

## CHAPTER 4

### FINANCIAL PERFORMANCE

#### 4.1 INTRODUCTION

The financial performance of individual companies displays markedly different patterns over time. Some companies' profits increase, some decrease, and some show fluctuating patterns. The following examples of well-known companies illustrates the point:

##### *Profit increases*

From 1980 to 1994, General Electric's return on equity averaged 18,1% (only twice less than 16%). Profits grew from \$1,5 billion to \$4,7 billion, showing year-to-year increases every year except two.

In 1985 Microsoft earned \$24,1 million profits on sales of \$140 million; in 1995, it earned \$1,45 billion on sales of \$5,9 billion; profits increased every year – the mean year-to-year profit increase was more than 50%.

##### *Profit decreases*

IBM's profits were from 1982 to 1990 only once below \$4 billion and were three times above \$6 billion (including 1990). In the following three years IBM sustained increasingly large losses: 1991 - \$2,8 billion; 1992 - \$5 billion; and 1993 - \$8,1 billion. Profits recovered to \$3 billion in 1994.

##### *Fluctuating profit*

In 1980 General Motors lost \$763 million, from 1983 to 1989 it averaged \$3,94 billion in profits (maximum \$4,9 billion and only once less than \$3 billion), in 1991

and 1992 it lost \$4,5 billion and \$23,5 billion, respectively. General Motors recovered to make \$2,5 billion in profits in 1993 and \$4,9 billion in 1994.

(Capon, Farley & Hoenig 1996: 1 – 3.)

In this chapter profitability is defined, elements of financial performance are discussed, including the profit zone and causal factors, and various measures of financial performance are reviewed.

## **4.2 DEFINING PROFITABILITY**

Profitability is a key component of financial performance. For the purposes of this study financial performance was defined in section 1.3 as relating more to the profitability of a company than to the possible wider interpretation of financial performance. Helfert (1991: 99) describes profitability as the effectiveness with which management has employed both the total assets and the net assets as recorded on the balance sheet. The effectiveness is judged by relating net profit to the assets utilized in generating the profit.

From the owners' point of view (the shareholders in the case of a company) profitability means the returns achieved through the efforts of management on the funds invested by the owners. (Helfert 1991: 102.)

## **4.3 ELEMENTS OF FINANCIAL PERFORMANCE**

### **4.3.1 The profit zone**

Once market share was the best predictor and guarantor of profitability. However, in the last decade the classic rules of strategy have broken down in a fundamental way. Companies like IBM, Kodak, United Airlines, U.S. Steel, General Motors, Ford, and a host of others succeeded fantastically in winning the market-share game but did not enjoy the profitability that was supposed to follow. In recent years several of these companies have reversed their strategic thinking about market share and profitability and initiated radical changes in their business

designs, achieving in the process some of the success that had been eluding them. (Slywotzky 1998: 12.)

According to Slywotzky (1998: 12) success in today' marketplace depends on the following questions:

- How does profit really happen in our industry?
- Where is the "profit zone", that area within a specific industry in which profit is allowed?
- How should the business model be designed in order to reach and operate in the profit zone?

Profitability must be understood for each company in its own terms. Disney and Coca-Cola make their profits in very different ways but both are part of a small portfolio of companies that are referred to as "reinventors". "Reinventors" are companies who have become almost habitually customer-centric and profit-centric. They change their business design every five years and expect that process to continue. (Slywotzky 1998: 14 – 15.)

In the early 1980's Coca-Cola's business model was essentially that of a syrup maker and advertiser selling through franchise bottlers. Coke's profitability was concentrated in fountain and vending, two areas that the bottlers could reach but that the company could influence at best indirectly and in many cases not at all. By the mid-1980s Coke had shifted its U.S. business model to that of a "value chain manager". It built a very different business design by taking control of the value chain by buying controlling stakes in its bottlers, maximizing its investment in fountain and vending, and eventually rebuilding that entire business model on a global basis. (Slywotzky 1998: 13.)

The profitability problem the Disney Company faced in the mid-1980s was that it was the value creator (of content and characters) in its industry while others recaptured the majority of this value. Disney began to participate directly in the retail part of the system. Due to this move Disney was able to create an entirely

integrated system, with a series of new ancillary activities, which allowed it to maximize the value and profitability of every piece of content it created. (Slywotzky 1998: 14.)

