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Financial Indicators for Growth Performance: Comparison of Pharmaceutical Firms In Pakistan

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Abstract— **Financial analysis is useful for every business entity to enhance their performance, competitive strength and access their financial stability and profitability of the firm. This paper investigates the financial analysis of the two Multinational companies, GlaxoSmithKline (GSK) and SanofiAventis (SA) and an attempt to compare their financial performance by using ratio analysis. Data is drawn from pharmaceutical industry in Pakistan from financial year 2005 to 2009. Analysis of variance (ANOVA) and statistical hypothesis test (t-Test) with independent sample characteristics was analyzed through Statistical Package for the Social Sciences (SPSS). The results comparison with this method between two pharmaceutical companies is presented. It is revealed that the performance of both companies in the observed period has improved. The current method reflects that GlaxoSmithKline is leading SanofiAventis.**

ANOVA;Financial Analysis; t-Test; Levene's Test

I. INTRODUCTION

Pakistan is a 6th most populous country having an emerging economy. Population continuous to grow (annual growth rate at 2%) offsetting any improvement in health indicators. There is a double burden of disease (communicable and non-communicable), which outweighs the meager resources at hand. Health care facilities are below the desired level and are underutilized. Pakistanis spent more than 80% of their total health expenditure on buying medicines.

Pakistan has a very vibrant and forward looking Pharma Industry. The Pharmaceutical Industry in Pakistan commenced its business operations a few years after the country came into existence. With the passage of time most of the multinational companies began manufacturing activities to cope with the requirement of quality drugs and medicines for the rapidly increasing population in both wings of the country.

II. LITERATURE REVIEW

White & Liu (1998) [1] examined the performance of pharmaceutical firms on the basis of scale and investigate the shift in key performance. Sixty-six Chinese Pharmaceutical firms were selected and financial, employee and operational data for 2 years, 1990-1992 were analysed by using OLS regression and longitudinal data. Production output, scales and profits, number of employees and fixed assets were taken as indicator for scale based performance while ratios and profits as percentage of output value, Return on Output, Return on Sales and Return on Assets were chose as indicator for efficiency based measures of performance. It was analysed by the researchers that scale based measures of performance are highly correlated with the firm's ability to increase factor of production and sale and growth of physical inputs i-e the firms endowment of fixed assets. Strong correlation has been observed by the efficiency based ratio with intangible assets and their related activities i-e highly related to store of production related engineering and technical skills, and firm's ability to leading new products.

Juma'h & Wood (2000) [2] examined the business performance of UK firms by taking into consideration outsourcing implications on profitability, liquidity, employment cost, Return on equity, research and development expenditures and changes in equity of the company. The results showed that profitability (operating profits and Return on Equity) firstly decreases in the year of outsourcing (1988-1991) and tends to increase the profitability in the subsequent years i.e. after outsourcing announcements (1993-1996). However operating profit and Return on Equity of the sampled firms are above the average of all UK firms Employment cost has been decreased by the outsourcing expectation while Research and Development expenditure decreases after years of outsourcing. Overall it has been analyzed that performance of firms increases after outsourcing announcements.

III. METHODOLOGY

Secondary source of data has been used in this study by using Annual reports of the company, articles, journals, news paper, books etc. Convenience sampling is adopted in this study. The period of study is five years from 2005 to 2009. During the period of study the company adopted 31st December as financial/ accounting year. SPSS was used to analyze the data. One way ANOVA and Independent sample t-test was run for the comparison of pharmaceutical companies. The research covers the Pharmaceutical industry of Pakistan. Two different Multinational pharmaceutical companies are taken as sample through which ratios are analyzed to check the performance of pharmaceutical companies. Data was analyzed by measuring all the financial ratios. Ratios are adapted from the books written by Gibson, (1997) [3] and Wild, et. al.,(2005) [4]. Growth ratios are adapted from the research of Ertugrul & Karakasoglu (2009) [5]. Basically these financial ratios- solvency ratios, liquidity ratios, activity ratios, profitability ratios and marketability ratios are used extensively in this study.

