Mergers and acquisitions | literature review

Having read and analysed the various literature available on the topic of mergers and acquisitions it is clear there are many conclusions and views on the long term performance of both the target and acquirer post takeover.

The first article I have analysed is Andrade, Mitchell and Stafford's " New evidence and perspectives on mergers" which gives a general overview of mergers and how the pattern has changed over the years. The 1960s seen a large number of deals relative to the number of publicly available targets, therefore the proportion of deals to targets was large even if the actual number wasn't as big as in the succeeding years. The 1980s then led to more important levels of takeovers with multi-million pound deals taking place. Around this time almost half of all major US companies received a tender offer. Now at present day and from the 1990s we have seen a combination of the previous 30 years trends, with a large number of large value mergers taking place. [1]

The next part of this journal then looks at the winners and losers in a merger deal both in the long and short term. In both cases the average abnormal stock market return is used to measure value creation or destruction. In the short term the stock prices quickly adjust following a merger announcement and the effect of the merger should be incorporated into the stock price by the time the merger is completed. The choice of event window then determines whether it is a short or long term study, with short term being the three days surrounding the merger (i. e. one day either side and the day itself). A longer window would be several days before merger ending at the completion; the performance would then be looked at in the longer period after this window.

The overall results from merger activity shows that target shareholders are clearly the winners in merger transactions, with research from this paper highlighting the 3-day abnormal return for targets to be 16% with this figure rising to 24% in longer windows. However the evidence for acquiring firms is not so easily analysed, with the average three day abnormal return being highlighted in the paper as being -0. 7% and -3. 8% over the longer window. However the difficulty comes when analysing these results as although the estimates are negative they are not reliably so as these figures will include the costs of making the bid and financing the takeover. Therefore it is unreliable to say that acquirers are losers in mergers, but it can be seen that they are not big winners in the same way as targets. [2]

To summarise this it can be seen that mergers seem to be value creating for shareholders overall, but the target achieves all of the merger gains around the announcement. It has also been argued that acquiring firms in many instances have come close to matching these transactions in the opposite direction; however this is not always the case.

The final section of Andrade, Mitchell and Stafford's paper focuses on long term event studies and the long term abnormal returns which go with it. The paper mentions that some recent long term event studies measure the negative abnormal returns in the few years following a merger and find some interesting results. They state that some investors fail to properly notice the full effects of corporate announcements and as a result this casts doubt on our previous findings in relation to the announcement-period event window. This is therefore out of line with the Efficient Market Hypothesis where the market will respond quickly and efficiently to new information. Other literature mentions that there is the potential in the long term for both over and under reaction to information and this is something we will analyse in more depth later.

Alan Gregory's 2005 journal entitled " The Long Run Abnormal Performance of UK Acquirers and the Free Cash Flow Hypothesis" mentions a potential drawback of long term event studies. He argues that if long term expected returns are only estimates of the true vale then as a result it follows that the long term abnormal returns will be incorrect. However this problem is seen to be less significant in short window event studies as the returns are seen to be accurate and therefore more reliable. The Andrade, Mitchell and Stafford journal gives a general overview of the topic of mergers, both in the past and present situation. Having established a general understanding I then looked at more precise literature which discusses certain aspects including the post merger performance of both acquiring and target firms. The conclusions gained will ultimately form the basis of my empirical investigation.

The majority of texts I have researched base their results on the post takeover performance of the bidder, while some texts also look at the performance of the merged firm after the takeover. The most common conclusion from the various available texts on mergers is that in the short term target shareholders gain and bidders do not lose. However in the long term it is seen that many firms experience abnormal performance in the few years following a merger. One of the most commonly referred to journals based on this conclusion is by Jensen and Ruback and is called " The Market for Corporate Control." It was one of the first pieces of literature to comment on the effects of corporate takeovers on shareholders and is therefore commonly used as a basis in later reviews as well as the Hubris Hypothesis which will be discussed later. The results from their analysis based on US companies are that mergers create positive gains, target shareholders benefit and the bidding firm shareholders do not lose. [3]However conclusions made later suggested there were still many controversial issues to be resolved regarding corporate control, for example all the findings in this research lead to positive results on shareholders however this may be as it is difficult to find actions made by managers which would actually harm shareholders. [4]The paper also comments that the long run post merger performance is a problem area as it yields results contrary to market efficiency, and in most texts this is described as a market anomaly. It is stated in the journal that negative abnormal returns suggest that deviations in the stock price are related to the overestimation of future gains from mergers. Although there has been a lot of research into the market for corporate control, there is still a lot more to be done in this area and Jensen and Rubacks's forms the basis for future analysis.

