firm; 1 if it is listed on a public stock exchange, 0 if it is not.

INDUSTRY : The industry of operation of the acquiring and target firms; 1 if the target firm is in the same industry as the acquirer, 0 if it is in a different industry.

RESULTS AND DISCUSSION

Following the steps discussed under the chapter titled Sample and Methodology; this chapter presents a discussion of the results thus obtained.

The statistical properties of the total sample can be interpreted as follows. The statistical significance of the CAR calculated for the entire sample, as given by the value of the t statistic is found to be 1.572. This value of the t statistic is lower than the critical value at 5% level of significance. Thus the announcement period gain is not statistically significant under the 95% confidence interval, which means that acquirers do not earn significant abnormal returns around the day of announcement. The mean value of the cumulative abnormal return for the total sample is 0.6292. Thus, mergers and acquisition deals, including both domestic and cross border by UK acquirers, on an average lead to positive returns. This is a useful finding. The extent to which the effective exchange rate of the Sterling Pound is able to influence the cumulative abnormal return is found by conducting an ordinary least square regression with the CAR as the dependent variable and the domestic currency as the independent variable. The value of the coefficient beta for the independent variable, in this case is equal to 0.036. This shows that an increase in the effective exchange rate can exert a positive influence on the gains accrued around the announcement period, or the cumulative abnormal return. But, a t statistic renders this value as statistically insignificant under the 5% level of significance.

Before proceeding on to further and more specific analysis, a helpful examination would be to test the effects of mergers and acquisitions in terms of grouping them on the basis of domestic or cross border mergers and acquisitions. During the sampling process, the category of cross border flag (as available from Thomson One banker) was included for each sample and the sample is subdivided accordingly.

DOMESTIC DEALS

There have been 197 domestic mergers and acquisitions during the sample period. The average value of the cumulative abnormal return for the firms under this domestic category is 0.2698 with a standard deviation of 9.1. Thus; the mean value of the CAR is positive which can be used to indicate that acquirers in the UK do not face negative returns by acquiring domestic targets, on an average. But, the value of the t statistic for the CARs under this group is lower than the critical value at 5% level of significance. This means that the returns experienced by UK acquirers of domestic targets around the day of announcement are not statistically significant under the 5% level of significance. To know the effect of the exchange rate on CAR, an OLS regression is conducted between the CAR as dependent variable and the exchange rate as the independent variable. This yields a coefficient beta equal to 0.024. This means that with a unit increase in the effective exchange rate, the value of CAR can increase positively. However, to test for the statistical significance, conducting a t test renders this value as insignificant under the 5% level of significance.
Fig. 1 shows the values of CAR traced against the effective exchange rate graphically. The lower graph captures the cumulative abnormal returns of UK firms acquiring domestic targets while the upper graph captures the EER or the effective exchange rate. Most of the domestic acquisitions took place around a time when the exchange rates of the Sterling Pound have not depicted severe fluctuations. However, whenever the effective exchange rates of the Sterling Pound have decreased to lower values compared to the corresponding high values then a decline in the values of the CARs is seen.

CROSS BORDER DEALS
Following domestic acquisitions, similar parameters are analysed for cross border mergers and acquisition deals. There have been 295 cross border mergers and acquisition deals in the UK for the period under study. Thus, during the sample period under study, the number of firms in UK acquiring foreign targets is more than those acquiring domestic targets. The average value of the cumulative abnormal return for the firms under the cross border category is 0.8692, with a standard deviation of 8.7, which is higher than the average value of the cumulative abnormal return for the firms under domestic acquisitions. However, conducting a t test to test for the statistical significance of the CARs make it insignificant under the 5% level of significance suggesting that acquirers do not earn abnormal returns around the day of announcement. To test the impact of the exchange rate on CAR, the value of the coefficient beta is calculated by means of an OLS regression with CAR as the dependent variable and the exchange rate as the independent variable. The value of the coefficient beta thus revealed is 0.048 which is twice the value of the beta calculated for domestic acquisitions. Thus, the value of the CAR has a tendency to be influenced positively by higher units with a unit change in the effective exchange rate, for cross border mergers and acquisitions. However, on being tested for the statistical significance, the t test renders this value as insignificant under the 5% confidence level.
Fig. 2 is a graphical representation of the cumulative abnormal returns for UK firms acquiring foreign targets against the effective exchange rate of the Sterling Pound. The lower graph represents CAR or cumulative abnormal return while the upper graph represents the EER or the effective exchange rate. Apart from the fact that there are more cross border acquisition deals by UK firms than domestic deals, much of these deals have been announced on dates that depict a fluctuating exchange rate of the Sterling Pound. A careful consideration of the CARs as against the corresponding effective exchange rates reveals that there is a direct relationship between the domestic currency and the CARs, implying that an increase in the strength of the domestic currency is associated with an increasing value of CARs.

