Impact of Inventory Management on Financial Performance of Listed Pharmaceutical Firms in Nigeria

Rashida Dakyes Usman[1], Yusuf Ibrahim Karaye[2] and Abdulkadir Abubakar[3]
rashidadakyes43@gmail.com

[123] Department of Accounting, Bauchi State University, Gadau- Bauchi State, Nigeria

Abstract
This study examines the relationship between Inventory Management, specifically, the discrete components of inventory and firm Profitability for the Nigerian Pharmaceutical sector. The study is carried out based on the historical panel data analysis. To achieve the objective of this study, an ex-post factor research design was employed. Data was generated from secondary sources, specifically, the annual reports and accounts of listed pharmaceutical firms from 2009 to 2018 and the Nigerian Stock Exchange Fact book. Descriptive statistics, Pearson correlation as well as multivariate regression techniques were utilized as tools of analysis in this study. The study revealed that Inventory Management affects the profitability of Nigerian Pharmaceutical companies significantly. The significant relationships found among all the discrete components of Inventory and profitability, evidenced by lower p values and higher t values, implied good inventory turnover for the studied companies. The study recommends that pharmaceutical companies in Nigeria should sufficiently plan and control their operations as regard proper management of the different components of inventory and to utilize the services of professionals in complex business areas especially in the use of modern sophisticated inventory management techniques such as the Just-in-Time, Material Requirement Planning, and The ABC inventory categorization and so on in order to maintain the tempo and remain competitive both locally and internationally.

Keywords: Inventory Management, Just in Time, Material Requirement Planning and Profitability

1.0 Introduction

Inventory represents one of the most important assets that most businesses possess, because the turnover of inventory represents one of the primary sources of revenue generation and subsequent earnings for the company's shareholders/owners. A business's inventory is one of its major assets and represents an investment that is tied up until the item is sold or used in the production of an item that is sold. In the cost structure of most of the manufacturing concerns, the cost of materials exceeds 50% of the total cost (Ramakrishna, 2005 cited in Monday, 2012). Such a large investment requires considerable planning and control of materials so as to minimize wastage which invariably affects the performance of organisations. According to Muller (2003), inventory brings with it a number of costs. These costs can include: Dollars/cash, Space, Labour to receive, check quality, put away, retrieve,

select, pack, ship, deterioration, damage, obsolescence, theft and so on. Thus, the management of these materials so as to reduce the costs associated with them is what the study refers to as Inventory Management.

In light of the expected benefits of inventory management, many studies have been conducted to examine the impact of inventory management on financial performance, but only a few have considered the separate impacts of the components of inventory, that is, raw material, work-in-process and finished goods inventories on profitability of Nigerian Manufacturing Industry. This paper fills the void in examining the impact of the discrete components of inventory on the profitability of firms in the Nigerian pharmaceutical industry.

2.0 Review of Related Literature

Inventory Management encompasses all operations management functions from purchasing of raw materials through the production processes to the final delivery of the end products. It deals with the overseeing and controlling of the ordering, storage and use of components that a company will use in the production of the items it will sell as well as the overseeing and controlling of quantities of finished products for sale. Inventory Management is a tool to optimize performance in meeting customer service requirements at the same time adding to profitability by minimizing costs and making the best use of available resources. The basic objective of inventory Management as explained by Banjoko (2000) and Jacobs, Chase & Aquilano (2009) is to ensure that the right item is bought and made available to the manufacturing operations at the right time, at the right place and at the lowest possible cost.

Inventory management is the process of efficiently overseeing the constant flow of units into and out of an existing inventory. This process usually involves controlling the transfer in of units in order to prevent the inventory from becoming too high, or dwindling to levels that could put the operation of the company into jeopardy. It encompasses all operations management functions from the purchase of raw materials, through the production processes to the final delivery of finished products to end users.

Effective inventory management is essential in the operation of any business (Bassin, 1990). Inventory as an asset on the balance sheet of companies has taken on increased importance because many companies are applying the strategy of reducing their investment in fixed assets, like plants, warehouses, equipment and machinery, and so on, which even highlights the significance of reducing inventory (Coyle, Bardi & Langley 2003). Changes in inventory levels affect return on assets (ROA), which is an important financial parameter from an internal and external perspective. Reducing inventory usually improves ROA, and vice versa

if inventory goes up without offsetting increases in revenue (Coyle, Bardi & Langley 2003). Many studies have been conducted in respect of inventory management and financial performance, but few have been conducted in the Nigerian context and more specifically, in critical sectors such as the pharmaceutical industry. This research attempts to fill this gap.

