PRE, DURING AND POST EFFECT OF MERGER AND ACQUISITION ON DANNEX AYRTON STARWIN (DASPHARMA) PLC

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ABSTRACT

The study intended at confirming the synergy theory and a statement by Mr. Daniel Appeagyei (Chief Executive Officer of Daspharma) in a circular that the merger of the three manufacturing firms (Dannex, Ayrton and Starwin) will improve profitability and efficiency. The study as well determined the reason for the positive or negative effect of merger and acquisition. Profitability ratio aids to determine firms' ability to generate earnings relative to its assets, revenue, shareholders equity or operating costs over time utilizing financial data from a specific point in time. Efficiency ratio measures how effective a firm utilizes its resources to generate revenue. The study was quantitative in nature using secondary data from the financial statement of the sampled firm for a period of six years (20116, 2017, 2018, 2019, 2021 and 2022). The pre period was proxied with 2016 and 2017; during M&A period was represented by 2018 and 2019; and post M&A period was represented by 2021 and 2022. Data was analyzed using accounting ratios, averages, and ANOVA statistics to make conclusions at 5% significant level. It was discovered that there is no significant effect on profitability and efficiency of Daspharma after the merger, and that the main reason for the negative effect was as a result of high administrative cost.

Keywords: Merger and Acquisition, Profitability, Efficiency.

INTRODUCTION

Business is said to be one of the humanity's earliest occupations. Globalization began with the development of technology and distance increasing. The earth seems to shrink as time goes on. The zeal of utilizing first mover advantage inspire mighty businessmen to choose geographical expansions, as progressive businessmen have always desired to be ahead of their counterparts (Zahid & Shah, n. d.). Merger and Acquisition (M&A) seems to be the smart move for some firms to expand or to go global. In general terms merger and acquisition is aggregating two or more firms to result in continues function of one firm (Soundarya, Lavanya & Hemalatha, 2018). In the business world, people are of the view that the best approach to tackle or deal with competitions is via M&A. Due to the flourishing Gross Domestic Products (GDP) of developed economies, Brazilians, Chinese and Indians from the year 2000 and onwards are very much aggressive in acquiring firms from developed nations.

According to a report by Institute for Mergers, Acquisition and Alliance (IMAA), M&A in the last five years have been around 50,000 yearly. This is equivalent to one transaction taking place in every 10-11 minutes (Chernenko et al., 2021). The ever-emerging Africa continent is expanding with great demand for investment. M&A transactions recorded in Sub-Saharan Africa was worth US$ 57.7 billion and numbered three hundred and thirty-three (333) in the first six months of 2021. In 2020, transactions across border increased in Ghana totaling US$ 793 million (Essuman &

Danso, 2022). Ghana has attracted the attention of well-known international organizations, who are investing in all sector of the economy (Lovells, 2016). Currently, merger and acquisition are close to breaking new records and have gained significant momentum over time as a result of increase competition among firms in both domestic and global markets (Soundarya et al., 2018). Organizations enjoy economies of scale through M&A (Besanko et al., 2016). Many businesses rather than folding up will consider opting for M&A (Soundarya et al., 2018).

Ghana has seen M&A between companies in and outside the same industry in the past two decades (Business-Inside-by-Pulse, 2019). It is said that M&A have proven to be the foundation for constructing Ghana's economic success story and also leads to improvement in revenue (Adu-Darko & Bruce-Twum, 2014). The synergy theory also notes that, merged or acquired firms' performance should surpass the sum of the merged or acquired firms' individual performance or worth. Studies like Adoma (2016) and Yeboah, Asirifi and Ampadu (2015) using the banking industry confirmed the synergy theory. Others like Musah, Abdulai and Baffour (2020); and Nyantakyi, Cao and Uchenwoke (2021) also using the banking industry recorded an opposing view that M&A cannot prove to be always successful. There are instances whereby in a single study, one performance indicator improved whereas the other did not experience any positive effect after merging. An example of such study is research by Adu-Darko and Bruce-Twum (2014) which revealed a general downward trend in profitability after acquisition, but liquidity increased after acquisitions. Researchers in all these studies refused to find out the reasons (the why) behind the positive or negative results. Soundarya, Lavanya and Hemalatha (2018) did also note that most of the studies in M&A were conducted using the financial sector whereby most performance indicators were measured in term of bonds, net worth, market share, etc.. Also, there may not be any studies that has looked at the performance of the firms during M&A. The purpose of the study is to first look at the pre, during and post effect of M&A on performance using the manufacturing industry in Ghana, precisely using the first ever merged firm in the pharmaceutical manufacturing industry. An industry which is less looked at in terms of M&A in Ghana. The study will as well determine the reason (why) behind the positive or negative results. The study will also confirm or oppose a statement made by Mr. Daniel Appeagyei, who happens to be the Chief Executive Officer of Daspharma that, he believes the first merger in the pharmaceutical manufacturing industry will increase efficiency and profitability.

