

# The External Financing Need Study for Body Shop Company

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**Abstract:** The Body Shop International PLC was a skincare company founded by Anita Roddick. The main objective of the project is to calculate the External Financing Needs (EFN). In arriving the EFN we will be providing the management with a set proforma financial statements for the projected years were finished by using percentage of sales method, based on the historic data from 1999 to 2001. Additionally, we will examine our scenario results and provide management recommendation accordingly.

**Keywords:** The Body Shop International PLC; External Financing Needs(EFN); Proforma; Sales Method; Scenario Results

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## 1. Explanation of percentage of sales method

Our financial model is based on the percentage of sales method. The fundamental idea of such method is to divide the income statement and balance sheet accounts into two groups, and then forecast each account into “pro forma” financial statements based on a percentage of the projected revenue.

### 1.1 Discussion of EFN

Body shop wants to grow, and external financing need arises when a firm internal financial resource is insufficient to support its operation and/or growth. In calculation, external financial needed or excess cash represents the difference between the trial assets and trial liability & equity that is  $EFN = \text{Trial Asset} - \text{Trial Liability \& Equity}$ . Moreover, when we conduct our forecast, we would get the new asset and liability & equity excluding cash and a liability item as a plug, so we could also say that  $EFN = \text{New Total Asset} - \text{New Total Liabilities \& Equity}$ .

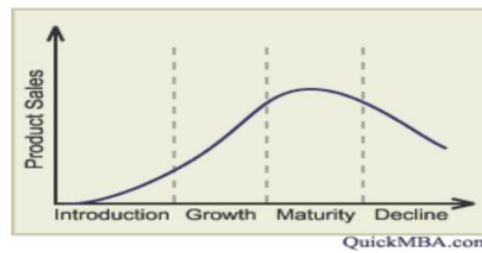
## 2. Assumptions

We employed percentage of sales method to create simple planning model to forecast the project years. Based on the data from 1999 to 2001, we find that COGS, operating expense - excluding exceptional costs and net fixed asset occupy are relatively large in percentage comparing to the turnover (sales).

Based on the data from 1999 to 2001, we could calculate the grow rate of turnover are  $(330.1-303.7)/303.7= 8.7\%$  for 2000, and  $(374.1-330.1)/330.1= 13.3\%$  for 2001. Therefore, we would think about that the grow rate of turnover (sales) maybe grow another 5% from the previous years. However, based on the sensitivity analysis, which we will discuss in detail in part 4, if the company grow 18% in 2002, the company would have a huge EFN which is 22.14 which is almost twice as EFN for the grow rate of 13% which is 12.11.

There is an economic assumption of the product life cycle which is depicted picture below<sup>2</sup>. We could assume that the product from the company between 1999 to 2001 become mature enough to reach the top line in 2001. This is also the reason why the grow rate from 2000 to 2001 could increase 4.6%. In addition, in fiscal year 2001, revenue grew to 13% but the pretax declined to 21%. As such we think the future growth should be around 13% for the next three years.

### Product Life Cycle Diagram



We look back the historical data, the percentage of COGS to turnover were 42%, 39.7% and 39.8% for the previous years, respectively. We would like to take the average of the three numbers which is  $(42\%+39.7\%+39.8\%)/3= 40.5\%$ . Thus, the percentage of COGS to turnover is around 40.5% for the following 3 years. The percentage of operating expense excluding exceptional costs would like to take the approximately number of the previous year 52% of sales for the excluding exceptional costs.

We have assumed for the turnover which would increase in the projected years so that the net fixed asset would also increase along with the turnover. We took the average of the three number which is  $(28.9\% + 31.7\% + 29.6\%)/3= 30\%$  as the percentage of net fixed asset to turnover.

Then, we assumed that the interest expense is 6% of the debt, EFN and excess cash. The tax is 30% of the profit before tax in 2002-2004. Also, we assumed that dividend is constant with 10.9 million dollars regardless of income in 2002-2004 in absence of additional information.

At last, there is another assumption that the Long-term liabilities are fixed in 2002, yet in 2003-2004, it is long-term liabilities from the prior years plus the external financing needed and External financing needed included in the long-term liability.

## 3. Results

### 3.1 External financing need results

As chart below, it is our estimation that the firm will need 12.1M, 14.4M, and 15M GBP in 2002, 2003, and 2004, respectively to finance its projected operation and revenue growth under current scenario for the projected years .It is our recommendation that the management secure a revolving credit line with a bank to cover the potential need liquidity, if it has not done so, while exploring the options of issuing long-term debt instruments. External financing needs will also have effect on liquidity and solvency, and as such, it is very important for the firm to maintain a manageable growth.

Year	EFN (in millions of GBP)
2002	12.1
2003	14.4
2004	15.0

We also believe that the following five factors that could pose the greatest influences on the external financing needs or excess cash, and we examine each factors through a sensitivity analysis to see how different values of these independent variables could impact the external financing needs or excess cash ceteris paribus.