3. Research Methodology

For the purpose of this research, data was collected mainly from secondary sources. This data was obtained primarily from the Fact-book maintained by the Nigerian Stock Exchange (NSE) and the published annual reports and accounts of the sampled Firms. Data collected from these sources is used for the computations of the ratios that were used to measure the Inventory Management and Profitability of the listed Nigerian Pharmaceutical companies. The data covered such items as turnover, cost of sales, profit before and after tax, total assets, trade debtor, trade creditor, stocks, fixed asset, current asset, current liability, and long-term liability.

The population of this study consist of all the seven listed pharmaceutical companies in the pharmaceutical industry namely: Evans Medical PLC, Fidson Healthcare PLC, Glaxo SmithKline Consumer (NIG) PLC, May and Baker Nig. PLC, Neimeth Intl Pharmaceuticals PLC, Nigeria-German Chemicals PLC and Pharma-Deko PLC as shown below.

Table 1: Population of the Study

S/N	Name of Company	Year of Incorporation	Year Listed
1	Evans Medical PLC	23/04/1954	1979
2	Fidson Health Care PLC	13/03/1995	4/6/2008
3	GlaxoSmithKline Consumer Nigeria PLC	23/06/1971	07/1977
4	May & Baker Nigeria PLC	04/09/1944	10/11/1994
5	Neimeth International Pharmaceuticals PLC	30/08/1957	21/09/1979
6	Nigeria-German Chemicals PLC	10/01/1964	08/1979
7	Pharma-Deko PLC	18/12/1969	08/1979

Source: NSE Fact book

3.2 Sampling and Sample Size

For the purpose of this study, purposive sampling was used in the determination of the sample size. Of the total of seven (7) companies that made up the industry, five companies

were selected. Two criteria were used in the selection of the sample. For a company to be selected, it must have been quoted on or before January 1st, 2004 and must have its complete annual reports and accounts for ten year period from 2004 - 2013. Applying these two criteria, the following firms emerged as the working population.

Table 2: Sample Size of the Study

S/N	Name of company
1	Evans Medical Plc
2	GlaxoSmithKline Consumer Nigeria Plc
3	May and Baker Nig. Plc
4	Neimeth International Pharm. Plc
5	Pharma-Deko Plc

Source: NSE Fact book

3.3 Variables and their Measurement

For the purpose of this study, the dependent variables and proxies for financial performance were measured by Return on Investment (ROI), Gross Profit Margin (GPM) and Net Profit Margin (NPM) while the independent variables and proxies for inventory management were measured by Inventory Days (I.D), otherwise known as the Inventory Turnover Period for the three major discrete components of inventory, i.e Raw Material inventory (RM), Work in Process inventory (WIP) and Finished Goods Inventory (FG). The control variables used are SIZE measured by logarithm of sales and LEV measured by DEBT. Table 3 provides the summary of the variables used and their respective measurement. Inventory Days (ID) or Days in Inventory (DII) or Inventory Turnover Period is an efficiency ratio that measures the average number of days the company holds its inventory before selling it. It is given by the formula:

$$I.D = \frac{Average\ Inventory}{Cost\ of\ Goods\ Sold} \times 365\ days$$

Hence, the lower the number of ID, the better the inventory management and this may cause better firm performance. This measure of inventory management has been used by many researchers such as Eroglu & Hofer (2011); Sahari, Tinggi & Kadri (2012); Fullerton, Mcwatters & Fawson (2003); Cannon (2008); Cachon & Fisher (2000) among others.