LITERATURE REVIEW

Merger and Acquisition

Merging has to do with the process of which two or more organizations come together to operate (Besanko et al., 2016). Merger is the combination of two firms whereby one moves out of business and the other exist (Soundarya, 2018). Merger simply can be defined as consolidating two or more organizations to form an entirely new organization.

Acquisition according to Essuman and Danso (2022) is taking over the control, share capital, assets or equity interest in another firm. It can also be said as the purchase of another firm (Bomfim & Callado, 2016). Acquisition can be in the form of acquiring licenses, businesses or patent (Kotler et al., 2013).

Efficiency is a prime reason for M&A. Economics of scale can result after M&A which would mean reducing cost of production but increasing output using added improved technology, information or patents (Besanko et al., 2016). The main distinction between acquisition and a merger is that, the acquirer with acquisition does not change identity but a new entity is formed with respect to a merger (Essuman & Danso, 2022). Base on the relationship between buyers and sellers; M&A can be horizontal, vertical, conglomerate and congeneric. Based on the method of acquisition (Statutory Transactions); M&A can be grouped as share acquisition and interest acquisition, assets acquisition and hybrid two-step acquisition. Vertical merger is when one of the merged organizations produces product used by the other organizations, as such organizations involved are at two different levels in the supply chain. Horizontal merger is when two or more firms who happens to be direct competitors come together to form a single business. Conglomerate is when both firms are in unrelated industries or engaged in unrelated activities. Congeneric is when both firms have different products but sells to the same customers. There are two ways that M&A process can be negotiated; it can be friendly or hostile corporate control methods (Camargos & Barbosa, 2015).

Laws that Regulate Merger and Acquisition in Ghana

In the process of planning for M&A, investors should consider the Company's Act as one of the other pieces of legislation. Investors need to be abreast with legislations like Corporate Governance Code for Listed Companies 2020, Securities Industry Act, 2016 (Act 929), and Securities and Exchange Commission Code on Takeovers and Mergers 2008 (Takeovers Code) in order to be successful. Investors should also look out for Tax Regulations and industry-specific regulations. Company's specific constitution must as well be taken into consideration (Essuman & Danso, 2022).

Ghana's law and regulations have been updated in recent years to quickly facilitate M&A. Example is government's recent initiative to approve merger agreements deal faster to enable most collapsed and insolvent banks recapitalize to the current minimum capital requirements (Nyantakyi, Cao, & Uchenwoke, 2021).

Synergy Theory

The worth expanding hypothesis is another name for synergy theory. According to Hitt, Harrison and Ireland (2001) as cited in Nyantakyi, Cao and Unchenwoke (2021), synergy is obtained when the combined performance and value of the merging businesses surpass the sum of their individual performance and worth. Merger and acquisition according to this theory will only take place if both the target and the acquirer find the deal profitable. The driving force behind M&A mostly is synergy or potential financial gain (Barone, Scott & Kvilhaug, 2022).

The collaboration that merging produce causes a rise in the value and size of the blended firm. Merged firms mostly enjoy economies of scale, which becomes clear when a merged or acquirer firm provides products at a relatively lower cost (Weston, Mitchell, Mulherin & Salwan, 2010). Synergy can be in the form of financial, managerial and operational synergy (Gaughan, 2015). This hypothesis posits that consolidation as a growth strategy improve performance.