5.3 ‘WEAK’ AND ‘STRONG’ CURRENCY DEALS

A more comprehensive analysis can also be drawn after monitoring the statistical details of the various sub samples. As mentioned before in the section titled methodology, the main sample has been subdivided into six sub samples depending on the strength of the Sterling Pound, which in our case is captured by the value of the effective exchange rate.

Fig. 3
Figure 3 is a graphical representation of the effective exchange rate of the Sterling Pound over the sample period.

A univariate analysis is performed to compare the parameters and the characteristics of the various sub samples thus obtained, the results of which are discussed as follows:

**Period of a low effective exchange rate:**
The time period of this sub sample has been from 02 January, 2006 to 01 May, 2006. The average figure for the effective exchange rate is 98.77855.

**Period of an increasing effective exchange rate:**
This sub sample covers the time period from 02 May, 2006 to 29 November, 2006. The average figure of the effective exchange rate is 101.7495.

**Period of the highest effective exchange rate:**
This sub sample covers the time period from 30 November, 2006 to 11 September, 2007. The average value of the effective exchange rate is 104.3249.

**Period of a high effective exchange rate:**
This sub sample covers the time period from 12 September, 2007 to 15 February, 2008. The average value of the effective exchange rate is 101.2733.

**Period of a decreasing effective exchange rate:**
This sub sample encircles the time period from 18 February, 2008 to 27 August, 2008. The average value of the effective exchange rate is 93.8299.

**Period of a low effective exchange rate:**
This sub sample has covered the time period from 28 August, 2008 to 31 December, 2008. The average value of the effective exchange rate is 87.9106.

The results for the sub samples as discussed can be presented in a tabular form. This is done as follows:

<table>
<thead>
<tr>
<th>Sub Sample</th>
<th>Mean Ex Rate</th>
<th>Mean CAR</th>
<th>Median CAR</th>
<th>Mode CAR</th>
<th>No Deals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>98.7786</td>
<td>0.04732</td>
<td>0.47162</td>
<td>3.19491</td>
<td>53</td>
</tr>
<tr>
<td>2</td>
<td>101.7495</td>
<td>1.24422</td>
<td>1.69212</td>
<td>-3.71772</td>
<td>112</td>
</tr>
<tr>
<td>3</td>
<td>104.3249</td>
<td>0.6535</td>
<td>0.321729</td>
<td>-5.091</td>
<td>149</td>
</tr>
<tr>
<td>4</td>
<td>101.2733</td>
<td>0.202641</td>
<td>0.339329</td>
<td>19.07463</td>
<td>78</td>
</tr>
<tr>
<td>5</td>
<td>93.8299</td>
<td>1.2096</td>
<td>1.12926</td>
<td>-6.7732</td>
<td>75</td>
</tr>
<tr>
<td>6</td>
<td>87.9106</td>
<td>1.4479</td>
<td>-2.78479</td>
<td>-18.4174</td>
<td>25</td>
</tr>
</tbody>
</table>

**TABLE 1.**

Table 1 summarises the results for the different sub samples discussed above.

The analysis of the median and the mode values of the CAR for each of the above groups do not imply any helpful conclusion as the time period for each category is too short for any meaningful analysis. The observation that can imply a useful understanding is that the number of bids by UK acquirers is the highest during the period when the effective exchange rate is the highest. It declines as the value of the exchange rate declines, taking the smallest value when the effective exchange rate is lowest.

A more effective analysis would be to club the time periods of changing values of the effective exchange rate under ‘weak domestic currency’ and ‘strong domestic currency’. This helps in the understanding of the exchange rate as an influencing factor for the gains from mergers and acquisitions. It need not follow the time period chronologically. Thus, the weak currency group would include sub samples 1, 5 and 6 while the strong
currency group would include sub samples 2, 3 and 4. The results for each group thus obtained are as follows:

**WEAK DOMESTIC CURRENCY**

The effective exchange rate of a currency takes into account the status of balance of trade of the country concerned. This value also determines the cost of import for other countries purchasing goods from the country under consideration. Thus a lower value of the effective exchange rate of the Sterling Pound characterizes a weak domestic currency for UK firms. The average value of the CAR earned by the firms under this group is positive, which means that a weak currency has not resulted in majority of firms experiencing negative returns. The median value of CAR is higher than the mean value which implies that since more values are concentrated around the mean value, the pattern of CAR values takes a negatively skewed form. The mode takes a negative value which means that of all the observations, a negative value of the CAR occurs most frequently. An OLS regression with the CAR as the dependent variable and the domestic exchange rate as the independent variable yields a positive coefficient which implies that as the strength of the domestic currency increases the value of CAR increases. But, on using a t test that tests the statistical significance of the exchange rate as an influencing variable gives a value lower than the critical value at 5% level of significance, thereby making this relation statistically insignificant. The explanatory power of the exchange rate to influence changes in the CAR as given by the R square is also very low.