Firstly in " Shareholder wealth effects of corporate takeovers" by J. R Franks and R. S Harris they come to the same conclusion that targets benefit and bidders do not lose in relation to UK companies after basing their investigation on the results of Jensen and Ruback (1983) which came to this conclusions after using a data set of US companies. A small number of papers found differing results at this time, namely Firth's articles in 1979 and 1980[5] which found that in the UK targets gain and bidders lose and in 1977 Franks, Broyles and Hecht[6] find that both parties gain. Franks and Harris found that a drawback of these results like many other studies was that either the sample size was too small or the sample was taken over too short a period. To combat this they made sure their sample was taken over a 30 year period from 1955-1985 and that it was a comprehensive study of a large number of companies involved in UK takeovers. The conclusion reached was that most mergers are value creating for shareholders, with the target achieving most of the gains and the bidder either breaks even or makes small gains. This was found by analysing the equity market price in the event window around the merger date. Franks and Harris however did find a potential problem relating to post merger performance as it is dependent on the benchmark returns against which bidders are evaluated; however this may lead to analysts finding false results depending on the timing of the merger. For example if a bidder times the merger event to coincide with a time were their own stock is doing well then it may produce false results as the good performance of this stock would cancel out and give an overall good performance no matter what.[7] Franks and Harris measure abnormal returns using three varying methods for the 24 months following the unconditional date. These are namely using a market alpha and beta combination, using a market model and using the CAPM asset pricing model. This can clearly be seen from table 10 (page 245) in the journal and this should be looked at as an area which may require further research. Finally comparisons between the UK examination by Franks and Harris and Jensen and Ruback's US equivalent come to two main conclusions. Firstly target wealth gains in both the UK and US have increased since 1968, as a result of bidder wealth effects and secondly after the form of the original offer is controlled, targets gains are similar for both the UK and US. This may suggest that the wealth effects of takeover are comparable in the two countries. [8]

One of the most widely recognised pieces of writing relating to corporate takeovers is by Richard Roll in 1986 and is entitled “ The Hubris Hypothesis of Corporate Takeovers”. This journal was written in order to gain a different view to previously written articles and ultimately to disprove Jensen and Ruback’s summary in their 1983 investigation on the market for corporate control. In Jensen and Ruback’s conclusion they stated that “ corporate takeovers generate positive gains, and that the target benefits and bidders do not lose.”[9] This result fits in with most other research on corporate takeovers; however Roll manages to give a different side to the argument by firstly looking at takeovers in general. He states that there are no gains from takeovers, however some bidders believe there are and such bidders are said to be “ infected by Hubris.” This ultimately led to managers making poor decisions. Going back to the actual bid itself, the first step of a takeover is for the bidding firm to identify a potential target and value that target. This value is then compared to the current market price and if the value is greater than the price the bid is made and becomes public, otherwise the bid is abandoned. Roll comes to the conclusion that “ Decision makers in acquiring firms pay too much for their targets on average.” [10]The Hubris Hypothesis also predicts that around a takeover the combined value of the target and bidder firms should slightly fall, and individually the bidding firm value should decrease, whilst the target value should increase. It is also stated that the overall gain to mergers, excluding costs is zero. Something which makes little sense as it would obviously seem to discourage takeovers.

