Do Shareholders Benefit From a Merger? The Case of Compaq and HP Merger

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***Abstract*—On the 3rd September 2001, Hewlett-Packard Company (NYSE: HWP) and Compaq Computer Corporation (NYSE: CPQ) announced a definitive merger agreement to create an $87 billion global technology leader. The aim of this paper is to analyze if Compaq and HP shareholders have benefited from such a merge. Using a modified two factor model, market capitalization and book to market value were found not to add significant value to the shareholders' post-merger returns. Earnings per share (EPS) and the price earnings (P/E) ratio dropped in the year following the merger between the two entities, before eventually picking up in later years. While higher post-merger EPS suggest shareholders from the target firm tend to have benefited more than shareholders from the acquiring firm, the post-merger P/E tend to be higher for shareholders from the acquiring company.**

***Index Terms*—Book to market value, market capitalization, pre and post merger.**

I. Introduction

Corporate acquisitions are considered as a critical component of corporate strategy, management dealings, and corporate finance. It involves buying, selling, and/or dealing with a combination of different or similar companies. While the concept of mergers and acquisitions is usually dealt within the same manner, there is a distinction to be made. In acquisitions, one company takes over the other company or some part of its operations, while in mergers, there is an equal distribution of rights between the two companies. More importantly, there are some critical aspects which make corporate acquisitions important issues namely raising capital, strategic planning, communication, decision making and crisis management. Corporate expansion through acquisitions increases both the assets and liabilities of the company, with a greater inclination towards increasing the assets base rather than the liability side. This makes it easier for the company to raise money for future investments or future development. In regards to strategic planning, acquiring a business also includes acquiring skills and planning. The acquisition embraces the good skills of both companies, which helps with developing a better planning strategy. Communication wise, the importance of acquisition lays in the strong communication base and communication technologies. Acquiring a company may add to the strength of the communication skills for the parent company, which in turn helps in several other entrepreneurial activities for the company. Further, it provides a framework towards proper decision making in terms of taking up another company, or ending up with mergers. Even after the acquisitions, it is important to have fair decisions processes among the people to ensure the existence of a proper network for the future development and growth of the company. Finally, but not least, most companies experience some sort of crisis at some point in time during the acquisition. To overcome this crisis, the company needs to design proper crisis management networks, which will benefit the shareholders and help to create a niche for the company.

To understand the significance of corporate acquisitions to the shareholders, the relationship between post acquisition returns, the mode of acquisition and form of payment must be traced. The mode of acquisition (merger or tender offer) and the form of payment (stock or cash) are two variables that are usually examined in the context of wealth gains from acquisitions. Acquisitions are called mergers when the managers of the target company are supportive to the idea of joining both companies into one unit, while they are called tender offers when the management of the target company is against the unity of both companies. There are times when organisations have been offered tenders, but after further analysis by the target company managers, the tender offer turns into a merger. In short, the difference in the mode of acquisition is based on the final outcome [1]. [2] analysed the effect two years right after the tender offers were made to targeted organisations and agree with the suggestion that there is a removal of inefficient managers, as a consequence of tender offers aimed at reaching the ultimate goal of creating wealth for the shareholders. Due to the large mergers and acquisitions wave in the 1990s, most transactions involved equity as the mode of payment where stock prices were overvalued prior to the merger transactions [3] and [4]. However, [5] show that the stock is issued by firms only when it is overvalued in the context that managers have access to private information which shareholders are not aware of. The issued stock of the acquiring company often finances the mergers while cash deals finance more primarily the tender offers. Further, [6] found that the acquiring stock has a superior record of historical growth and book-to-market ratios than the target ones.

Corporate acquisitions and mergers have a great potential in uncovering new strengths of organisations which can help in increasing the value for the shareholders. The issue was initially tackled by [1] whether corporate acquisitions are beneficial for the long-term shareholders, and their findings support that mergers with pure stock exchange earn significantly negative excess returns of -25.0 per cent while cash tender offers earn significantly positive excess returns of

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61.7 per cent. To this end, the scope of this paper is to analyse the effect of Hewlett-Packard and Compaq merger and to derive whether such a merger had any significant impact for the shareholders by measuring the impact on the share price, earnings per share, and price to EPS ratios both pre- and post-merger. The rest of the paper provides some historical background to both companies, possible reasons for the merger, and pre- and post-merger financial analysis, before ending with some conclusive remarks.