Empirical Review

This is a review of literature on what other researchers have written in relation to merger and acquisition.

A study conducted in 2021 examined if merger and acquisition as a tool for recapitalization will improve performance of Ecobank Ghana Limited. Findings from the study revealed that merger and acquisition have no significance effect on performance (Chernenko et al., 2021). Again in 2021, Nyantakyi, Cao and Unchenwoke had a primary objective of determining if merger and acquisition as a tool of recapitalization will improve the performance of Ecobank Ghana Limited. Findings from the studies revealed that merger and acquisition have no significant effect on performance. Other researchers in 2020 looked into merger and acquisition and how it has affected performance of commercial banks in Ghana. Data was obtained from inspected reports of eight banks over a period of ten years (2009-2018). Data was analyzed via descriptive, regression and correlation methods of analysis. It was revealed that merger and acquisition have no significance effect on performance and that it does not necessarily leads to an improved in performance (Musah, Abdulai & Baffour, 2020). Soundarya et al., in 2018 took a different angle, by looking at how human resource strategy can impact performance after merger and acquisition. The study concluded that business efficiency cannot be improved solely through the use of physical and financial resources. A study using financial and accounting data from ten banks examined the effect of M&A on performance. Data was gathered from the State Bank of Pakistan's financial statement analysis (FSA) from 2006-2011. Result from the study revealed a little difference in performance before and after a merger or an acquisition (Abbas et al., 2014). The impact of merger and acquisition deals in European banking sector was examined using data from 1990 to 2004. It was discovered that the European banking sector improved as a result of M&A (Athanasoglou & Athanasoglou, 2013).

METHODOLOGY

A quantitative study was adopted. The population consisted of listed non-financial firms on the Ghana Stock Exchange (GSE) as at 2010 to 2018 periods who have merged or have acquired another. According to a report by GSE in 2019, about six (6) listed non-financial companies have undergone merging and acquisition between 2010-2018. The companies are Benso Oil Palm Plantation, Dannex Pharmaceutical Company, Guinness Ghana Breweries, MTN Ghana, Total Petroleum, and AngloGold Ashanti. A sample of one (1) out of the six was selected using multi-stage sampling technique which falls under the probability sampling technique. The selected organization was Dannex Ayrton Starwin PLC (Daspharma). Below three (3) categories were used for the selection of the sampled firm:

- It should be a publicly traded company from 2010 to 2018 on the Ghana Stock Exchange.
- It should have its financial statement published (publicly available) on GSE website between 2010-2022.
- It should be a merger or acquisition between traded firms on GSE for the years 2010-2018.

Secondary data was used. Quantitative data was used via annual data from the selected sample's financial statements. Financial ratios like profitability (Gross Profit Margin, Operating Profit Margin, Net Proft Margin and Return on Assets); and efficiency (Operating Efficiency, Efficiency Ratio, Asset Turnover and Total Assets to Sales) were used to determine the pre, during and post-performance of the selected sample. Profitability ratio aids to determine firms' ability to generate earnings relative to its assets, revenue, shareholders equity or operating costs over time utilizing financial data from a specific point in time. Efficiency ratio measures how effective a firm utilizes its resources to generate revenue. These ratios were selected to confirm or oppose a statement made by Mr. Daniel Appeagyei who happens to be the Chief Executive Officer of Daspharma that, he believes the merger of the three pharmaceutical firms will increase efficiency and profitability of the firm. Data was analyzed quantitatively using descriptive statistics like standard deviations,

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and averages. ANOVA was used to make conclusions. The pre period was proxied with 2016 and 2017; during M&A period was represented by 2018 and 2019; and post M&A period was represented by 2021 and 2022. ANOVA was used to determine the significance difference in mean before, during and after the merger.