General Electric (GE) has probably answered better than anyone else the question of how manufacturers can make money. In the early 1980s GE's business model was based on the principle of being No. 1 or No. 2 or getting out of the business because being the market share leader was the pathway to highest profitability. By the mid-1980s this was no longer true because GE's customers began to focus on getting the lowest price. The business model changed to not only being No. 1 in market share, but also securing the No. 1 position in productivity. That model worked for several years, but by the early 1990s it was not enough to create sustained profit growth. The profit was in selling the full "package", so GE began to develop services, solutions, and other ancillary activities to ensure profit growth. (Slywotzky 1998: 15.)

#### **4.3.2 Causal factors**

Although individual experts, consultants and promoters may tout a single particular element as driving superior performance, Capon, Farley & Hoenig (1996: 182) found no single factor that acts independently. A variety of key factors, drawn from several research traditions, seem to work together to produce better-than-average performance. They found that elements of environment, strategy and organization (can be divided into structure and climate or culture) are important in explaining differences in financial performance. (Capon *et al* (1996: 6) defines "environment" as the set of market, transactional and contextual factors facing a company, therefore "environment" in their work refers to more than "green environment".)

This finding is supported by the results from a meta-analysis of extant empirical work on financial performance and the empirical study of Capon *et al*. The meta-analysis showed that environment and strategy variables dominate in strength of impact, with strategy providing the most consistent effects. The empirical study

also showed that environment and strategy provide the strongest relationships, but several significant relationships for organization, especially structure, were also identified. (Capon *et al* 1996: 182.)

Capon *et al* (1996: 185) identified the following causal factors that, regardless of analytic method employed, stand out in terms of the consistency with which they affect alternative measures of performance:

- Competing in relatively concentrated markets with high market share (environment);
- competing in growing markets (environment);
- high investment in research and development, especially for developing new products and services (strategy);
- high involvement in markets outside of the U.S. (strategy);
- low debt levels (strategy); and
- an entrepreneurial atmosphere (organization) that supports a strategy of innovation.

The power of these six factors in driving financial performance was demonstrated in their exploratory use as a predictive performance tool for a single company. Using Eastman Kodak as an example, a very good fit between actual and predicted performance was secured over a 13-year period. (Capon *et al* 1996: 186.)

#### **4.4 MEASURING FINANCIAL PERFORMANCE**

According to Capon, *et al* (1996: 7) measures of financial performance take a variety of forms. These measures differ from each other on several dimensions, and many issues concern the choice of which particular financial measure to employ. For example, measures may be absolute (e.g. sales, profit), return-based (e.g. profit/sales, profit/capital, profit/equity), internal (e.g. profit/sales), external (e.g. market value of the firm), a level for a single period (e.g. one year), a mean or

a growth rate over several years or a variability (e.g. standard deviation) about a mean or a trend. In their empirical study they introduced firm survival as one of the measures.

According to Banker, Chang & Majumdar (1993: 35) finding useful components of performance measures is a relevant area for research. For them a major difficulty was defining the appropriate components and showing whether the interpretations that result are reasonable and applicable elsewhere.

The following measures are often used to measure financial performance:

#### **4.4.1 Profit margin**

Profit margin = Net profit after tax / Sales

This gives an indication of the profit generated for every rand of sales. A relatively high profit margin is desirable as it corresponds to low expense ratios relative to sales. A smaller margin is not necessarily bad, for example, lowering a sales price will usually increase unit volume, but profit margins will shrink. Total profit may still increase due to the increase in volume. (Ross, Westerfield, Jordan & Firer 1996: 60 – 61.)

#### **4.4.2 Return on assets (ROA)**

ROA = Net profit / Total assets

The easiest form of profitability analysis is to relate net profit to the total assets on the balance sheet. Net assets (total assets less current liabilities), which are equivalent to the total long-term sources on the balance sheet may also be used, using the argument that operating liabilities are available essentially without cost to support a portion of the current assets. (Helfert 1991: 99.)