IV. EMPIRICAL ANALYSIS AND FINDINGS

Results of group statistics show that mean values and standard deviation of GSK for liquidity ratios are greater than SA. Profitability and growth ratios mean and standard deviation of GSK are less than SA except for Return on investment ratios. Solvency ratios except times interest ratio and earnings ratios mean and standard deviation is less for GSK, however showing little variations. Dividend ratio as compare to SA reveals more mean and standard deviation. Account receivables ratios have equal mean values for both the companies. Asset utilization ratios mean and standard deviation are approximately same for GSK. Account receivables turnover, payables turnover and sales per day have more mean and standard deviation for GSK than SA while some activity ratios show mixed results.

Significant values of ANOVA and Leven Test are presented in table 1 and 2. Leaven test is run to check the normality of data and it shows that the data is normally distributed for most of the ratio except for some profitability ratios. Some activity ratios like account payables turnover, collection period, account receivables ratios, and debt to equity ratio and interest earned ratio shows that data is not normally distributed but the parametric test is applied on the responses.

TABLE I. MEAN AND STANDARD DEVIATION OF GLAXOSMITHKLINE AND SANOFI-AVENTIS.

Code	Company	Mean	SD
Liquidity Ratios			
L1	GSK	2.23	0.68
	SA	1.21	0.09
L2	GSK	2.68	0.76
	SA	0.38	0.08
Activity Ratios			
A1	GSK	2.77	0.07
	SA	3.01	0.87
A2	GSK	9.56	10.04
	SA	11.61	1.90
A3	GSK	32355	6365
	SA	8725	3062
A4	GSK	21432	6594
	SA	12352	3649
A5	GSK	10.39	13.29
	SA	43.18	9.13
A6	GSK	70.53	38.0
	SA	8.74	1.78
A7	GSK	94.01	75.13
	SA	31.76	5.88
A8	GSK	0.04	0.04
	SA	0.06	0.02
A9	GSK	0.03	0.03
	SA	0.03	0.009
A10	GSK	5.58	0.54
A11	GSK	1.17	0.12
	SA	1.70	0.22
Profitability Ratios			
P1	GSK	0.34	0.07
	SA	30.13	4.46
P2	GSK	0.21	0.07
	SA	10.51	4.06
P3	GSK	0.14	0.05
	SA	3.85	3.00
P4	GSK	0.22	0.06
	SA	5.91	4.26
P5	GSK	17.63	5.61
	SA	8.91	4.86
P6	GSK	21.85	6.61
	SA	15.10	10.71
Solvency Ratios			
S1	GSK	0.21	0.03
	SA	0.55	0.07
S2	GSK	0.27	0.05
	SA	1.31	0.37
S3	GSK	0.03	0.007
	SA	0.05	0.02
S4	GSK	144.61	76.22
	SA	4.18	2.34
Marketability Ratios			
M1	GSK	17.42	5.66
	SA	33.57	14.41
M2	GSK	8.79	3.33
	SA	8.40	4.66
M3	GSK	2.75	0.92
	SA	2.09	0.71
M4	GSK	0.45	0.20
	SA	0.19	0.13
M5	GSK	0.13	0.06
	SA	0.15	0.08
M6	GSK	5.96	4.20
	SA	2.18	0.91
Growth Ratios			
G1	GSK	10.92	8.77
	SA	17.50	21.14
G2	GSK	10.10	7.14
	SA	19.61	19.43

To check whether there is a significant difference between the five financial years (2005 to 2009) for GSK and SA, one way ANOVA is applied. Results indicate that none of the ratio shows any significant difference among all the five years for the two companies. This shows that both the companies regarding ratio performance in the past five years are not significant. Simply it reveals that years are insignificant and thus meaningless.

TABLE II. SIGNIFICANT VALUES OF ONE WAY ANOVA AND LEAVEN TEST.

Ratios	Code	Sig.[a]	Sig.[b]
Liquidity Ratios			
Current ratio	L1	0.986	0.242
Acid test ratio	L2	0.979	0.010
Activity Ratios			
Inventory turnover	A1	0.500	0.057
Avg. Collection period	A2	0.260	0.005
Avg. Purchases per day	A3	0.955	0.036
Avg. Sales per day	A4	0.458	0.072
Avg. Payment period	A5	0.991	0.500
A/P turnover	A6	0.893	0.030
A/R turnover	A7	0.566	0.007
A/R by total assets	A8	0.244	0.014
A/R by sales	A9	0.201	0.001
Fixed assets turnover	A10	0.468	0.598