H0: There is no significance difference in profitability and efficiency of Dannex Ayrton Starwin before, during and after the merger

H1: There is a significance difference in profitability and efficiency of Dannex Ayrton Starwin before, during and after the merger

Table 3:1: Financial Ratios Used and their Formular

Performance Indicator	Formular
Gross Profit Margin	Gross Profit/Sales*100
Operating Profit Margin	Operating Profit/Sales*100
Net Proft Margin	Net Profit/Sales*100
Return on Assets	Net Profit/Total Assets
Operating Efficiency	(Operating Expense + Cost of Goods Sold)/Net Sales
Efficiency Ratio	Total Expense/Revenue
Asset Turnover	Net Sales/Average Total Assets
Total Assets to Sales	Total Assets/ Sales

RESULTS AND DISCUSSION

Figure 1: Profitability Trend

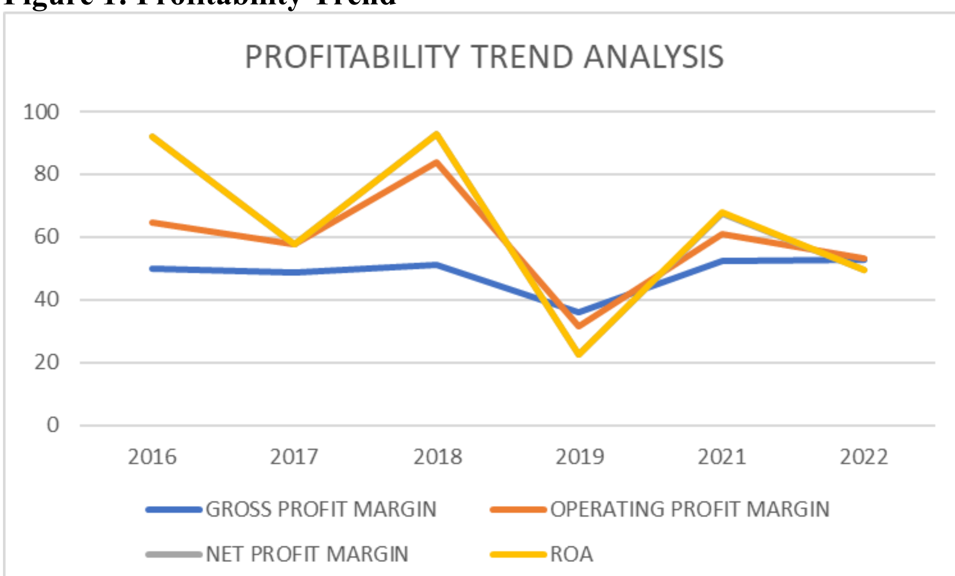

Table 4.1: Pre and Post Profitability Analysis

ANALYSIS OF INDIVIDUAL FIRMS BEFORE THE MERGER AND AFTER THE MERGER				
PROFITABILITY INDICATORS	DANNEX	AYRTON	STARWIN	MERGER
Gross Profit Margin	42.84	48.95	55.68	52.63
Operating Profit Margin	-19.975	13.43	42.78	4.515
Net Profit Margin	9.41	6.62	24.57	1.475
ROA	0.015	0.09	0.125	0.015

Source: Secondary data, 2023

Table 4.2: Profitability Sammary

PROFITABILITY SUMMARY TABLE					
Groups	*Count*	*Sum*	*Average*	*Standard Deviation*	*Variance*
BEFORE	4	74.8417	18.71041667	21.17	448.2977581
DURING	4	57.7475	14.436875	20.55	422.3693516
AFTER	4	58.635	14.65875	25.38	644.3207229

Source: Secondary data, 2023

Table 4.3: Profitability ANOVA Analysis

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	46.3045	2	23.15225978	0.045846427	0.95541	4.25649
Within Groups	4544.96	9	504.9959442			
Total	4591.27	11				

