Substainable Growth Rate – A Case Study On Wipro and Infosys

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INTRODUCTION

In the present era of highly competitive environment, companies are striving hard to earn a reasonably good profit to increase the shareholders' wealth. The increase in the wealth of the shareholders depends upon a target profit which can be achieved within a reasonable period of time. Now the question remains– how an investor is let to know how long earnings growth can last ? The easy way to gauge such a situation is by calculating the company's sustainable growth rate (SGR).

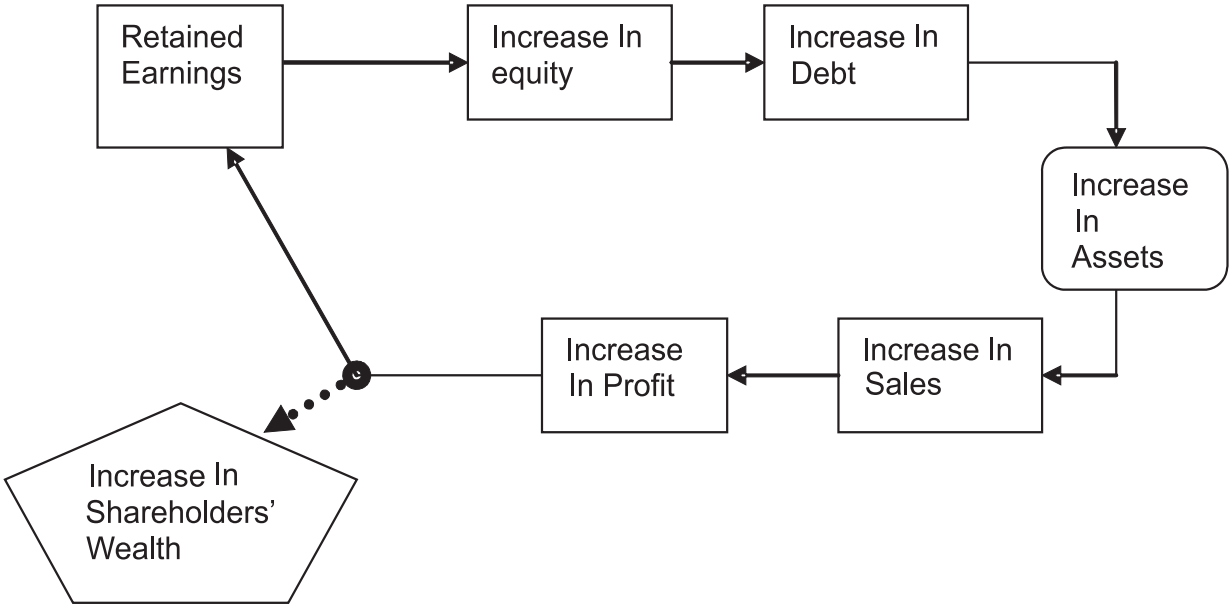
PART I

DEFINITION AND MEANING OF SGR

A company's SGR is the maximum growth rate with the use of internally generated funds without changing its operating and financial policies. According to Robert C. Higgins (2001, 2007), sustainable growth represents the maximum sales or asset growth that a firm can support using both internally generated funds and debt. SGR is calculated by multiplying the company's return on equity (ROE) by the proportion of its retained earnings (RE). According to Higgins, SGR depends upon the change in equity in a financial year divided by opening equity without any additional equity introduced during the year. Such a change is possible only through the retained earnings. Thus, the funds generated through retained earnings increase the net worth of the firm and with the increase in the net worth, the firm can borrow more funds which would enable the firm to increase its asset base. The increase in assets results in increase in operation which ultimately results in increase in profit and thereby increase in retained earnings. The following figure depicts the whole process:

Flow of funds through retained earnings. The following figure depicts the whole process:

Flow of Funds Through Retained Earnings



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Higgins used the following equation to workout SGR:

SGR = Change in equity (*without new additions*) divided by opening equity

= Retained earnings/Opening equity.