Table 3: Variables and their Measurement

THE DEPENDENT VARIABLES	
Variable	**Measurement**
Return on Investment (ROI)	Net Profit After Tax ⁄ Total Assets
Gross Profit Margin (GPM)	Gross Profit / Sales * 100
Net Profit Margin (NPM)	Net Profit After Tax / Sales * 100
The Independent Variables	
Raw Material Days (RMD)	Raw Material⁄(COGS/365 days)
Work in Process Days (WIPD)	Work in Process⁄(COGS/365 days)
Finished Goods Days(FGD)	Finished Goods⁄(COGS/365 days)
Thus, INV = RM + WIP + FG/ (COGS/365 days)	
The Control Variables	
SIZE	Natural logarithm of sales
LEVERAGE	Total Debt⁄ Total Assets

3.4 Techniques of Data Analysis

Descriptive statistics, Pearson Correlation Coefficient as well as Multivariate Regressions were used in analysing the data.

3.5 Model of the Study

In order to evaluate the strength of the relationship between the inventory management measures on one hand, and Profitability on the other, the study adopts Return on Investment (ROI), Gross Profit Margin (GPM) and Net Profit Margin as proxies for Profitability. The dependent as well as the independent variables were derived from the Published Annual Reports and accounts of the companies under study. The control variables used are SIZE and LEVERAGE. Since other factors apart from the explanatory and identified control variables are likely to affect the companies' Profitability, the coefficient of determination (R^2) is computed to explain the extent to which the independent variables explain the dependent variable. All other things that affect the Profitability score is incorporated into the

relationship by adding an error term, ε. The functional relationships among these variables are therefore defined as:

$ROI_{it}, GPM_{it}, NPM_{it} = f(RMD, WIPD, FGD, SIZE, LEV)_{it} + \varepsilon_{it}$

From this general form of the regression equation, three models, each designed to test one hypothesis is developed. These models are consistent with the works of Sahari, Tinggi & Kadri (2012), Baveld (2012), Padachi (2006), Garcia–Teruel and Martinez-Solano (2007), Falope & Ajilore (2009), Hayajne & Yassine (2011) among others.

$ROI_{it} = \beta_0 + \beta_1 RMD_{it} + \beta_2 WIPD_{it} + \beta_3 FGD_{it} + \beta_4 SIZE + \beta_5 LEV + \varepsilon_{it}$ Model 1

$GPM_{it} = \beta_0 + \beta_1 RMD_{it} + \beta_2 WIPD_{it} + \beta_3 FGD_{it} + \beta_4 SIZE + \beta_5 LEV + \varepsilon_{it}$ Model 2

$NPM_{it} = \beta_0 + \beta_1 RMD_{it} + \beta_2 WIPD_{it} + \beta_3 FGD_{it} + \beta_4 SIZE + \beta_5 LEV + \varepsilon_{it}$ Model 3

WHERE:

ROI, GPM and NPM measure the firms' profitability, SIZE – stands for the company size measured by the natural logarithm of sales, LEV– Debt, RM – Raw Material, WIP – Work in Process, FG- Finished Goods, β_0 – fixed intercept element, β_1 – the ratio of change in any of the dependent variables to a unit change in RMD, β_2 – the ratio of change in any of the dependent variables to change in WIPD, β_3 – the ratio of change in any of the DVs to change in FGD, β_4 – ratio of change in any of the DVs to change in SIZE, β_5 – ratio of change in any of the DVs to change in LEV, i – number of companies in the panel data, t – time periods of the panel data and ε - error variable of the regression analyses.

4. Empirical Results

4.1 Descriptive Statistics of the Variables of Study

Table 4 provides summary of the descriptive statistics for the variables of the study. All the variables were computed from the relevant balance sheets and income statements of the sampled companies.

Table 4: Descriptive Statistics of the Variables

Variable	Obs	Mean	Std. Dev.	Min.	Max.
ROI	50	0.184357	0.2196116	-0.37056	0.97427
GPM	50	49.1794	19.89777	5.28549	94.18364
NPM	50	0.169758	0.2065259	-0.28387	0.79249
RMD	50	82.6729	53.639	9.6154	224.1192
WIPD	50	24.31062	35.08111	0.08314	135.6835
FGD	50	75.14479	77.74645	1.30067	32.9796
SIZE	50	0.6970722	0.01614	0.01614	1.62076
LEV	50	15.09436	13.81753	13.81753	17.18912

Source: Generated by the researcher using (Stata Version 12)