It should also be noted that “ the Hubris Hypothesis is consistent with semi-strong market efficiency.”[11]Many academics believe that the Hubris Hypothesis is one of the most important pieces of writing in relation to takeovers. They say that if there really are no gains from takeovers then the Hubris Hypothesis is important in order to explain why the managers would not abandon such bids. The hypothesis finds some problems when interpreting the bidding firm’s returns as a bid can obviously be anticipated and therefore at announcement the return value does not give an entirely true value as it is anticipated.

There are also however a few arguments against the use of the Hubris Hypothesis and its results. Firstly it has been suggested that Roll’s hypothesis implies that managers act against shareholders interests. This is suggested in several recent papers and the conclusion reached is that the evidence is consistent with “ conscious management actions against the best interests of shareholders”[12]. However the Hubris hypothesis on the other hand doesn’t rely on this result and states that it is sufficient evidence that managers act against shareholder interests when they issue bids based upon false valuations of the target firm. Another argument against Hubris is that it is said to imply inefficiency in the market for corporate control. However if all takeovers were to be prompted by Hubris as has been suggested then shareholders could stop the practice by stopping managers to make bids. Therefore since this is not the case then Hubris alone cannot explain the takeover phenomenon. Overall there are many arguments both for and against Richard Roll’s Hubris Hypothesis however most of the arguments against fail to be fully supported and as a result the Hubris

Hypothesis remains as one of the most important pieces of literature on the subject of corporate takeovers.

In 1974 a pioneering study taken by Gershon Mandelker in his journal entitled “ Risk and Return: The case of merging firms” found that there were gains from takeovers and found results were consistent with two hypotheses. Namely, the perfectly competitive acquisitions market (PCAM) and the efficient capital market hypotheses[13]. His study examines the market for takeovers and analyses the impact that mergers have on the returns of the shareholders involved. Previous studies state that acquiring firm shareholders earn abnormal returns following a merger and some of which actually state that most mergers tend to be unsuccessful. This relates to a study by Hogarty[14] who stated that mergers actually have a negative effect on the merged firm value. However based on this assumption it would seem odd that firms would enter into mergers, though Hogarty states that this is because mergers suit risk taking managers and although the majority of these takeovers lead to losses for the acquiring firm, a small portion lead to “ extraordinary profits” which is why they are still so common. There are however certain problems which exist in these previously undertaken studies. The majority of which use small samples which can lead to biased or untrue results, and the second problem is that the studies tend to use primitive models which fail to take into consideration any risk or changes in risk. As a result this provided the motivation of Mandelker’s study as he tried to include these factors and come to a new conclusion.

The principle aim of Mandelker’s study was therefore to investigate the acquisitions market using empirical methods to examine the returns of both the acquired and acquiring firm shareholders. In order to do this the author tested two main assumptions. Firstly he analysed the perfectly competitive acquisitions market hypothesis which based its testing on previous literature which stated that acquiring firm shareholders gain abnormal returns following a takeover. However the problem with this result was that it lacked significant empirical support, in fact in a majority of previous studies it was actually found that the acquiring shareholders experienced negative abnormal returns following a merger. These findings therefore fit in with the hypothesis that " acquiring firms operate in a perfectly competitive market." Even though it is found that the acquirers experience negative abnormal returns following a merger there is no evidence that they overpay and therefore they do not lose from mergers. In relation to the acquired firm shareholders it is found that they achieve most of the gains from takeovers and therefore in relation to the perfectly competitive acquisitions market Mandelker finds that there are zero gains achieved by the bidding firm shareholders and that the target firm shareholders obtain the gains from the takeover before the firm disappears.

The second hypothesis tested was the Efficient Stock Market hypothesis. Mandelker investigates how the stock market reacts to the announcement of takeover information, with many previous hypotheses stating that the stock market fails to properly react to the announcement of merger information. However in his study Mandelker finds results which are consistent with the Efficient Market Hypotheses and therefore stock prices of the involved firm at the time of merger already reflect all available information. Therefore as a result it is impossible to earn abnormal returns once a takeover becomes public as the stock price will have reacted immediately. Overall Mandelker finds that the acquiring firm shareholders earn normal returns following a merger and that any gains from mergers are entirely of the acquired firm shareholders.