Using DuPont analysis, the equation can be rewritten as:

$$SGR = \frac{\text{Retained earnings}}{\text{Profit}} \times \frac{\text{Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Opening equity}}$$

SGR as determined above is based on the following assumptions:

a) The firm increases the sales as rapidly as the market conditions permit;
b) Management is unwilling to sell new equity;
c) The firm's current capital structure remains unchanged;
d) The firm's current dividend policy remains unchanged;
e) The company maintains a constant assets turnover ratio; and
f) In the long-run, all costs are variable and will become a fixed percentage of sales.

Though the growth through the internally generated funds is the best way of doing business, there is no constraint on the part of the management to raise new equity funds to expand its business operations. But, in practice, firms are reluctant to do so because such new issues involve high floatation costs, possible dilution of earnings per share (EPS) and loss of control of management. Further, a company can increase debt only if it has unused debt capacity with assets that can be used as security and its debt-equity ratio is reasonable in relation to the industry. Also, quite often, the reduction of dividends has a negative impact on the company's share prices. In such situations, the companies adopt internal control measures such as cutting the costs or enhancing the manufacturing and logistics efficiencies to improve the profit margin. In addition, firms can outsource more activities from outside vendors or lease production facilities and equipments, which have the effect of improving the asset turnover ratio.

As opposed to Higgins's formula for SGR, Arvind Ashta(2008) in his recent paper used opening assets in the assets turnover ratio and leverage ratio and refined the formula as follows:

$$SGR = \text{Change in equity / Opening equity}$$

$$= \text{Retained earnings / Opening equity}$$

$$= \frac{\text{Retained earnings}}{\text{Profit}} \times \frac{\text{Profit}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Opening assets}} \times \frac{\text{Opening assets}}{\text{Opening equity}}$$

Arvind Ashta used the opening assets in both the ratios based on the following arguments:

1. Relating sales to closing assets seems to create an impression that sales create assets, which may ultimately be true, but the fact is that a firm starts its operation in any financial year with the opening assets rather than the closing assets.
2. The asset or equity may be added on any date of the year of operation, but once it is considered that a firm's growth depends upon opening equity as stated by Higgins, then it is more logical to depend on the opening assets as well to start the flow.
3. It is also true that the fixed assets added during a particular year would not bring the desired returns in the same year rather than in the year after or more.

In this paper also, the equation used by Arvind Ashta is considered more appropriate than Higgins equation due to the arguments posed by Arvind Ashta. The ratios illustrated in Table – 4 of Infosys also substantiate his arguments. Infosys has never used financial leverage in all the nine years of the study period. Using Arvind Ashta's equation (opening assets divided by opening equity), the average leverage ratio of Infosys is worked out to be 1 which indicates that Infosys has totally relied on equity rather than debt. (Financial leverage is the ability of a firm to use debt financing to increase the profitability. Debt is a cheaper source of finance as well as the interest on debt is tax deductible. Researches indicate that a firm is more profitable if it uses more debt in its

capital structure.) If the leverage ratio of Infosys is calculated using Higgins formula, the average leverage ratio is 1.3 which is illogical and leads to wrong conclusions.

VALUE CREATION AND CASH MANAGEMENT

The best and most appropriate way a firm can create value is by increasing the sales, thereby increasing the total assets (such as fixed assets, debtors and inventory) to produce and support additional sales. Obviously, this results in spontaneous increase in trade creditors to provide the additional short-term finance needed. In addition to the trade creditors, additional cash is needed to finance extra fixed assets and extra working capital.

Growth and the resultant cash management are measured by taking the difference between the SGR and annual sales growth rates (AGR), which is referred to as sustainable growth challenge (SGC), (Higgins, 2003). If the difference is positive (SGR>AGR), it indicates that there is a cumulative cash surplus. A negative difference (SGR<AGR) means that the firm is in short of cash.

For a firm with several departments or strategic business units (SBUs), it has several alternatives to invest the excess cash to grow further, thereby expanding the company internally or externally through acquisition of similar or related businesses. If there is no opportunity to grow internally or externally, the firm may be tempted to opt for unrelated, diversified acquisitions. Historically, it has been shown that these kind of unrelated diversifications rarely work. A firm should rather avoid it as a general rule.