Source: Secondary data, 2023

From the trend analysis, profitability was measured using four profitability ratios namely Gross Profit Margin (GPM), Operating Profit Margin (OPM), Net Profit Margin (NPM) and Return on Assets (ROA). It was discovered that the average Gross Profit Margin after the merger was 52.63, followed by 49.16 for before the merger and the least figure of 43.53 was recorded during the merger. Looking at the individual firm's performance, it was revealed that Starwin was doing well before the merger. Ayrton with the exception of Gross Profit Margin also has higher profitability ratios before merger. Dannex has a mix results. Gross Profit Margin before the merger was 42.84 which is lower than after the merger of 52.62; Operating Profit Margin before the merger is -19.975 which is far lower than after merger performance of 4.515; Net Profit Margin before the merger was 9.41 which is a bit strange to the researcher because of the negative Operating Profit Margin recorded before the merger; ROA before and after the merger was the same (0.015). Examining the financial data, the reason behind the negative result for Operating Profit Margin but a positive result for Net Profit Margin before the merger is because in 2016 the company recorded an Operating Profit of (GHS 3,791,232) and a Net Profit after Tax of GHS 4,212,200.
Operating Profit Margin recorded its highest of 14.34 during the merger, followed by 12.08 before the merger and the worst of 4.52 recorded after the merger. Net Profit Margin (13.53) was very high before the merger, with the least of -0.13 recorded during the merger. ROA also recorded its highest of 0.08 before the merger, followed by 0.015 after the merger and the worst of 0.00 during the merger.

The profitability table gives a summary of all four profitability measures. From the table, the highest average of 18.71 was recorded before the merger, followed by after the merger (14.66) and the least of 14.44 recorded during the merger. Profitability is low during the merger probably due to high cost of expenses. This is because a lot of announcement, meetings and education has to be done during the period of merger for customers to know is the same quality product being offered under a new name.

From the ANOVA table, the P-value of 0.95541 is greater than 0.05 and so you do not reject the null (H0) hypothesis but rather accept and reject the alternative hypothesis. This implies the merger has no significance impact on profitability. It means the merger has not impacted profitability. This is contra to the findings of Athanasoglou and Athanasoglou (2013) and the pronouncement of Mr. Daniel Appeagyei (Chief Executive Officer) who did state profitability improves as a result of M&A. It also does not agree with the synergy theory that, merger will improve performance as a merged firm is to enjoy from economies of scale. This study is in line with the findings of Adu-Darko and Bruce-Twum (2014) who experienced a downtrend in profitability after acquisition. A critical examination of the financial data revealed that, Gross Profit after the merger was higher than Gross Profit before the merger, but what accounted for the insignificant profitability is high administrative cost. High cost of expense reduces net profit, which led to less recorded values for profitability ratios.

Figure 4.2: Efficiency Trend

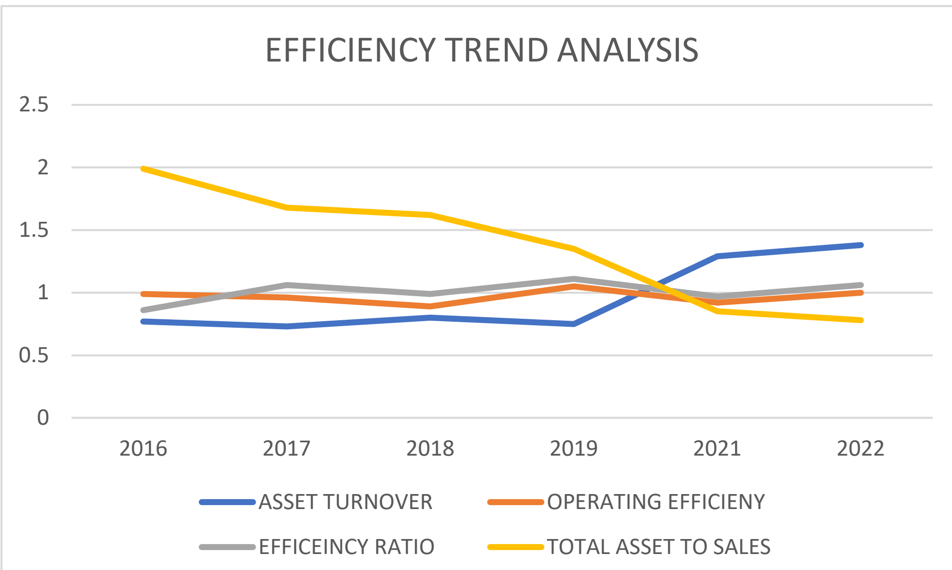

Table 4.4: Pre, During and Post Efficiency Analysis

ANALYSIS OF INDIVIDUAL FIRMS BEFORE THE MERGER AND AFTER THE MERGER				
EFFICIENCY INDICATORS	DANNEX	AYRTON	STARWIN	MERGER
Asset Turnover	0.42	1.28	0.555	1.335
Operating Efficiency	1.2	0.89	0.3835	0.96
Efficiency Ratio	0.915	0.95	1.02	1.015
Total Asset to Sales	2.695	0.78	2.035	0.815