**STRONG DOMESTIC CURRENCY**

A high value of the effective exchange rate implies that the country concerned has a favourable balance of trade situation. Also, the benefits from imports are higher as foreign countries that purchase its domestic goods are willing to pay a high value. Thus, a high value of the effective exchange rate of the Sterling Pound translates into a strong domestic currency for UK acquirers. The mean value of CAR for firms under this group gives a positive value which shows that UK acquirers earn positive returns on an average when acquiring other firms under a period of a strong domestic currency. The median value of CAR is positive and is higher than the mean value implying a negatively sloped curve for the CAR values as more observations (CARs) are concentrated around the mean than the median. The mode of all the CARs is a positive number which means that a high positive value of CAR is most common for this group. The coefficient beta for the exchange rate as an independent variable, after running an OLS regression with CAR as the dependent variable gives a negative value which implies that there is an inverse relationship between the strength of the domestic currency and the CAR. However, conducting a t test to test for the statistical significance of the exchange rate as an influencing variable gives a value lower than the critical value at 5% level of significance, thereby making this variable statistically insignificant. Also a zero value of R squared implies that this relation between the CAR and the exchange rate has no explanatory power.

<table>
<thead>
<tr>
<th></th>
<th>WEAK CURRENCY</th>
<th>STRONG CURRENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAN</td>
<td>0.372759</td>
<td>0.744927</td>
</tr>
<tr>
<td>MEDIAN</td>
<td>0.422191</td>
<td>0.898318</td>
</tr>
<tr>
<td>MODE</td>
<td>-10.1059</td>
<td>19.07463</td>
</tr>
<tr>
<td>NO. OF DEALS</td>
<td>153</td>
<td>339</td>
</tr>
<tr>
<td>BETA</td>
<td>0.085</td>
<td>-0.013</td>
</tr>
<tr>
<td>T-STAT</td>
<td>1.044</td>
<td>-0.247</td>
</tr>
<tr>
<td>R-SQUARED</td>
<td>0.007</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**TABLE 2.**

Table 2 summarises the results for the ‘weak’ and the ‘strong’ domestic currency groups discussed above.
Figure 4 depicts a graphical representation of the value of CAR traced against the corresponding effective exchange rate (EER). For the period during which the effective exchange rate has a high value, a corresponding trend of high and positive values of CAR is observed. Significant drops in the EER reflect a decline in the value of CAR experienced during those periods. This is particularly apparent towards the later part of the time period when, as the EER acquires the lowest value, the decline in the value of the corresponding CAR has been the maximum.

MULTIPLE FACTORS THAT DETERMINE GAINS FROM MERGERS.

The focus of this study is to determine the influence of the strength of the domestic currency on the gains from mergers and acquisitions, whether domestic or cross border. However, there are various other factors that play an important role in determining the gains that arise from such activity. Of all the factors that have the potential of influencing these gains, this study has particularly taken into consideration, the variables like method of payment, technique of acquisition, the status of the target firm (whether listed or unlisted) and the nature of industry of the acquiring and the target companies involved. The degree of correlation between these variables is low, however, a high degree of correlation between the acquisition technique and the target status is observed. A multiple regression with these variables, including the exchange rate as the independent variable and the CAR as the dependent variable is used and the results obtained can be discussed as under:

EXCHANGE RATE

The effective exchange rate of the Sterling Pound when regressed against the CAR along with the other variables capable of affecting the returns from mergers yield a positive coefficient equal to 6.86. However, testing for the statistical significance of this variable to know its potential explanatory power, a t test is used which gives a value lesser than the critical value at 5% level of significance. Thus, the influence of the exchange rate on the CAR is not statistically significant.

METHOD OF PAYMENT

For most of the deals under study, it is observed that payment to target firms by means of cash is most common. Other methods are share deals and earnouts adopted by the firms under study. The results indicate a positive coefficient equal to 0.84335 for the payment variable which implies that bidders gain positive returns when payment is made to the target firms in the form of cash than other methods of payment like share deals and earnouts. However, a t statistic to test the significance of this variable yields a value lower than the critical value at 5% level of significance, which renders this value as statistically insignificant.
TECHNIQUE OF ACQUISITION
The various techniques of acquisition observed for the deals under study comprises of merger deals, tender offers, divestiture and stock swaps. Though the use of tender offers as an acquisition technique is found to be less frequent for the acquisition deals under consideration as compared to other techniques, the coefficient for this technique is found to be a positive number worth 0.6203 which implies that acquirers in the UK included in the sample earn positive returns when tender offers are made relative to other methods. To test for the explanatory power of this variable, a t test is conducted which yields a value lower than the critical value at 5% level of significance. Thus, the value of this coefficient is statistically insignificant.