Table 4 reveals that the return on assets of the five pharmaceutical companies over the ten year period to 2013 have an average of 18.44% ranged from a negative return of -37.06% to a maximum of 97.43%. This means that for every one Naira worth of net investment, the industry had at worst made a loss of 37.06 kobo and had at best earned a maximum of 97.43 kobo. Every firm in the industry could earn an average of 18.44% on its net investment with a high degree of risk, as returns varied at both sides of the scale by as large a margin as 21.96%. It took an average of 83 days to convert Raw Materials to Work-in-Process inventories. While at a particular time, some firms in the industry were able to shorten this range to 10 days, others could not turn Raw Materials to the next stage of production till after 224 days. For the Work-in-Process inventory, it took an average of 24 days to turn to Finished Goods. While some firms could perform this process in a day, others could not till after 136 days. An average of 75 days is taken for the finished goods to be converted to cash from its sales. This is in line with the work of Capkun, Hameri & Weiss (2009).

Table 5: Correlation Coefficients of the Variables

Variables	ROI	GPM	NPM	RMD	WIPD	FGD	SIZE	LEV
ROI	1.000							
GPM	-0.2307	1.000						

NPM	0.6665	-0.2901	1.000					
RMD	-1.1678	0.1132	0.1683	1.000				
WIPD	0.0476	0.7287	-0.2353	-0.2408	1.000			
FGD	0.0696	0.0078	0.3318	0.7160	-0.3044	1.000		
SIZE	-0.1453	0.0932	-0.4258	-0.5152	0.0292	-0.2456	1.000	
LEV	-1.1119	0.3445	-0.2156	-0.3446	0.4289	-0.4199	0.0063	1.000

Source: Generated by the researcher using (Stata Version 12)

From the above Table 4.2, the values on the diagonal are all 1.000, indicating that each variable is perfectly correlated with itself. The highest correlation with ROI is for FGD (0.0696) which implies absence of multi-collinearity with ROI and all variables. Likewise, the correlations within the explanatory variables prove lack of multi-collinearity as the highest correlation coefficient is that of FGD and RMD with a positive value of 0.7160. With regard to the nature of the correlation between the dependent and the independent variables, the relationship between ROI and RMD shows a negative amount of -1.168 which is less than 117%, which implies as RMD reduces by less than 117%, ROI will increase by the same percentage. Also, the correlation between WIPD and ROI is positive with about -0.476 coefficients, which implies that as the period of WIP decreased, the Profitability of Pharmaceutical companies in Nigeria may increase by 47.6%. Similarly, the nature of the correlation between ROI and FGD show a negative and insignificant amount of only -0.094 which is less than 9.4%, which implies as FGI days decrease by less than 9.4%, ROI will increase by the same percentage.

4.3 Impact of Inventory Turnover Period (RMD, WIPD and FGD) on Profitability (ROI)

In order to determine the impact of the discrete components of inventory on ROI as one of the profitability ratios, the first regression equation,

$\text{Profitability (ROI)}_{it} = \beta_0 + \beta_1 RMD_{it} + \beta_2 WIPD_{it} + \beta_3 FGD_{it} + \beta_4 SIZE + \beta_5 LEV + \varepsilon_{it}$ in the model is run. The regression results of the combined impact of the discrete components of inventory on profitability is evaluated from the model summary as presented in Table 6.

Table 6: Regression Results of the Impact of RMD, WIPD, and FGD on Profitability (ROI, GPM, NPM)

Model Summary

Equation	Obs	Parms	RMSE	R^2	F	P
ROI	50	6	.2003399	0.2527	2.976107	0.0212
GPM	50	6	11.07225	0.7220	22.84925	0.0000
NPM	50	6	0.1707859	0.3859	5.530744	0.0005

Source: Generated by the researcher using (Stata Version 12)