Another key piece of literature I have summarised is Dodd and Ruback's " Tender offers and shareholder returns." This journal looks at the stock market reaction to both successful and unsuccessful tender offers. The findings show that bidding shareholders earn significant positive abnormal returns in the twelve months prior to takeover, whereas only successful bidders earn significant positive abnormal returns in the month of the offer. The main section of the paper is based on these results and the paper investigates two alternative hypotheses, namely the positive and zero impact hypotheses. Firstly we look at the positive impact hypothesis, where it is stated that the announcement of a merger will lead to positive information about the two involved firms and as a result will cause the stock prices of these firms to rise. There are many reasons for a positive impact and the main reasons are firstly increased market power. Empirically Dodd and Ruback find that for successful bids the target and/or the bidder benefit from the takeover, however with regards to unsuccessful bids neither the bidder nor target will gain from the process. A problem with unsuccessful bids is that they cost both the bidder and target during the process of the bid and this is why they can experience negative abnormal returns. An alternative hypothesis is that the gains arising from takeovers can be attributed to the increased product efficiency which is namely synergy. Therefore the synergy hypothesis states that the combined value of the merged firm will increase as a result of the merger. This will therefore again yield positive abnormal returns for a successful takeover and either zero or negative abnormal returns for an unsuccessful takeover. As a result of this it can be seen that the monopolistic market power and synergy hypothesis are very similar and carry similar results. Finally the third hypothesis is the internal efficiency hypothesis. It states that the target was underperforming as a result of poor management of assets and also states that this is something the bidder feels can be rectified. Therefore it is believed that a takeover can be used to “ discipline inept management”. As a result an announcement would be seen as positive news by target as it is stated that shareholder wealth will increase with removal of inefficiencies. However the impact on the bidding firm depends on whether the bid is successful or not. Successful bidders will experience positive abnormal returns following the takeover; however unsuccessful bidders will experience zero abnormal returns following the bid.

Secondly, we analyse the zero impact hypothesis which states that corporate takeovers have no impact on the value of firms involved. This therefore implies that there are no net gains as a result of merging with another firm. The empirical implications of this are that in successful tender offers the shareholders of both the bidder and target earn normal returns. However Mandelker, as we have just mentioned, disagrees with this statement and states that acquired firms are seen to have positive returns for the twelve months before and 85% of gains occur in the five months post merger. Earlier studies report that stockholders involved in completed mergers earn abnormal returns before the date of merger. However these studies don’t look at the first public announcement of the acquisition therefore we can't determine whether gains observed before the acquisition date reflect the market reaction to announcement of acquisition or to prior good performance unrelated to the merger. Therefore Dodd and Ruback isolate the market reaction to the announcement of the takeover in order to gain a true conclusion of shareholder performance. It is seen from calculations in the journal that in the month of announcement target shareholders earn large and significant returns of 20. 58% for successful offers and 18. 96% for unsuccessful offers. Whereas successful bidding shareholders also earn positive abnormal returns however these are a lot smaller (2. 83%), and unsuccessful bidders earn normal returns. It should be noted that Dodd and Ruback find that if a firm experiences abnormal returns in the month of the announcement that both the positive and zero impact hypotheses can be rejected.

Therefore in conclusion to the above Dodd and Ruback's paper had a big impact on the information available on mergers as they were one of the first academics to assess the market reaction to unsuccessful takeover attempts. Finding that stockholders of unsuccessful bidding firms earn normal returns following the bid and that unsuccessful targets earn significant abnormal returns in the month following the bid. From all the analysis it can be found that the primary motive for takeovers is the removal of inefficiencies, with the target seen to become more efficient as a result of both a successful and unsuccessful bids. These results are actually similar to those experienced by Mandelker as most of the takeover gains accrue to the target shareholders.