If the SGR is consistently less than AGR, the firms create value, but are growing too fast. The danger is that if sales grow too quickly and consistently over SGR, there is not enough spontaneous finance from retained income and debt to finance additional fixed assets and to supply the working capital requirements. This causes cash shortfall that accumulates if the growth in sales is not limited to sustainable level. There are two options in this situation – to reduce dividend payments and thereby increasing the retention ratio or to raise additional capital by borrowing or by new issue of shares. If it is not possible to raise new capital, the firm has no other choice but to cut back on some of its operations or to reduce the overall growth rate to the level of SGR.

CHALLENGES OF SUSTAINABLE GROWTH RATE

Business experts argue that achieving sustainable growth is not possible without paying attention to two important aspects, viz. growth strategy and growth capability. Companies that fail to give adequate attention to one aspect or the other are doomed to fail in their efforts to establish practices of sustainable growth in the long run. For instance, if a company has an excellent growth strategy in place, but has not taken efforts to increase its infrastructural facilities, long term growth is impossible. Similarly, a company that has sufficient resources and infrastructural facilities, but a poor growth strategy will also fail in the long-run.

Achieving the sustainable growth rate is the prime concern of managers of companies, whether small or big. But, in a fast changing economic, political and competitive environment, achieving the sustainable growth is not an easy task, especially in the present highly complex global environment. Consumer attitude, for instance, changed considerably over the last few decades. They are more discriminative which compels the firms to attract customers by adding more value to the products and by offering innovative services. Similarly, competition is keen in almost all the industries, which have seen unprecedented breakdowns in the barriers that formerly separated them; therefore, companies must look forward to identify their competitors and their strategic choices in the search for creating sustainable growth.

PART - II

Based on foregoing discussions, a study has been conducted using the audited financial statements of two leading IT firms, viz. Wipro and Infosys and the results are discussed in the following paragraphs:

OBJECTIVES OF THE STUDY

- To identify the components of SGR and the efficiency in their usage;
- To study the impact of the components on the SGR; and
- To study the relationship between SGR and actual growth rate (AGR).

PERIOD OF THE STUDY

The study is conducted based on the audited financial statements of Wipro and Infosys for a period of 9 years (1998-99 to 2006-07).

RESEARCH DESIGN

1. Simple Ratio Analysis
2. Correlation Analysis With Hypothesis test.

ANALYSIS AND DISCUSSION

The components of capital employed by the two companies are presented in Table – 1. Both the companies have relied much on the internally generated funds rather than debt or equity. Both the firms have exploited the market opportunities to improve their AGR which enabled them to use the internal funds rather than the funds from external sources.

Table – 1 : Components of Capital Employed

(*percentage to total CE)*

	Wipro			Infosys		
Year	SC	R&S	Loan	SC	R&S	Loan
1999	9	57	34	6	94	0
2000	9	84	7	4	96	0
2001	2	95	2	2	98	0
2002	2	97	1	2	98	0
2003	1	97	2	1	99	0
2004	1	96	3	1	99	0
2005	3	96	1	3	97	0
2006	4	95	1	2	98	0
2007	3	94	2	3	97	0

SC = Share capital; R&S = Reserves & Surplus

The summarised results are shown in Table – 2 and the calculations of SGR and AGR of Wipro and Infosys are presented in Table – 3 and Table – 4 respectively.

Table – 2 : Summary Results

	Ave	CV	CAGR
Wipro		%	%
Profit Margin	0.19	20	15
Retention Ratio	0.75	35	35
ATR	2.2	32	0
Assets/NW	1.09	15	-5
Infosys	Ave.	CV	CAGR
Profit Margin	0.29	9	-2
Retention Ratio	0.71	33	34
ATR	1.85	12	5
Assets/NW	1	0	0

Ave: Average CAGR-Compounded Annual Growth Rate

CV-Coefficient of Variation

It can be seen that the average SGR of Wipro (Table – 3) is greater than the average AGR, whereas the SGR is less than AGR in Infosys(Table -4). Also, all the component ratios of SGR were higher except the profit margin in the case of Wipro as compared to Infosys.