In appraising the Model 1, based on the regression result in Table 6, the coefficient of determinations "R-square" shows 25.27% indicating that the variables considered in the model accounts for about 25.27% change in the dependent variable that is ROI, while the remaining of the change is as a result of other variables not addressed by this model. From the same result in Table 6, the p value is 0.02121 which is lower than 0.05 (for a 95% confidence level), thus, the null hypothesis will be rejected as the p-value is lower than 5% that means the explanatory variables have significant influence on the dependent variable. Thus, considering both correlation and regression outcomes, it can be concluded that the relationship between the discrete components of inventory and profitability, measured by ROI, is negative and significant. This is in line with Narware (2004) and Gill, Biger & Mathur (2010), who found a statistically significant association between Profitability and inventory turnover and in line with the findings of Alipour (2011); Deloof (2003); Lee, Song, & Lee (2009); Panigrahi (2013); and Usama (2012) who discovered an inverse relationship between the inventory turnover period and Profitability. However, opposed to Ali (2011); Gill, Biger & Mathur (2010); Padachi (2006); Rimo & Panbunyuen (2010); Soekhoe (2012); and Warnes (2013) who found a positive relationship.

4.5 Impact of Inventory Turnover Period on Profitability (GPM)

In appraising model 2 based on the regression equation in table 6, the coefficient of determination, R^2 shows 0.7220 which is more than 72%, indicating that the variables considered in the model accounts for 72.20% change in the dependent variable, while the remaining change is as a result of other variables not addressed by the model. The p value of this model is 0.0000 which is less than 5% for a 95% confidence level. Thus, the null hypotheses will be rejected as the p-value is lower than 5%. This means the explanatory variables have significant influence on the dependent variable, as the lower the p-value, the higher the relevance of the variable. Going by the correlation and regression results, it can be

concluded that the relationship between the discrete components of inventory and profitability, measured by GPM, is negative and significant.

4.6 Impact of Inventory Turnover Period on Profitability (NPM)

In appraising model 3 based on the regression result in table 4.3, the coefficient of determination, R^2 shows 0.3859 which is 38.59%, indicating that the variables considered in the model accounts for 38.59% change in the dependent variable, while the remaining change is as a result of other variables not addressed by the model. The p value of this model is 0.0005 which is less than 5% for a 95% confidence level. Thus, the null hypotheses will be rejected as the p-value is lower than 5% that means the explanatory variables have significant influence on the dependent variable as the lower the p-value, the higher the relevance of the variable. Going by the correlation and regression results, it can be concluded that the relationship between the discrete components of inventory and profitability, measured by NPM, is negative and significant.

5.0 Summary, Conclusions and Recommendations

5.1 Summary

Effective inventory management is vital for business survival and ultimate growth. Inventories constitute a significant portion of the overall manufacturing costs (50-60)%. Such a huge investment requires adequate planning and control in order to avoid wastage which invariably affects profitability. The financial management decisions of companies are basically concerned with three major areas: capital structure, capital budgeting, and Working Capital management. Among these major areas, the Working Capital Management (WCM) of which inventory management is an indispensable component of, is an area of great significance for every company as it virtually affects its overall Profitability and liquidity.

5.2 Conclusions

Inventory management is a vital aspect of firms' financial management decision. The ability of a firm to continuously operate in longer period is dependent on how it deals with investment in inventory management. The optimal Inventory management could be achieved by firm that manage the trade-off between Profitability and level of inventory. Based on the analysis made in chapter four, the following conclusions are drawn:

Raw Material Inventory Turnover Period (RMD) is negatively related to Profitability of the listed Pharmaceutical Firms in Nigeria; and the relationship is significant based on the documented evidence. When a company maintains a high level of inventory with generous trade credit policy, the sales are likely to increase, hence improving the Profitability of the company. However, the increases in Raw Material Inventory Days means a longer period is

taken for the Raw Material inventory to be converted to the next level of production, hence, increasing the storage costs and other negative costs associated with keeping inventory e.g deterioration, pilferage, insurance costs, obsolescence and so on.

Work-In-Process Inventory Days (WIPD) is also negatively related to Profitability of the listed Pharmaceutical Firms in Nigeria; also, the relationship is significant. Increases in the Work in Process Days have negative impact on company's performance, as semi-processed goods remain idle for a longer period of time, which ties down cash that may be used to finance other viable projects.

Finished Goods Inventory Days is negatively related to Profitability of the listed Pharmaceutical Firms in Nigeria also the relationship is significant. Due to the nature of pharmaceutical products, this component of inventory is expected to have a very short gestation period. This is evidenced by a high correlation coefficient between it and ROI as one of the profitability proxy.