According to Bandrowski (1992: 19) the most widely used formula for return on investment is return on net assets (RONA). According to Ross *et al* (1996: 61)

RONA is a measure of profit per rand of assets invested in a firm and thus an indicator of operating performance. They chose to define it as follows:

$$\text{RONA} = \text{Net profit before interest and tax} / \text{Net assets}$$

Helfert (1991: 100) accepts the argument that income taxes are a normal part of doing business and states that net profit before interest but after taxes can be used in the above ratio. Ross *et al* (1996: 61) states that the above ratio is sometimes used with net profit after interest and tax in the numerator.

#### **4.4.3 Return on equity (ROE)**

$$\text{ROE} = \text{Net profit after tax} / \text{Total equity}$$

According to Ross *et al* (1996: 61) ROE is a measure of how the shareholders fared during the year. Since benefiting shareholders is the main goal of a company, they are of the opinion that ROE is, in an accounting sense, the true bottom-line measure of performance. ROE is a measure of profit per rand invested in equity.

Helfert (1991: 102) prefers to call this ratio “return on net worth” and states that it is the most common ratio used for measuring the return on the owners’ investment.

#### **4.4.4 Du Pont identity**

$$\text{ROE} = (\text{Net profit after tax} / \text{Sales}) * (\text{Sales} / \text{Net assets}) * (\text{Net assets} / \text{Total equity})$$

The above equation is the traditional Du Pont identity. It shows that ROE depends on operating efficiency (profit margin), asset use efficiency and financial leverage. (Ross *et al* 1996: 64.)

The Du Pont system is a financial analysis and planning tool, which uses basic accounting relationships, and is designed to provide an understanding of the factors that drive the ROE of a company. ROE can be progressively decomposed to specific income statement and balance sheet items. The decomposition of ROE may be represented by a flow chart. Management can use such a flowchart to identify specific ratios where improvement can best be achieved if ROE is unsatisfactory. (Ross et al 1996: 63 – 64.)

According to Banker *et al* (1993: 25) the Du Pont formula has long been used to measure the financial performance of companies. They are of the opinion that due to the way in which the profitability ratio is constructed, it provides only a gross aggregate measure and does not easily capture the impact that the micro-attributes of the operations of companies have on profitability. In answer to this problem the American Productivity Center's (APC) formula disaggregates changes in a company's profitability into two components capturing changes in its productivity and its price recovery ability.

The APC productivity change ratio is the ratio of the values of current period outputs to base period outputs, divided by the ratio of the values of current period inputs to base period inputs. The APC price recovery ratio is the ratio of the value of outputs at current period prices to the value of base level prices, divided by the ratio of the value of inputs at current period prices to the value at base level prices. (Banker *et al* 1993: 26 – 27.)

When Banker *et al* (1993: 35) combined the profitability component (profit to sales) of the Du Pont formula with the APC method, the resultant ratios allowed more micro-analytic details of performance to be evaluated. They extended the profitability ratio analysis of the APC method and analyzed changes in productivity, price recovery, product mix and capacity utilization to examine how each contributes to changes in a company's profitability.



#### **4.4.5 Earnings per share (EPS)**

EPS = Net profit after tax / Number of shares in issue

EPS is a measure to which both management and shareholders pay a great deal of attention. It is widely used in the valuation of common stock and is often the basis for setting specific corporate objectives and goals as part of strategic planning. (Helfert 1991: 105.)

#### **4.4.6 Price/Earnings ratio (P/E ratio)**

P/E ratio = Market price per share / EPS

Both management and owners often quote the simple relationship between current or expected EPS and the current market price of the stock. The ratio is also called the "earnings multiple", and it is used to indicate how the stock market is judging the company's earnings performance and prospects. (Helfert 1991: 110.)

#### **4.4.7 Excess value (EV)**

EV = (Market value of equity + Book value of debt – Total assets) / Sales

EV was first used by Thomadakis (1977) and Errunza & Senbet (1981), and was found significant by Cochran & Wood (1984: 50) to relate social responsibility and financial performance. EV captures the premiums or discounts granted to individual companies by the market. (Allen 1994: 96.)