Total assets turnover	A11	0.920	0.070
Profitability Ratios			
Gross profit margin	P1	0.999	0.002
Operating profit margin	P2	0.959	0.000
Net profit margin	P3	0.776	0.001
Pre-tax profit margin	P4	0.804	0.000
Return on assets	P5	0.595	0.897
Return on equity	P6	0.284	0.207
Solvency Ratios			
Debt ratio	S1	0.987	0.154
Debt to equity ratio	S2	0.962	0.030
Long term debt to ratio	S3	0.321	0.142
Times interest ratio	S4	0.900	0.012
Marketability Ratios			
Earnings per share	M1	0.636	0.008
Price to earnings ratio	M2	0.440	0.243
Price to book ratio	M3	0.208	0.650
Dividend payout ratio	M4	0.839	0.302
Earning yield	M5	0.754	0.549
Dividend yield	M6	0.712	0.073
Growth Ratios			
Sales growth	G1	0.419	0.204
Assets growth	G2	0.361	0.271

Sig.[a]=one way ANOVA
Sig.[b]= Leaven Test.

V. Concluded Discussions

After Liquidity position of the GSK is found to be higher than SA and showing significant difference, both the companies shows decreasing trend in liquidity, however most liquid assets at GSK on one side shows the ability of the company to meet their short term liabilities, while on the other side, from investors point of view, GSK is not so successful to mobilize their funds to the productive sector.

Inventory turnover of both the companies shows good trend i-e they take 2 to 4 days to sell their inventory indicating no significant difference. Sales and purchases per day of GSK is more than SA. Collection period of SA overall shows smoothing trend during the observed period while GSK shows unfavorable collection period in last two years (2008 and 2009) due to huge increase in account receivables and as a result Receivables turnover also affected and shows a decreasing trend. GSK is better at managing their receivables turnover and payables turnover. GSK is better at paying their suppliers than SA. Account payables turnover at GSK shows a stable trend during the observed period but in year 2009 huge decrease in ratio also increases the payment period to the creditors. There is huge increase in account payables in year 2009 at GSK showing relaxing credit policy. Account receivables ratios for both the companies reveal insignificant difference. Both the companies are better at managing their assets turnover to generate sales revenue with GSK more efficiently utilizing their fixed assets than SA significant at 0.05. Efficient management utilization of total assets is at SA than GSK in year 2008.

The more profit margins of GSK indicate that earning power of GSK is sound. However both companies shows better performance in profits in year 2005 and 2006 while GSK shows decreasing trend in profit margin in year 2008 and 2009 due to inflation and exchange loss. SA also shows lower margins in year 2007 and 2008 due to exchange loss (2007: 44 Mn and 2008: 39 Mn) and finance cost of 227 Mn further decreases the profits of year 2008 but SA improves their profits in year 2009 more than GSK because of sale of vaccines (Rs. 6,725,708). Profitability ratios result significant difference between the companies. More return from assets of GSK shows their better utilization of assets and return from equity investment at both companies shows good results with SA more return in year 2009.

Solvency position of both the companies is sound. Debt ratio and debt to equity ratios shows better and significant results for both the companies in year 2005 and 2006 as debt portion is low and hence reduces interest payments but from 2007 onwards debt portion of both the companies increases. However GSK focuses more on equity financing while SA has more debt financing. Thus both the companies have to consider interest, principal repayment burden, risk and tax issues when deciding on an optimal debt ratio. GSK is more capable in paying interest payments than SA. This reflects there are more earnings to pay interest payment, while on the other side paying much debt with earnings could be used for other investment opportunities to get higher rate of return.

Earnings per share of both the companies are better but SA with little high earnings brings increment in the share value of SA. Earnings per share show insignificant results. Price to earnings ratio is more at GSK indicating market is willing to pay more for GSK and ensures growth in earnings. Dividends payments at GSK are more than SA indicating GSK a more mature company and maximizing shareholders wealth.

Growth ratios show insignificant difference between the companies. GSK and SA both revels growth in sales in the past five years. In year 2008 sales growth are more at GSK while in year 2009 more at SA. Total assets of both the companies revels consistent growth.

Overall it is concluded that GSK shows better performance than SA in some ratios due to their business size. However both the companies revels good results in year 2005 and 2006. Better performance in year 2005 is due to minimal debts of the country and more sales of pharmaceutical and vaccines products as a result of Earthquake in 2005. Performance of both the companies' decreases after year 2006 due to more inflation rate in years 2007 and 2008. SA shows better growth performance in year 2009 than GSK. Both the companies shows growth in sales, however SA shows an increase of 54% in year 2009, far more than GSK.