The journal I have looked at next is Healy and Palepu's, " Does corporate performance improve after mergers?" and analyses the corporate performance of the merged firm post takeover. This article looks at the post merger performance for the fifty largest US mergers between 1979 and 1984. The academics motivation in producing the journal as they have was the inability of previous stock price performance studies to determine exactly whether takeovers create economic gains and if they do what is the cause of such gains. The findings show that merged firms show improved cash flow returns post merger and they are seen to be generated by an increase in asset productivity in their relative industries as a result of the combined firms' size. It should also be noted that the improvements in cash flow immediately following the merger are not at the expense of long term performance, as the firms will maintain both capital expenditure and R&D rates relative to their industries post merger. The final conclusion that Healy and Palepu draw is that there is evidence of a strong positive relationship between the post merger increase in cash flows and the abnormal returns at the merger announcement. Overall then Healy, Palepu and Ruback find in their investigation that merged firms overall have shown significant improvements in cash flow returns following merger. It should also be noted that improved performance is strong for firms in highly overlapping business.

Some pieces of literature analyse the long term performances of both the acquiring and bidding shareholders in the years following the merger. One such example is Agrawal, Jaffe and Mandelker's 1992 article entitled " The Post Merger performance of acquiring firms: A Re-examination of an Anomaly." They comment that existing articles on the post-merger performance of acquiring firms give conflicting opinions and therefore their motivation is to come to a definitive conclusion on what actually happens. They state that although not all previous literature has resulted in post-merger underperformance this could be attributed to biased results through firms not properly adjusting for size or shifts in beta. There are many implications in relation to consistent post-merger underperformance with the main implications being the following; firstly poor performance following a merger is not consistent with the Efficient Market Hypothesis and would suggest that the market is failing to fully react to the merger announcement. This then leads to a problem regarding the second implication which finds that in majority or literature regarding post-merger performance finds that performance is based on the key assumption of an efficient market, which as we have just found is not entirely true. The implication is more in line and suggests that poor post-merger performance fits in with other information which suggests poor economic performance following a merger, with Caves et al being cited as a key writer on this subject.

This therefore provides the motivation for Agrawal, Jaffe and Mandelker to undertake a thorough analysis of the post-merger performance of acquiring firms using a near exhaustive sample of mergers between targets in the period of 1955 to 1987. The results of this indicate that acquiring stockholders experience a loss of around 10% over the five years following the merger, and this leads Agrawal, Jaffe and Mandelker to analyse the reasons for this. One possible explanation may be that the market is slow to react to the merger and therefore takes a longer time for the impact of the merger to set in, i. e. the loss in shareholder value. This therefore provides the question as to whether this result is time specific and in order to evaluate this Agrawal, Jaffe and Mandelker analyse the post-merger performance of acquiring firms over the last 3 decades. The results of table 2 in the journal show that the anomaly does not change over time and as a result does not appear to be time specific. Therefore this does not support the view that negative abnormal performance is a result of market inefficiency.

In order to try to explain the post-merger performance the academics drew up two hypotheses to obtain a conclusion. Firstly, the market adjusts fully to the announcement of a takeover and any underperformance is due to other factors. And secondly, the market may be slow to react to any takeover information and therefore any post-takeover underperformance is reflected in the negative NPV, therefore market inefficiency is present. The alternative hypotheses are then tested by regressions of the post-merger abnormal returns and the announcement period abnormal returns. From this it is seen that there is a significant negative relationship over the full sample and as a result it can be seen that the post-merger returns and announcement period returns are both related.