In the overall, it can be deduced that Inventory Management impacts on the Nigerian Pharmaceutical companies' Profitability significantly.

5.3 Recommendations

Based on the findings of this research, there is an impressive inventory management in the sampled firms of the study. Despite this, the following recommendations are offered based on the research findings:

In the case of high cost/level inventories, there should be periodic stock taking so as to discover in time, the slow moving stocks (if any) to avoid over investment in such stocks. Further, in case of dwindling demand for obsolete stock, prices should be written down to promote sales.

Proper communication among members of the Supply Chain should be maintained in order to avoid the "Bull Whip Effect" a situation that leads to unwarranted accumulation of stock along the Supply Chain.

The ABC inventory categorization should be adopted by the firms in order to differentiate between the fast moving top ranking goods from the average and slow moving goods. The essence of this is to help management in assigning different level of control to different category of goods.

Similarly, companies should sufficiently plan and control their operations, especially, investment in inventories, amend the shortfalls as noted, consider the principles of finance in their decision making and utilize the services of professionals in complex business areas.

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		EVANS MEDICA																	
YEAR	TURNOVER	COST OF SALES	PAT	TOTAL DEBT	F/A	C/A	T/A	C/L	RMI	WIP	FGI	INV	SIZE	LEV	ROA	RMD	WIPD	FGD	INVD
2004	1009091	529247	46652	1883744	1358315	2032555	3390870	1653588	157197	26632	43422	227251	6.00393	0.555534	0.013758	108.4123	18.367	29.94638	156.7257
2005	1068624	536279	14223	1735962	1304235	1988585	3292820	1530668	201201	14931	31094	247226	6.028825	0.527196	0.004319	136.9406	10.16228	21.16307	168.2659
2006	2908469	1354039	132204	2178476	1404258	2415119	3819377	2023317	414824	70680	33231	518735	6.463664	0.570375	0.034614	111.8216	19.05277	8.957877	139.8322
2007	3151753	1639485	-317019	3023873	1598611	2826595	4425206	2569577	424406	71676	361837	857919	6.498552	0.683329	-0.07164	94.48588	15.95729	80.55609	190.9993
2008	4465237	2015865	-510098	3873419	1135509	2683911	3819420	3116300	486169	85521	107233	678923	6.649845	1.014138	-0.13355	88.02756	15.48475	19.41601	122.9283
2009	2193563	1300328	-622697	3452079	1638470	2159723	3798193	3165666	526198	24326	85578	636102	6.34115	0.908874	-0.16395	147.7029	6.828269	24.02161	178.5528
2010	2594838	1392783	169846	3327849	1642792	2201017	3843809	1579566	427599	14729	122414	564742	6.41411	0.865769	0.044187	112.0588	3.859959	32.08045	147.9992
2011	2757873	1540541	15196	3431395	1695272	2267278	3962550	1801576	448686	17321	44389	510396	6.440574	0.865956	0.003835	106.3071	4.10386	10.51707	120.928
2012	3030540	1433957	27795	4023665	4210125	2410162	6620287	2190451	370585	30149	51900	452634	6.48152	0.607778	0.004198	94.32886	7.674139	13.21065	115.2136
2013	3120847	1435986	388995	4013775	4209135	2430264	6639399	2290652	380584	303246	53780	737610	6.494272	0.604539	0.058589	96.73713	77.0793	13.66984	187.4863
			PHARMA-DEKO PLC DATA SHEET																
YEAR	TURNOVER	COST OF SALES	PAT	TOTAL DEBT	F/A	C/A	T/A	C/L	RMI	WIP	FGI	INV	SIZE	LEV	ROA	RMD	WIPD	FGD	INVD