#### 3.1.1 Growth rate

In our forecasts, we adopted 13% as the turnover growth rate because 13% is the year to year growth rate between 2000 to 2001, the nearest time frame of our forecast.

The Body Shop Pro Forma Sensitivity Analysis (In millions of GBP)						
Growth	2002		2003		2004	
	External Financing Need	Excess Cash	External Financing Need	Excess Cash	External Financing Need	Excess Cash
13%	12.11	0.00	14.43	0.00	15.05	0.00
5%	0.00	1.26	0.00	0.18	0.00	0.90
7%	2.08	0.00	3.27	0.00	2.65	0.00
9%	5.42	0.00	6.86	0.00	6.49	0.00
11%	8.77	0.00	10.58	0.00	10.62	0.00
13%	12.11	0.00	14.43	0.00	15.05	0.00
15%	15.45	0.00	18.42	0.00	19.78	0.00
17%	18.79	0.00	22.54	0.00	24.83	0.00
19%	22.14	0.00	26.80	0.00	30.21	0.00
21%	25.48	0.00	31.19	0.00	35.92	0.00
23%	28.82	0.00	35.71	0.00	41.96	0.00
25%	32.16	0.00	40.37	0.00	48.36	0.00

In this sensitivity analysis, we collected the data of external financing need and excess cash under the growth rate of 5% to 25%. We can clearly see that only if the growth rate of turnover is under or equal to 5%, there is no external financing need, and the firm will be able to invest excess cash. As such, the management should constantly monitor its sales forecasts along with the market research data and update the expectation of external financing need.

### 3.1.2 Cost of goods sold

Cost of goods sold represent the cost of creating the goods that the company sells and thus directly affects the margin and, in turn external financing need.

The Body Shop Pro Forma Sensitivity Analysis (In millions of GBP)						
Costs Of Goods Sold	2002		2003		2004	
	External Financing Need	Excess Cash	External Financing Need	Excess Cash	External Financing Need	Excess Cash
40%	12.11	0.00	14.43	0.00	15.05	0.00
20%	0.00	49.67	0.00	58.08	0.00	69.73
24%	0.00	37.31	0.00	43.58	0.00	52.77
28%	0.00	24.96	0.00	29.08	0.00	35.82
32%	0.00	12.60	0.00	14.57	0.00	18.86
36%	0.00	0.25	0.00	0.07	0.00	1.91
40%	12.11	0.00	14.43	0.00	15.05	0.00
44%	24.46	0.00	28.94	0.00	32.00	0.00
48%	36.82	0.00	43.44	0.00	48.95	0.00
52%	49.18	0.00	57.94	0.00	65.91	0.00
56%	61.53	0.00	72.45	0.00	82.86	0.00
60%	73.89	0.00	86.95	0.00	99.82	0.00

When we forecast the Income Statement from 2002 to 2004, we use 40% as the percentage of cost of goods sold to sales. This is the average level of cost of goods sold. Evidently, in this proform, when the cost of goods sold under 36% of the sale, that is gross margin below 36%, there is no need to get external financial resources, however the company need to put more excess cash in a decreasing trend. When cost of goods sold is between 40% to 60% to sales, instead of excess cash, the company need more and more external financing. As we mentioned that cost of goods sold is a large proportion in sales, when the ratio of cost of goods sold to sales increase, the profit will decrease at the same time. This means the company needs more external financing.

### 3.1.3 Accounts Receivable

According to the chart below, we decided to use 8% as accounts receivables to sales, because in 2001, the accounts receivable is about 8% of sales. In this form, the change of the percentage is between 5% to 15%. in 2002, 5% is the scenario when external financing need is zero and excess cash is 1.13 millions, when accounts receivable to sale is greater than 5%, external financing need starts to grow and excess cash will be zero, in 2003 and 2004, our sensitivity analysis show that regardless of the accounts receivable

level there would be external financing need. Such result could indicate that a portion of the firm external financing are effectively being used to finance its own accounts receivable for its customer, as such the firm must direct more attention to its collection efforts as well as bad debt and factoring policy.

<b>The Body Shop Pro Forma Sensitivity Analysis (In millions of GBP)</b>						
	2002		2003		2004	
Accounts Receivable	External Financing Need	Excess Cash	External Financing Need	Excess Cash	External Financing Need	Excess Cash
8%	12.11	0.00	14.43	0.00	15.05	0.00
5%	0.00	1.13	12.13	0.00	12.42	0.00
6%	3.28	0.00	12.90	0.00	13.29	0.00
7%	7.70	0.00	13.67	0.00	14.17	0.00
8%	12.11	0.00	14.43	0.00	15.05	0.00
9%	16.52	0.00	15.20	0.00	15.92	0.00
10%	20.93	0.00	15.97	0.00	16.80	0.00
11%	25.35	0.00	16.73	0.00	17.67	0.00
12%	29.76	0.00	17.50	0.00	18.55	0.00
13%	34.17	0.00	18.27	0.00	19.42	0.00
14%	38.58	0.00	19.04	0.00	20.30	0.00
15%	43.00	0.00	19.80	0.00	21.17	0.00