Therefore in conclusion to all of this analysis Agrawal et al find that acquiring shareholders experience negative abnormal returns in the 5 years following a merger. It is also clearly seen that the market has failed to become more efficient over time as the anomaly holds for all of the previous 3 decades apart from the 1970s. Overall it is found that the results are not consistent with the hypothesis that suggests the poor performance is attributed to slow reaction to information. To conclude Agrawal, Jaffe and Mandelker find that “

the efficient market anomaly of negative post-merger performance is not resolved. “

Eugene Fama made key arguments when he introduced the “ Bad Model Problem” in his 1998 journal “ Market Efficiency, long-term returns, and behavioural finance.” In this journal Fama states that we should not abandon market efficiency as he argues that long term return anomalies are basically only chance results, with overreaction of stock prices just as common as under reaction. In the article he states, “ Most important, the long-term return anomalies are fragile. They tend to disappear with reasonable changes in the way they are measured.” Basically Fama says that the anomalies are either chance results or results of a bad model. However following this argument it is difficult to decide how to interpret post-takeover performance. This is a confusing area and one which yields differing results. Many of the previous long term event studies seem to suggest market efficiency, especially under and overreaction to information. This therefore poses the question as to whether market efficiency should be discarded, with Fama’s response being a definitive no. The reasoning behind this is that an efficient market generates events which seem to suggest an over-reaction in prices following an announcement. However, in an efficient market over and under-reaction are both equally likely. Therefore if the aforementioned anomalies are shared randomly amongst the two then it is consistent with market efficiency. Analysis of previous studies suggests this to be the case. It has also been suggested that these anomalies are sensitive to the methodology selected and can vary or even disappear when a different model of expected returns is employed. Overall, with regards over and under-reaction, long-term return literature does not highlight one or the other to be more dominant. Thus a random split is always likely and as such market efficiency is maintained.

With regards the methodology employed, Fama argues against the use of the buy and hold abnormal return (BHAR) as " the systematic errors that arise with imperfect expected return proxies (the bad model problem) are compounded with long horizon returns." He also states that the use of methodology that " ignores cross sectional dependence of event firm abnormal returns that are overlapping in calendar time is likely to produce overstated test-statistics." Fama then goes on to support the use of a monthly calendar time approach to measure abnormal returns in the long term. The reasoning given is that the use of monthly returns makes the study less affected by the bad model problem. Also, forming calendar time portfolios ensures that the cross correlation of event firm abnormal returns are taken as part of the portfolio variance. Despite Fama's preference of the calendar time approach, Lyon, Barber and Tsai (1999) and Loughran and Ritter (1999) prefer the BHAR approach as it " accurately represents investor experience."

Another study which analyses both the bidders and acquirers post takeover performance is " Glamour, value and post-acquisition performance of acquiring firms" by Rau and Vermaelen, which uses a long horizon event study to analyse the shareholder performance in the three years following a merger. They find that bidders in mergers underperform, while bidders in tender offers over perform post merger. The main motivation in undertaking this study is to try gain a definite conclusion on the long run performance of bidders in both mergers and tender offers. This is done by looking mainly at bidders underperformance in the long run following a merger, and also what causes underperformance, if any. The paper compares results from the study by Jensen and Ruback (1983) which analyses six studies examining bidders returns in the year following a takeover. This study finds that following a tender offer bidders earn positive abnormal returns, whereas bidders underperform post merger. From the acquirers' point of view Rau and Vermaelen find that acquirers in tender offers earn small but statistically significant positive abnormal returns, however the long term underperformance of acquiring firms in mergers is not uniform across all firms. These findings go on to help support the hypothesis that the market overexpolates the past performance of the bidder and therefore as a result the market, management and shareholders overestimate a glamour bidder's (bidder with good past performance) ability to do such a good job in managing similar companies. In a similar way the market seems to be pessimistic regarding a value bidders potential to manage other companies. (where a value firm is a firm with poor past performance). However value firms' bidders are not affected by hubris in the same way as glamour firms, and therefore as a result are likely to be thoroughly scrutinised by directors and majority shareholders before a transaction is initiated. The biggest problem is that is appears the market fails to realise that " past performance is not a good indicator of future performance."

To conclude this paper helps to add to a large sample of evidence suggesting that short term event studies fail to fully capture the market reaction to an event. Therefore it is suggested that future studies must try to explain why markets tend to react sluggishly to corporate finance and strategic decisions.

Analysis of post takeover performance has be