2004	712481	223589	30619	830544	368499	733490	1101989	733878	43713	82346	28118	154177	5.852773	0.753677	0.027785	71.3597	134.4265	45.9015	251.6877
2005	564944	328592	8216	759576	498663	734380	1233043	732888	42711	95686	18119	156516	5.752005	0.616017	0.006663	47.44338	106.288	20.12659	173.858
2006	648868	535689	-337330	1351678	616516	340195	956711	270102	32194	137149	7495	176838	5.812156	1.412838	-0.35259	21.93588	93.4486	5.106834	120.4913
2007	790399	491272	-242284	1564037	652283	417705	1069988	1205058	25160	84454	4076	113690	5.897846	1.461733	-0.22644	18.69311	62.74673	3.028343	84.46818
2008	1105570	752634	-197972	1672466	622556	488137	1110693	1404041	44966	98726	2682	146374	6.043586	1.505786	-0.17824	21.80687	47.8785	1.300672	70.98604
2009	501930	418791	-461497	1891812	910110	335295	1245405	1636842	71032	132895	35775	239702	5.700643	1.519034	-0.37056	61.9084	115.8255	31.17993	208.9138
2010	494457	383006	464094	3047495	881174	1055820	1936994	2070468	71026	142377	54752	268155	5.694129	1.573312	0.239595	67.6869	135.6835	52.17798	255.5484
2011	1261876	692673	42158	3245755	808956	1240293	2049249	2177412	67982	17723	71196	156901	6.101017	1.583875	0.020572	35.82272	9.339032	37.51632	82.67807
2012	1037463	546712	740945	1839379	2128112	654699	2782811	1839379	92035	8882	68597	169514	6.015973	0.660979	0.266258	61.4451	5.929868	45.79725	113.1722
2013	1251987	683574	45360	3143364	805976	1246282	2052258	2180489	71047	17973	72017	161037	6.0976	1.531661	0.022102	37.93613	9.596832	38.45407	85.98704
			MAY AND BAKER DATA SHEET																
YEAR	TURNOVER	COST OF SALES	PAT	TOTAL DEBT	F/A	C/A	T/A	C/L	RMI	WIP	FGI	INV	SIZE	LEV	ROA	RMD	WIPD	FGD	INVD
2004	1900865	1800395	91139	76803	409452	926837	1336289	417883	83296	113237	260821	457354	6.278951	0.057475	0.068203	16.88687	22.95691	52.8771	92.72088
2005	1996974	1243478	101759	492559	644129	1302006	1336289	492554	245350	60652	179631	485633	6.300372	0.368602	0.07615	72.01796	17.80327	52.72736	142.5486
2006	2253389	1215293	211470	225948	1664154	2300418	1336289	986923	306822	74297	231147	612266	6.352836	0.169086	0.158252	92.15064	22.31429	69.42248	183.8874
2007	3859749	2363690	208318	21562	1778032	2676969	1336289	1582729	467302	165231	82066	714599	6.586559	0.016136	0.155893	72.16058	25.5149	12.6726	110.3481
2008	5439910	3529046	417962	472674	2300418	3429738	1336289	2138612	459307	223877	164923	848107	6.735592	0.353721	0.312778	47.50492	23.15501	17.05755	87.71749
2009	4604458	2878932	232081	427483	3506376	2647472	1336289	2637900	311416	219523	354792	885731	6.663179	0.319903	0.173676	39.48229	27.83181	44.98164	112.2957
2010	4639202	2770229	192977	1066023	4158408	2658508	1336289	2693127	436384	191680	280153	908217	6.666443	0.797749	0.144413	57.49711	25.25539	36.91242	119.6649
2011	4749617	2808205	253062	746899	5037202	1996463	1336289	2940557	353408	96672	214507	664587	6.676659	0.558935	0.189377	45.93465	12.56507	27.88082	86.38054
2012	5484925	3455499	82282	2165805	4968740	3103110	1336289	2768543	393827	258524	298680	951031	6.739171	1.620761	0.061575	41.59945	27.30756	31.54919	100.4562
2013	6253986	4026568	-78116	1889692	4782075	3374525	1336289	3207522	693309	195280	322387	1210976	6.796157	1.414134	-0.05846	62.84702	17.70173	29.22371	109.7725