Table – 3

Rs. Crores

Wipro										
Details/Year	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**Ave.**
Sales	1831	2360	3134	3477	4040	5135	7233	10227	13684	6161
PAT	112	248	668	866	813	915	1495	2020	2842	1233
Total assets	828	828	2010	2559	3400	3608	4956	6478	9555	4174
Net worth	547	770	1965	2533	3330	3508	4894	6428	9317	4093
Dividend	8	10	14	23	26	761	401	813	1001	381
RE	104	238	654	843	787	154	1094	1207	1841	852
Ratios										
Profit Margin		0.11	0.21	0.25	0.20	0.18	0.21	0.20	0.21	0.19
ATR		2.85	3.79	1.73	1.58	1.51	2.00	2.06	2.11	2.20
Assets/NW		1.51	1.08	1.02	1.01	1.02	1.03	1.01	1.01	1.09
ROE		0.45	0.87	0.44	0.32	0.27	0.43	0.41	0.44	0.45
Retention Ratio		0.96	0.98	0.97	0.97	0.17	0.73	0.60	0.65	0.75
SGR (ROE*RE)		0.44	0.85	0.43	0.31	0.05	0.31	0.25	0.29	**0.36**
AGR		0.29	0.33	0.11	0.16	0.27	0.41	0.41	0.34	**0.29**

Table – 4

Rs. Crores

Infosys										
Details/Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	Ave.
Sales	509	882	1901	2604	3623	4761	6860	9028	13149	5351
PAT	135	294	629	808	958	1243	1904	2421	3783	1505
Total assets	574	833	1390	2080	2861	3253	5242	6897	11162	4215
Net worth	574	833	1390	2080	2861	3253	5242	6897	11162	4215
Dividend	12	30	66	132	191	973	352	1412	751	488
RE	123	264	563	676	767	270	1552	1009	3032	1017
Ratios										
Profit Margin		0.33	0.33	0.31	0.26	0.26	0.28	0.27	0.29	0.29
ATR		1.54	2.28	1.87	1.74	1.66	2.11	1.72	1.91	1.85
Assets/NW		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
ROE		0.51	0.76	0.58	0.46	0.43	0.59	0.46	0.55	0.54
Retention Ratio		0.90	0.90	0.84	0.80	0.22	0.82	0.42	0.80	0.71
SGR (ROE*RE)		0.46	0.68	0.49	0.37	0.09	0.48	0.19	0.44	**0.40**
AGR		0.73	1.16	0.37	0.39	0.31	0.44	0.32	0.46	**0.52**

PAT – Profit after tax RE – Retained earnings

ATR – Asset turnover ratio NW – Net worth

AGR – Actual sales growth rate

Figure – 1: Wipro

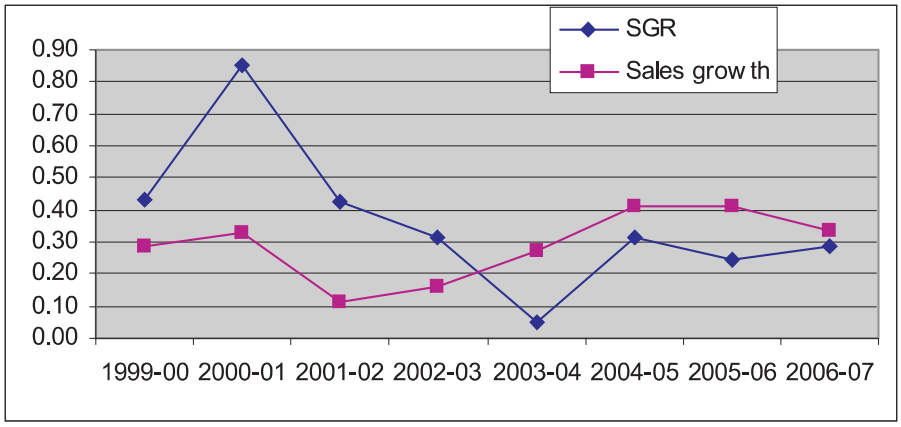
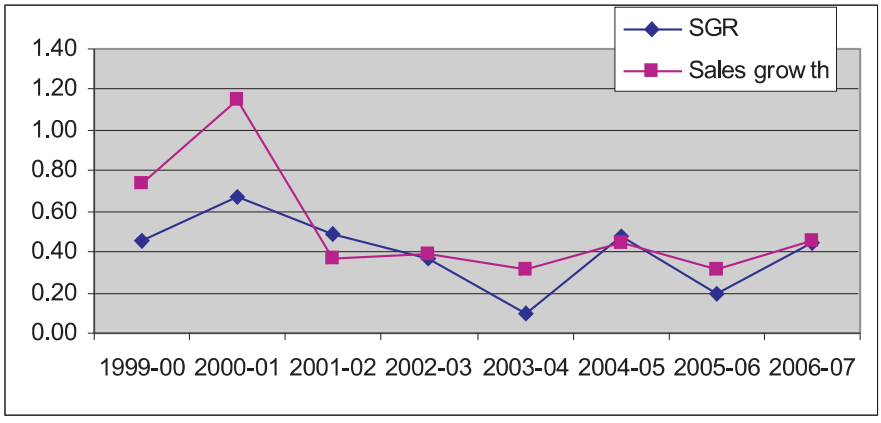