II. Background of Study

Hewlett-Packard: HP is an American multinational information technology corporation and it provides hardware, software and services to consumers. In 1938, William Hewlett and David Packard started their own business in a garage. After one year, they formalized their business into a partnership called Hewlett-Packard. During the next fifty years or so (1940-1990s), the company concentrated in the making of electronic test equipment such as frequency counters and went public in 1957. Further, it produced the first mini computers in 1966, with further additions like inkjet and laser printer for desktops in the 1980s. With a well-diversified market penetration, the yearly net revenue for the company grew from $5.5 million in 1951 to $3 billion in 1980. By 1997, annual net revenue exceeded $42 billion and HP had become the world's second largest computer supplier [7].

COMPAQ: Compaq Computer is an American Personal Computer Company founded in 1982 and is considered to be one of the largest suppliers of personal computing systems in the world. The company was formed by Rod Canion, Jim Harris and Bill Murto with the COMPAQ company name being derived from "Compatibility and Quality". Compaq produced one of the first computers in 1983 at a price of 2995 dollars with the disadvantage of looking like a suitcase. Nevertheless, there were huge commercial benefits from the computer as it sold more than 53,000 units in the first year with a revenue generation of 111 million dollars. Compaq existed as an independent corporation until 2002, when it was acquired for $25 billion by Hewlett-Packard. Prior to its takeover, the company was headquartered in northwest unincorporated Harris County, Texas, United States. Below is a summarized breakdown of HP's portfolio of products and services, including the main competitors.

Reasons for the Merger and the Merger Deal: A merger usually happens when two companies are combined and the resulting company takes the form of the company who bought the other company. The boards of directors and management teams of both companies, HP and Compaq, had a key role to play in the merger that look place in 2001. They believed that the proposed merger represented the best strategic alternative for delivering increased value to their respective shareholders, with the aim was to modernize the culture of operation and addressing a number of challenges and opportunities their companies were facing. It laid great emphasis on the profitable sides of the business. HP and Compaq shared the conviction of technology advancement and believed that the expansion of their services businesses to be an important source of growth and profitability. The main goals of the merger aside from reducing costs were to bolster stock price and allow HP to grow in order to compete with bigger companies like IBM. This meant that improvement in the internal strategies of the company was not going to be sufficient for the company's success. Eventually, the company had to certainly plan out something different and it was decided that the company would be acquiring Compaq in a stock transaction. The process started with the telephonic conversation between CEO of HP, Fiornia and Chairman and CEO Compaq, Capellas. The idea behind the conversation was to discuss on a licensing agreement but it continued as a discussion on competitive strategy and finally a merger. It took two months for further studies and by September 2001, the board of the two companies approved the merger.

TABLE I: Transaction Summary of HP and Compaq Merger

Mode of Transaction	Purchase
Form of Payment	Stock-for-Stock Merger
Exchange Ratio	0.6325 of an HP Share per Compaq Share
Ownership	Shareholders; Compaq 36% and HP 64%
Value	Approximately $25 billions

Source: [8]

TABLE II: Summarized Structure Plan of the New HP (Pro-forma Combined)

	Pro forma Combined	Compaq	HP
Assets	$56.4 billion	$23.9 billion	$32.4 billion
Total Revenues	$87.4 billion	$40.4 billion	$47.0 billion
Operating Earnings	$3.9 billion	$1.9 billion	$2.1 billion

Source: [8]

The merging deal between HP and Compact which started in 2001 was finalized between the first half of 2002 and the summary of transaction is laid out in Table I. The merged entity was headquartered in Palo Alto. It also held a presence in Houston, which was the key strategic center of engineering excellence and product development. In line with Table II, the new HP was structured around four operating unites like Imaging and Printing Franchise, Access Devices Business, IT Infrastructure business and a service business, which were developed to build on the companies' similar go-to-market and product development structures to provide clear customer and competitive focus.