Source: Secondary data, 2023

Table 4.5: Efficiency Summary Table

EFFICIENCY SUMMARY TABLE					
Groups	*Count*	*Sum*	*Average*	*Standard Deviation*	*Variance*
Before	4	4.52333	1.13083	0.48	0.2318
During	4	4.275	1.06875	0.3	0.08969
After	4	4.94	1.235	0.31	0.09668

Source: Secondary data, 2023

Table 4.6: Efficiency ANOVA Analysis

ANOVA						
Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	0.05646	2	0.028229398	0.202522922	0.82029	4.25649
Within Groups	1.2545	9	0.139388657			
Total	1.31096	11				

Source: Secondary data, 2023

From the trend diagram, Asset Turnover (AT) after the merger was the highest (1.34), followed by during the merger (0.77), and the least of 0.75 recorded before the merger. Operating Efficiency was interestingly high before and during (0.97) the merger but was low after the merger (0.96). Efficiency Ratio recorded its highest of 1.015 after the merger, followed by during the merger (1.05) and the least of 0.96 noted before the merger. Total Asset to Sales recorded its highest (1.84) before the merger, followed by 1.63 after the merger and 1.48 the lowest during the merger. Asset Turnover (1.335) after the merger is higher than that of the individual firm's performance before the merger. Operating Efficiency after the merger is 0.96 which is also higher than that of Starwin and Ayrton but lower than that of Dannex (1.2). Efficiency Ratio after the merger is 1.015, which is higher than that of Ayrton and Dannex but lower than that of Starwin (1.02). Total Asset to Sales after merger is 0.815, this is higher than that of Ayrton (0.78) before the merger but lower than that of Dannex (2.695) and Starwin (2.035).

The Efficiency Summary Table gives a summary of all four efficiency measures. From the table, the highest average of 1.24 was recorded after the merger, followed by before the merger (1.13) and the least of 1.07 recorded during the merger.

From the ANOVA Table, the P-vale of 0.82029 is greater than 0.05 and so you do not reject the null (H0) hypothesis. This means the merger has no significant impact on the efficiency of Dannex Ayrton Starwin and so the merger has not impacted efficiency. The finding is in agreement with Musah, Abdulai and Baffour (2020); and Chernenko et al (2021) that merger has no significance effect on performance. This finding is direct opposite to the synergy theory, which states that consolidation as a growth strategy improves performance. The summation of sales for the three firms pre-merger was GHS 125,386,267.00 as compare to after the merger of GHS 170,323,440.00 which is 36% increment. The question then is, why efficiency results from Daspharma not significant although sales has improved after the merger? The answer can be due to the high cost of administrative expense after the merger. Total Asset Turnover after the merger is low probably because of the decrease in value of total assets after the merger. Depreciation of fixed assets may account for the reduction in value of total assets of the merged firm.

CONCLUSION

There is no gainsaying that, businesses can reorganize and expand via merger and acquisition, as it provides opportunities to acquire additional potential sales, market-availability, production capacity and marketing channels. But researcher do agree with Nyantakyi, Cao and Uchenwoke (2021) that, not all mergers have a successful story. It is true from the study that, high administrative cost accounted for the insignificant result, but can this be because merger and acquisition is a long-term investment. If M&A is really a long-term investment, then it means

Daspharma is experiencing insignificant values because the study was done quite short (Three years) after the merger. Future researchers after five years or more may again research on Daspharma to examine if time can be a factor and that the perception of M&A being a long-term investment which will in the long run lead to positive performance is achievable.

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