Figure – 2: Infosys



Further analysis of Table – 3 & 4 and Figures 1 & 2 reveals that Wipro had very high SGRs in the earlier years, i.e. from 2000 to 2003, after that the SGRs dropped below the AGRs. The reverse was the case with Infosys. The AGRs were higher than the SGRs in all the years except in the years 2002 and 2005 in which the AGRs dropped marginally below the SGRs.

COMPONENT-WISE ANALYSIS

PROFITABILITY ANALYSIS

The average profit margin was 19 per cent in the case of Wipro, whereas, the average profit margin of Infosys was 29 per cent which indicates better performance of Infosys as compared to Wipro. The coefficient of variation is 20 per cent and 9 per cent respectively, also that indicates better consistency in the case of Infosys as compared to Wipro, but the compounded annual growth rate (CAGR) was 2 per cent as compared to Wipro's growth rate of 15 per cent.

Table 5: Major Cost Components (As A Percentage OfSales)

Wipro	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**Ave.**
Rm/sales	0.43	0.32	0.31	0.28	0.25	0.24	0.24	0.15	0.28
EC/sales	0.11	0.13	0.14	0.16	0.17	0.40	0.42	0.42	0.24
S&A/sales	0.25	0.26	0.25	0.31	0.34	0.09	0.08	0.08	0.21
Infosys									
Rm/sales	0.05	0.05	0.04	0.06	0.06	0.09	0.10	0.11	0.07
EC/sales	0.38	0.38	0.43	0.46	0.50	0.46	0.47	0.48	0.44
S&A/sales	0.17	0.16	0.12	0.13	0.11	0.10	0.09	0.08	0.12

RM – Raw material cost; EC – Employee cost;

S&A – Selling and administration expenses

Further analysis of the profitability of both the firms (Table – 5) reveals that Infosys has spent an average of around 12 per cent of the sales value towards selling and administration expenses, whereas Wipro has spent more than 20 per cent which has caused lesser profit margin as compared to Infosys.

The return on equity was also very high in Infosys as compared to Wipro. The average ROE of Infosys was 54 per cent as compared to 46 per cent ROE of Wipro. High ROE coupled with high retention ratio has enabled both the firms to trade on equity rather than relying on external debt.

ASSET TURNOVER ANALYSIS

The asset turnovers of both the firms were exceptionally high compared with any industrial standards. Wipro's asset turnover was more than double (average ATR of 2.2 times), whereas the ATR of Infosys was 1.85 times, indicates better utilisation of assets by Wipro as compared to Infosys. But, in terms of growth rates and consistency, Infosys has shown better results with the coefficient of variation of 12 per cent and CAGR of 5 per cent in comparison with Wipro's coefficient of variation of 32 per cent and nil CAGR.

LEVERAGE ANALYSIS

It is evident from the data that both the firms were conservative in using external debt during the entire study period. Wipro has used high amount of debt in the first year (1999). then gradually reduced the debt resulting in a substantial decrease in the leverage ratio from 1.51 times in 1999 to 1.08 times in 2000 and further reduced to a marginal level of 1.01 times during the later years, resulting in a negative growth rate of 5 per cent and the coefficient of variation of 15 per cent. But, Infosys has never used external borrowings, as a result the leverage ratio remained at 1 during the entire study period.