### 3.1.4 Net fixed assets

<b>The Body Shop Pro Forma Sensitivity Analysis (In millions of GBP)</b>						
	2002		2003		2004	
Net Fixed Asset	External Financing Need	Excess Cash	External Financing Need	Excess Cash	External Financing Need	Excess Cash
30%	12.11	0.00	14.43	0.00	15.05	0.00
20%	0.00	32.02	6.76	0.00	6.29	0.00
22%	0.00	23.19	8.30	0.00	8.04	0.00
24%	0.00	14.37	9.83	0.00	9.79	0.00
26%	0.00	5.54	11.36	0.00	11.54	0.00
28%	3.28	0.00	12.90	0.00	13.29	0.00
30%	12.11	0.00	14.43	0.00	15.05	0.00
32%	20.93	0.00	15.97	0.00	16.80	0.00
34%	29.76	0.00	17.50	0.00	18.55	0.00
36%	38.58	0.00	19.04	0.00	20.30	0.00
38%	47.41	0.00	20.57	0.00	22.05	0.00
40%	56.24	0.00	22.10	0.00	23.80	0.00

Since from 1999 to 2001, the net fixed assets are about 30% of sales, it is reasonable to set the ratio of net fixed assets to sales equals to 30% in 2002 to 2004. According to the pro forma sheet about net fixed asset, apparently, external financing need is increasing while the proportion of net fixed asset is increasing. However, excess cash goes to the different direction the external financing need heads. when the ratio equals to below 28%, only excess cash is needed. While between 28% to 40%, there is only a demand for external financing. Also worth noting is that for every 2% of increase net fixed asset, the incremental increase in external financing needs is quite a lot. As such, the firm must methodically plan its major fixed asset addition in accordance growth in sales.

### 3.1.5 Operating expenses - Excluding exceptional cost

<b>The Body Shop Pro Forma Sensitivity Analysis (In millions of GBP)</b>						
	2002		2003		2004	
Operating Expenses - Excluding Exceptional Cost	External Financing Need	Excess Cash	External Financing Need	Excess Cash	External Financing Need	Excess Cash
52%	12.11	0.00	14.43	0.00	15.05	0.00
40%	0.00	24.96	0.00	29.08	0.00	35.82
42%	0.00	18.78	0.00	21.83	0.00	27.34
44%	0.00	12.60	0.00	14.57	0.00	18.86
46%	0.00	6.42	0.00	7.32	0.00	10.39
48%	0.00	0.25	0.00	0.07	0.00	1.91
50%	5.93	0.00	7.18	0.00	6.57	0.00
52%	12.11	0.00	14.43	0.00	15.05	0.00
54%	18.29	0.00	21.68	0.00	23.52	0.00
56%	24.46	0.00	28.94	0.00	32.00	0.00
58%	30.64	0.00	36.19	0.00	40.48	0.00
60%	36.82	0.00	43.44	0.00	48.95	0.00

When we forecast the operation expenses, we assumed immaterial exceptional expense. Due to the historical performance of regular operation expense from 1999 to 2001, we set the it as 52%. When this proportion is below 48%, external financing turns to zero and excess cash would be available to invest, above this threshold, external financing would be needed. As such, the firm must take measures control its overhead expenses aiming to at least stay at the current level and try to be operationally as efficient as

possible in the future. An efficient operation will ease the pressure on the margin and thus the need for external financing.

### 3.2 Recommendation

According to the inventory turnover, we can see the Body Shop firm has an inventory turnover of 125 days on these three years, which means the half one year of the inventory change. Based on the book *Financial Reporting And Statement Analysis: A Strategic Perspective*, in 2012, the high-end jeweler company Tiffany had an inventory turnover of 509 days but the Apple's turnover was only 3 days, our recommendation for the retail company Body Shop is to increase the inventory turnover to make the products much more liquid to the customers to avoid the problem we mentioned in part 4 which says the company goes to the mature stage within the product cycle assumption.<sup>3</sup>

Body Shop should use the external financing needed to outsource the production of a high percentage of goods, which requires the company to share profit margin that we calculated net margin in the financial ratio form with the outsourcer but reducing the amount of raw materials and work-in process inventories.

### 3.3 Limitation of the model

There are several limitations about our model. The first is its constant sales growth for these three years' assumption. It is hard for a company to maintain the unchangeable sales growth of each year, especially for a retail company.

The second limitation of this model is that we assumed no force majeure uncertainties. All assumptions are predicated on the historical performance of Body Shop past three years from 1999-2001.

The third limitation of this model is the net fixed assets. Based on the past three years' balance sheet, we assume that the net fixed assets change by the sales growth. Also, it is a constant growth related to the sales. In common, some companies may change the fixed assets once 3-5 years to expand production.

The fourth limitation of this model is regarding to the issue of the net interest expense. The net interest expense is accrued payment not the actual payment over this period. According to the Generally Accepted Accounting Principle, if Body Shop has prepaid the interest, the difference between interest accrued and interest paid would go to the "current assets" account in the balance sheet.

### References

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