III. Pre and Post Merger Analysis

A. *Pre-merger Scenario*

Table III provides a summary of the major financial ratios that Compaq attained during the 1996–2000 period. Till 1998, it can be noticed that the stock price was increasing but from 1999 it decreases profoundly to 15.5. The increased competition and low prices among other firms could be the main factor leading to this change. However, the book value has increased, due to an increase in Net Assets. Table IV provides similar statistics for HP. HP shares witnessed the same fate as Compaq. The market value of its shares increased until 2000 when it decreased by a huge amount to 3.672. Its book value is almost three times its market value thereby suggesting that the company is worth more than perceived market price.

TABLE III: COMPAQ PRE MERGER FINANCIAL STATEMENT RATIOS

Year	Return	Stock	Market Capitalisation	MV/ share	Equity	No. of shares	Book Value per share	book To Market Ratio
1996	0.55	14.88	6175360000	4.1952	7290000000	1472000000	4.9524	1.180
1997	0.8985	28.25	6725360340	4.4686	9429000000	1505000000	6.2651	1.402
1998	0.48672	42	7679360000	4.7757	11351000000	1608000000	7.0590	1.478
1999	-0.35571	27.06	8039000000	4.748	14834000000	1693000000	8.7619	1.845
2000	-0.4438	15.05	7600300000	4.465	12080000000	1702000000	7.0975	1.589

TABLE IV: HP PRE MERGER FINANCIAL STATEMENT RATIOS

Year	Return	Stock	Market Capitalisation	Mv/Share	Equity	No. of Shares	Book Value Per Share	Book to Market Ratio
1996	0.199	25.12	5577312000	5.420	13400000000	1472000000	13.022	2.40
1997	0.241	31.19	6225046000	6.067	16200000000	1505000000	15.789	2.60
1998	0.095	34.16	7446744000	7.201	16900000000	1608000000	16.344	2.269
1999	0.665	56.88	8039000000	7.967	18300000000	1693000000	18.136	2.27
2000	-0.445	31.56	7627000000	3.672	14209000000	1702000000	6.841	1.86

TABLE V: HP POST MERGER FINANCIALS

Year	Return	Stock	Market Capitalisation	Mv Per Share	Equity	No. of Shares	Book Value Per Share	Book to Market Ratio
2001	-0.349	20.54	40545960000	20.54	13953000000	1974000000	7.068389	0.344128
2002	-0.154	17.36	43382640000	17.36	28547000000	2499000000	11.42337	0.658028
2003	0.323	22.97	69989590000	22.97	37746000000	3047000000	12.38792	0.539309
2004	-0.087	20.97	63413280000	20.97	37564000000	3024000000	12.42196	0.592368
2005	0.365	28.63	82425770000	28.63	37176000000	2879000000	13.1108	0.457939

B. Post Merger

Following the merger, and the resultant 'new' HP, in 2001, the price of the share decreases but after that it increases to get $ 28.63 in 2005. The book value however is much less when compared to the market value. The book value per share and book value to market price ratios are summarized in Table V. To capture the effect of market capitalization and book to market ratios over the return of the firm, the following regression model is created:

$$Return_t = \psi + \beta \text{MarketCapitalization} + \delta \text{BooktoMarket} + \xi_t \qquad (1)$$

where $Return_t$ represents the return a shareholder would have expected if the latter holds the share for one year period, is the market capitalization value of the firm, and represents the book value to market price ratio of the company. This is in line with [9] two or more factors models, in determining the returns of a company. The market capitalization variable is chosen since it is based on the share price and number of shares a company would have as outstanding. Similarly, the book value to market price ratio would be based on what the shareholder perceives the company to be worth relative to its net asset value per share. A low book value to market ratio would suggest the share to be overvalued, and is expected to impose a negative impact on the return of the share. The firm size variable may influence the firm's awareness of opportunities. Existing literature suggests that a smaller firm's size is linked with exploration, where exploration includes search, experimentation and innovation [10]. The regression is carried out based on three cases namely: Compaq before the merger, HP before the merger and the combined firm after the merger. Table VI provides the regression results, and is broken down into Panel A, B and C. The relatively high values reported in the three panels suggest the market capitalization and book to market variables provides a good measure of how well observed returns are replicated by the model. While Panel A coefficients suggest a negative impact of market capitalization and book to market value on the return for Compaq shareholders before the merger, the same coefficients tend to add positively to the shareholders' return in the post-merger case as showcased in Panel C. However, the two dependent variables had relatively high p-value statistics (at 5% significance level) in both pre and post-merger scenarios, suggesting that changes in book to market and market capitalization variables are not significantly related to changes in the shareholders' return.