RETENTION RATIO ANALYSIS

Both Wipro and Infosys have adopted a conservative dividend policy except during a couple of years which is evident from Tables - 3 and 4 respectively. The average retention rate was 75 per cent in the case of Wipro and 71 per cent in the case of Infosys, which again substantiates Higgins logic. In terms of growth rate also, both the firms have shown almost the same results with the CAGR of 35 per cent and 34 per cent respectively and the coefficient of variation of 35 per cent and 33 per cent respectively. The coefficient of variations of both the companies were very high because of the lowest retention ratio of 17 per cent of Wipro and 22 per cent of Infosys, both happened in the year 2004.

OVERALL PERFORMANCE

Table - 6 :Growth rates

	Wipro	Infosys
CAGR of Net Worth(%)	47	46
CAGR of net assets (%)	41	46

Table – 6 shows the growth rates of both the firms in terms of net worth and net assets. Both the firms have a CAGR of more than 45 per cent within a span of just 9 years (47% and 46% respectively), but the CAGR of net assets is far higher in the case of Infosys (The CAGR of Wipro's net assets was 41 per cent and that of Infosys was 46 per cent). In short, it can be concluded that Infosys has outperformed Wipro in terms of sustainable growth as stated by Higgins, i.e. the growth through internally generated funds.

CORRELATION ANALYSIS

As discussed earlier, if targeted sales increase faster than the SGR, the sustainable growth challenge (SGC) is positive and operating and financial adjustments need to be made in order to restore an accounting and operating balance such that SGC $\rightarrow$ 0. This is accomplished by increasing the SGR. In contrast, if the SGC is negative which may occur with scale inefficiencies in the utilisation of existing resources, targeted sales growth will be lower than the SGR. Consequently, unproductive cash surpluses will increase and to drive SGC $\rightarrow$ 0 adjustments must be made to decrease the SGR. Hence, always there is a close relationship existing between the SGR and AGR. In this part of the study, an attempt is made to find the correlation between SGR and AGR to ascertain their relationship and also to test whether the computed values of such correlation coefficient are significant or not by using student's 't' test.

Table - 7

	r	t
Wipro	-0.01	/ 0.014 /
Infosys	0.75	/ 2.78 /

The Karl Pearson's correlation coefficient (**r**) of Wipro is -0.01 and that of Infosys is 0.75 (Table -7) which indicates that the degree of relationship between SGR and AGR is marginal and negligible in the case of Wipro, but there is a strong positive association between the two variables in the case of Infosys.

In order to examine whether there is a significant difference between SGR and AGR, students 't' test is applied. The two hypothesis are:

- Null hypothesis (Ho) – There is no significant difference between SGR and AGR; and
- Alternative hypothesis (H1) – There is significant difference between SGR and AGR.

The calculated values of 't' of Wipro and Infosys are 0.014 and 2.78 respectively (Table 7). The critical value of 't' with 6 (n-2) degrees of freedom and at 5% level of significance is 1.943. As the calculated value of Wipro is much less than the table value, we accept the null hypothesis and conclude that there is no significant association between SGR and AGR. In the case of Infosys, the calculated value (2.78) is much higher than the table value. Hence, the null hypothesis is rejected and it is concluded that the association between the two variables in the case of Infosys is significant.

CONCLUDING REMARKS

Monitoring the current situation and progress of a company by mapping its sustainable growth rate helps managers to ensure that the scarce resources are allocated wisely. Also, it ensures the company's operating and financial policies go in consistency with the sustainable growth rate and serve as valuable tools in the process of coordinating plans and actions by combining two sets of ratios of SGR equation. The first set includes the retention ratio and leverage ratio whereas the second set includes the asset turnover ratio and profitability ratio. The former two ratios can be described as policy statements of a company reflecting the management's attitude towards the risks and opportunities it expects in the future and the latter two ratios are the outcomes of managerial action; the end result is the overall improvements in its operational and financial performances. In short, using the four component ratios, SGR concept serves as the best tool for prospective firms to fix a target growth rate using the internally generated funds and improve their operating and financial performances over a period of time. This paper also substantiates the above arguments and illustrates how the two firms, viz. Wipro and Infosys have used the internally generated funds to exploit the fast growing IT market and become successful.

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