VI. Propositions

The Ratio analysis is important for different stakeholders. Managers, creditors, investors, etc all are interested in their respected ratios. In this context, certain suggestions are forwarded to the management of GSK and SA for their performance improvements and growth opportunities.

a. SA should increase their liquid assets mainly cash balance to pay the demand of short term fixed depositors and to meet short term obligations while GSK shows over liquidity and items of current assets should be decreased and utilize their idle funds in some productive sector. Current and acid test ratio should bring to normal standard level.

b. Account receivables are very high in year 2008 and 2009, GSK should have a control over sundry debtors otherwise it may evade the profits. GSK should tight their credit policy and increase their collection period. Relaxing credit policies leads to generation of bad debts and aging of account receivables. Account receivables are good only when they are converting into cash within short period of time.

c. Account payables are high in year 2009 at GSK, company should decrease external borrowings up to some extent. Payment period should be decreased as well, because payment to creditors must be on time. This leads to increased good will of the company and to avail discount policies.

d. SA should also have a control over their debtors, SA should emphasize on equity financing as well, so to get free from the burden of interest payments. Although both the companies have enough earnings to pay financial charges, however both the companies should further enhance their earning capacity to fulfill the interest of shareholders. Efforts should be done by both the companies for credit creation based on deposits.

e. Company's value mostly depends on dividend payout ratio, dividend yield of the company. SA should formulate plans to increase the amount of dividend per share.

f. Both the companies has to decrease their cost mainly cost of sales, depreciation and finance cost to further improve their earnings. Other expenses should be decreased and increased the working capital position of the companies.

g. Profits of GSK are increasing but with decreasing trend, the company should try to establish an increasing trend.

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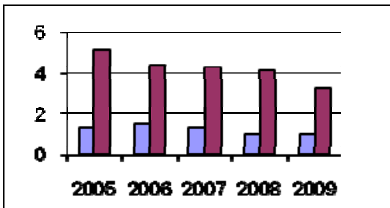
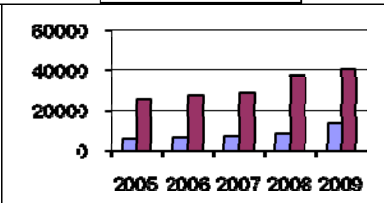
Annexure

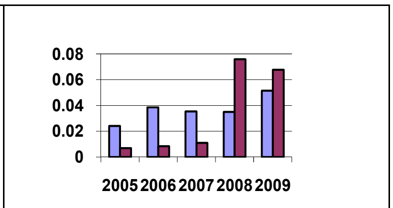
Sanofi Glaxo



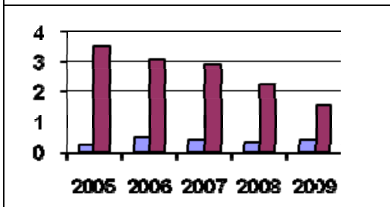
Current ratio



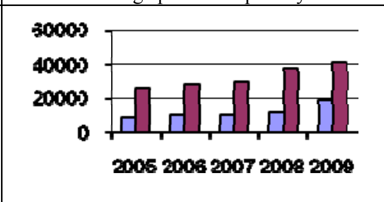
Average purchases per day



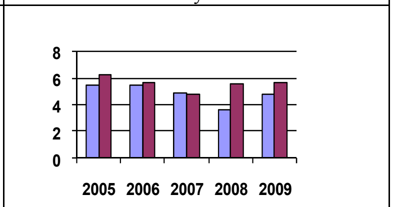
A/R by sales



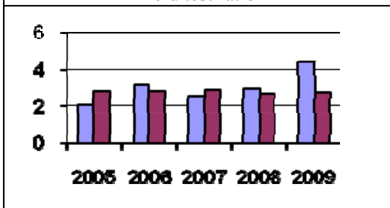
Acid test ratio



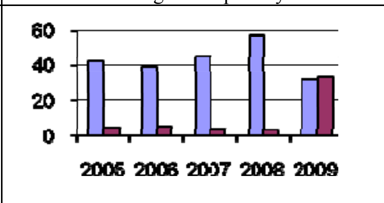
Average sales per day



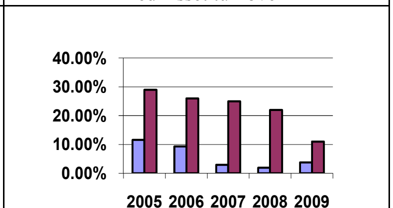
Fixed Asset turnover



Inventory turnover:



Payment period



Pre-tax Profit Margin

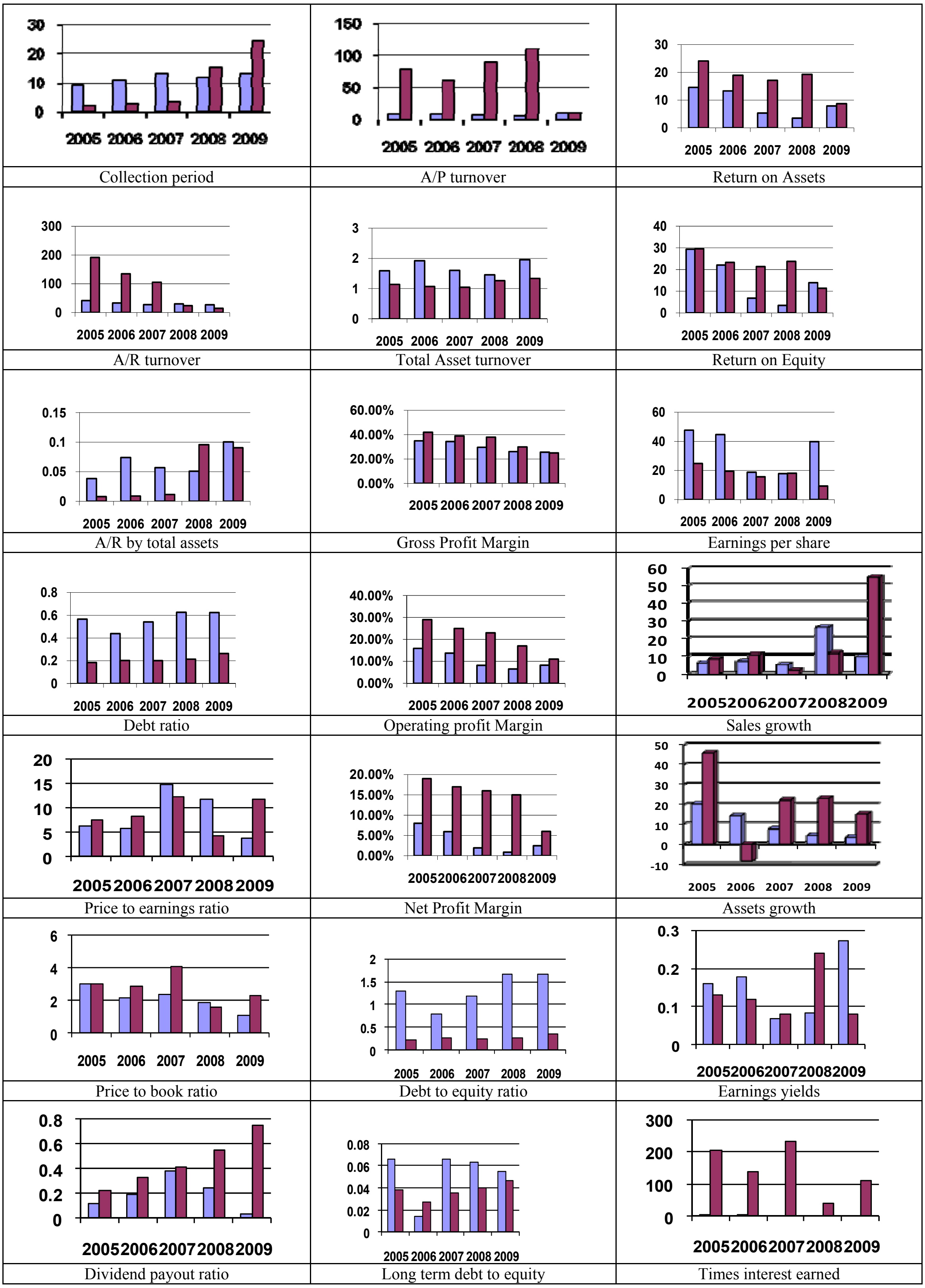


Figure 1. Collected Data Ratio Reresentation from Year 2005 to 2009.