IV. COMPARATIVE ANALYSIS OF EPS AND P/E

It is generally accepted that EPS is the amount the company actually earns for each outstanding share. The P/E ratio determines how much a stock costs compared with how much the company earns. While Panel A of Table VI provides the net income, number of outstanding shares, market price, EPS and P/E for Compaq and HP prior to the merger for the period 1996 to 2000, Panel B provides similar data following the merger for the period 2001 to 2005. Dell is used as a competitive benchmark for the analysis in both panels. HPQ

is the ticker used for HP by the New York Stock Exchange following the merger of the two entities. Although not reported here, it can be observed that HP witnessed a fall in its EPS during the 1999 to 2000 period, compared with Compaq which had a boost in its EPS during the 1998 to 2000 period. This is in line with the argument that some conglomerate acquisitions were particularly motivated by the desire to engage in the window-dressing exercise where corporations sometimes engage in acquisitions to increase their EPS. Bidders that acquire targets with relatively low P/E ratios, automatically increase the EPS for the combined firm [11]-[13].

TABLE VI: EFFECT OF MARKET CAPITALIZATION AND BOOK TO MARKET VALUES PRE AND POST MERGER

Panel A	**The case of Compaq (Pre Merger)**	
	Coefficients	*P-value*
Intercept	3.1743	0.4211
Market Capitalization	-7.42E-011	0.9421
Book to Market Ratio	-1.6072	0.6289
R-squared	0.5634	
Panel B	**The case of HP (Pre Merger)**	
	Coefficients	*P-value*
Intercept	-5.1589	0.1976
Market Capitalization	2.51E-010	0.3199
Book to Market Ratio	1.5587	0.1671
R-squared	-0.8329	
Panel C	**The case of HP (Post Merger)**	
	Coefficients	*P-value*
Intercept	-1.0744	0.1401
Market Capitalization	1.61E-011	0.0741
Book to Market Ratio	0.2464	0.7517
R-squared	0.9269	

Following the merger, the EPS of HPQ dropped initially in 2002 from 0.21, before recovering in the next 3 year period. While the findings contradict the earnings hypothesis that the acquiring firm, HP in our case, manages their earnings during the period prior to their merger, as suggested by [14] and [15], a lower EPS in late 1999 and 2000 support prior findings by [16] and [17] who find no evidence of earnings management prior to mergers. Findings also tend to support that existing Compaq shareholders have benefited more compared to the existing HP shareholders. This is based on the assumption that pre merger shareholders still retained some of their ownership with the HPQ shareholdings. This in line with [18] who found that managers can plan a successful integration process following a merger. On the other hand, Compaq has been witnessing a drop in its P/E ratio during the 1999 to 2000 period, while HP has been experiencing a rather stable P/E ratio during the 1996 to 2000 period. Following the merger, HPQ P/E has increased significantly after 2002, although it experienced a drop in the prior year. These findings are consistent with earlier findings from [19]-[21] who generally support the acquiring firms do not benefit from the post merger earnings and market share price.

V. CONCLUSION

The HP and Compaq merger is generally considered to have been a successful deal as it helped the operations in both the firms and allowed them to be more profitable and strong within other competing firms. The findings in this paper suggests a negative impact of market capitalization and book to market value on the return for Compaq shareholders before the merger, while the same variables tend to add positively to the shareholders' return in the post-merger case. The results were however statistically insignificant suggesting that changes in book to market and market capitalization variables are not significantly related to changes in the shareholders' returns. Both EPS and P/E dropped in the year following the merger between the two entities, before gradually picking up in later years. While higher post merger EPS suggest shareholders from the target firm tend to have benefited more than shareholders from the acquiring firm, the post merger P/E tend to be higher for shareholders from the acquiring company. A future area of research would look at a further defragmented data by focusing on a higher frequency data set. Further, other independent variables which are statistically significant need to be included in optimizing the model, while not comprising on their rationality in explaining changes in financial markets' returns.

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