GLAXOSMITH KLINE DATA SHEET

YEAR	TURNOVER	COST OF SALES	PAT	TOTAL DEBT	F/A	C/A	T/A	C/L	RMI	WIP	FGI	INV	SIZE	LEV	ROA	RMD	WIPD	FGD	INVD
2004	7149033	4350526	955261	3504261	2122516	3899467	6021983	2975635	1120340	34606	1005230	2160176	6.854247	0.581911	0.158629	93.99417	2.903371	84.33669	181.2342
2005	8273679	5109759	881903	4802924	2695056	5105818	7800874	3734763	1115013	23105	924056	2062174	6.917699	0.61569	0.113052	79.64754	1.650435	66.00711	147.3051
2006	10012127	6052067	967091	4675132	3114388	5210621	8325009	3417071	1594337	53641	936400	2584378	7.000526	0.561577	0.116167	96.15442	3.235087	56.47426	155.8638
2007	9915400	6041660	836877	4117210	3515775	5203386	8719161	3331697	758606	11503	1413799	2183908	6.99631	0.472203	0.095981	45.83032	0.694941	85.41305	131.9383
2008	12545129	7177239	1277441	4159822	3961996	5649286	9611282	3321911	921268	0	1326204	2247472	7.098475	0.432806	0.132911	46.85128	0	67.44438	114.2957
2009	14952445	8444296	1701829	5495121	4788426	7289936	12078362	4625976	1457778	24487	2846915	4329180	7.174712	0.454956	0.140899	63.01164	1.058437	123.0563	187.1264
2010	16489111	9270385	2326484	6407504	6880710	7273188	14153898	4576644	1159544	3512	2447005	3610061	7.217197	0.452702	0.164371	45.65437	0.138277	96.34517	142.1378
2011	21148210	12314048	2671444	8934844	7262238	10447981	17710219	6610469	1204464	2805	2121511	3328780	7.325274	0.504502	0.150842	35.70145	0.083143	62.88359	98.66818
2012	25127000	14990778	2754863	11129661	8835220	12736048	21571268	9449552	1940578	15694	2552532	4508804	7.400141	0.515948	0.12771	47.24978	0.382122	62.14982	109.7817
2013	29183675	17581625	2915896	13867949	12122017	13900136	26022153	11753615	2247240	9864	3359236	5616340	7.46514	0.532929	0.112054	46.6534	0.20478	69.73878	116.597

NEIMETH PLC DATA SHEET

YEAR	TURNOVER	COST OF SALES	PAT	TOTAL DEBT	F/A	C/A	T/A	C/L	RMI	WIP	FGI	INV	SIZE	LEV	ROA	RMD	WIPD	FGD	INVD
2004	1002024	912869	59175	532459	54800	896653	951453	54800	247846	5799	358897	612542	6.000878	0.559627	0.062194	99.09833	2.318662	143.5008	244.9178
2005	1241949	1088347	98427	469304	58571	938002	1010223	72221	273135	5342	364896	643373	6.094104	0.464555	0.097431	91.60155	1.791552	122.3755	215.7686
2006	1203530	482231	82228	335301	48874	2560917	2609791	724390	296102	6102	372075	674279	6.080457	0.128478	0.031508	224.1192	4.618596	281.6231	510.3609
2007	1503857	608099	116415	311840	95261	2523278	2618539	794897	293193	13815	543090	850098	6.177207	0.119089	0.044458	175.9836	8.292194	325.9796	510.2554
2008	1946513	652136	98267	751199	155438	2958259	3113697	885158	397158	13345	425299	835802	6.289257	0.241256	0.03156	222.289	7.469186	238.0395	467.7977
2009	1731820	713456	-455206	1792983	182334	2640091	2822425	1238852	419737	19112	476196	915045	6.238503	0.635263	-0.16128	214.735	9.77759	243.6191	468.1318
2010	1871667	990350	-48839	1805889	300648	2578299	2878947	1255065	454078	20565	475901	950544	6.272229	0.627274	-0.01696	167.3534	7.579366	175.3964	350.3292
2011	1898501	791692	113077	1796576	394163	2523433	2917596	1763187	320977	24143	551055	896175	6.278411	0.615773	0.038757	147.9826	11.13084	254.0572	413.1706
2012	2330203	1028283	-59936	1315262	556443	2341112	2897555	1098513	396873	25958	499366	922197	6.367394	0.453921	-0.02069	140.8743	9.214069	177.2553	327.3436
2013	2016522	959225	130578	1110870	506189	2384890	2891079	919505	321464	53143	294628	669235	6.304603	0.384241	0.045166	122.322	20.22174	112.1105	254.6543