TARGET STATUS
The sample under study includes the deals with target companies which are both listed and unlisted in a stock exchange. Majority of the targets are firms which are not listed in any public stock exchange. The coefficient for this variable is again a positive value of 0.2877 which imply that acquirers gain more by acquiring listed targets relative to unlisted targets. However, this result is not statistically significant as, on conducting a t test, it yields a value which is less than the critical value at 5% level of significance.

INDUSTRY
This variable tests for the returns accruing to acquiring firms depending on the industry of the target firms. If the industry of the target firm is different from the industry of the acquiring firm, then it is considered to be a diversified merger. Most of the deals under the sample studied are diversified mergers. The explanatory power of this variable, as given by the coefficient gives a positive number equal to 1.3481, the implication of which is that acquirers earn greater returns when it acquires a target company from the same industry relative to acquiring target companies from different industries. However, statistical significance of the ability of this variable to explain the variability in the CAR is tested by means of a t test. This gives a value which is less than the critical value at 5% level of significance, thereby rendering this variable as statistically insignificant.

<table>
<thead>
<tr>
<th>CAR</th>
<th>CO EFF</th>
<th>STD. ERR</th>
<th>T</th>
<th>P&gt;T</th>
<th>95% COF</th>
<th>INTERV</th>
</tr>
</thead>
<tbody>
<tr>
<td>CURRENCY</td>
<td>6.862223</td>
<td>8.214515</td>
<td>0.84</td>
<td>0.404</td>
<td>-9.278125</td>
<td>23.00257</td>
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<td>CASH</td>
<td>0.843533</td>
<td>.8219186</td>
<td>1.03</td>
<td>0.305</td>
<td>-0.7715993</td>
<td>2.458306</td>
</tr>
<tr>
<td>TENDER</td>
<td>0.6203418</td>
<td>2.318784</td>
<td>0.27</td>
<td>0.789</td>
<td>-3.935738</td>
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<td>STATUS</td>
<td>0.2877152</td>
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<td>0.877</td>
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<td>3.946206</td>
</tr>
<tr>
<td>RELATED</td>
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<td>.8199297</td>
<td>1.64</td>
<td>0.101</td>
<td>-0.262897</td>
<td>2.959192</td>
</tr>
<tr>
<td>CONS</td>
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<td>37.85446</td>
<td>-0.85</td>
<td>0.397</td>
<td>-106.4998</td>
<td>42.25742</td>
</tr>
</tbody>
</table>

Table 3

CONCLUSION
This research has tried to establish a relation between the strength of the domestic currency as a determining factor that can influence the gains accruing from domestic as well as cross border mergers and acquisitions based on a sample of UK acquirers listed on the LSE. However, this study could not establish a statistically significant result to state a definite relation between exchange rate and the gains from mergers, nor could it show statistically significant gains around the announcement date of the mergers. But, considering an elaborate analysis, it would be wrong to conclude that the strength of the domestic currency cannot influence such gains. Firstly, cross border mergers are more common during periods of a fluctuating domestic currency, while domestic mergers are an-
nounced during a stable domestic exchange rate period. Secondly, the number of takeover bids announced during periods of a high effective exchange rate is more than that of a low effective exchange rate period. Finally, the mean value of the CAR experienced by firms during period of a strong domestic currency is higher than those observed during period of a weak domestic currency. Also, negative values of CAR occur more frequently during the period of a weak domestic currency while, during the period of a strong domestic currency, higher positive values of CAR occur more frequently. A possible reason for these observations is that high effective exchange rate of the Sterling Pound translates into profitable position for UK acquirers as they have to give up less in terms of the domestic currency. It gives them competitive advantage in the world market thereby promising a better bargaining power for them.

Considering the fact that gains from mergers are determined by a host of factors, this study attempts to extend the relation between the gains from mergers and the exchange rate by including other factors like the method of payment, technique of acquisition, target status and the relative industries of the acquiring and target firms along with the domestic exchange rate. This study could not produce any significant results that could state the nature of relationship between these variables and the gains from mergers.

The time period included under this research is not long enough to capture significant fluctuations in the exchange rate. Thus, an implication for future research would be to include a similar study taking into consideration a longer time period that can encircle widespread variations in the strength of the domestic currency.

REFERENCES