#### **4.4.8 Return on capital (ROC)**

ROC = Net profit after tax / Total capital employed

Stewart (1990: 85) suggested that the rate of return on total capital is the return that should be used to assess corporate performance. According to Stewart ROC measures the productivity of capital employed without regard to the method of financing, it is free from accounting distortions that arise from accrual bookkeeping

entries, free from the conservative bias of accounting statements, and from the tendency to understate capital by writing off unsuccessful efforts. However, Stewart concluded that simply measuring ROC is not enough, as it is important to consider the cost of capital employed as well as the return upon it. He suggested the use of Economic Value Added (discussed in section 4.4.9).

#### **4.4.9 Economic value added (EVA)**

Traditional performance measures (net income, ROA, ROE, and earnings per share) do not properly reflect risk and therefore reinforce behaviour that is either too aggressive (that is, aims to maximize earnings) or too conservative (aims to prevent dilution of returns) (Uyemura, Kantor & Pettit 1996: 98).

According to Epstein & Young (1999: 45) shareholder value measures such as economic value added (EVA), an increasingly popular performance metric, can significantly improve corporate decision making in the realm of environmental management and can improve both environmental and general capital investment decisions. (EVA is a registered trademark of Stern Stewart & Company.)

EVA is similar to conventional measures of profit but with two important differences:

- EVA considers the cost of all capital, including the cost of equity.
- EVA corrects for potential distortions caused by generally accepted accounting principles (GAAP).

(Epstein & Young 1999: 46.)

To understand EVA it is necessary to understand market value added (MVA). MVA is the difference between the market value of the company and its invested capital (including equity and debt) contributed to the company:

$$\text{MVA} = \text{Market value} - \text{Invested Capital.}$$

(Epstein & Young 1999: 46.)

Following from the above, MVA is the net present value (NPV) of a company's current and anticipated future investments, or the NPV of the company. MVA or NPV can be calculated as the present value of all future EVA, just as it can be the present value of cash flow. (Thompson 1998: 17.)

EVA is the mathematical equivalent of NPV. If the same assumptions are plugged into both valuation models, they will produce the same answer. This is an essential theoretical underpinning of EVA. However, unlike NPV, EVA yields a period-by-period scorecard on whether management is actually delivering positive NPV, and a basis for analysts to assess likely future increases in NPV. (Thompson 1998: 17.)

EVA is a period performance measure of the amount by which net operating profit exceeds or fall short of the cost of all debt and equity capital:

$$\text{EVA} = \text{Net operating profit} - \text{Capital charges}$$

or

$$\text{Net operating profit} - \text{Invested capital} \times \text{Weighted average cost of capital}$$

(Thompson 1998: 17; Epstein & Young 1999: 46.)

Stewart (1990: 192) as well as the Bureau of Financial Analysis of the University of Pretoria calculates EVA as follows:

$$\text{EVA} = (\text{Return on total capital} - \text{Weighted average cost of capital}) \times \text{Capital}$$

If GAAP distorts the measure of capital or operating profit, it can be adjusted as necessary. Most of the adjustments are in the form of "equity equivalents". The logic behind these adjustments is that when companies apply GAAP, certain items are charged to income, such as provisions, deferred taxes, and goodwill, which

artificially (and misleadingly) reduce stated capital. The potential number of adjustments is practically limitless. EVA consultants have already identified more than 150 changes that can be made to operating profit and invested capital. However, most companies make fewer than five adjustments for fear that the evaluation and reward system based on EVA would become impossibly complicated. (Epstein & Young 1999: 46.)

According to Huckle (1995: 41) EVA is the most robust measure of company profitability, but its calculation is onerous and time consuming. Uyemura, Kantor & Pettit (1996: 103) referred to an “EVA drivers” analysis that identifies the specific aspects and parameters of any product or service that are key to realizing a sustainable, positive EVA and conceded that such comprehensive profitability measurement may appear to be a daunting undertaking. However, they are of the opinion that it need not be the case, especially when the following three principles are observed:

- The 80/20 rule is the empirical observation that one can obtain 80% of the information sought by analyzing the most significant 20% of the data.
- EVA is normally applied as a “top-down” process. This means that all analyses begin at the highest level of the organization and is “drilled-down” to lower levels only as warranted by the need and benefit of such additional detail.
- The accountability concept (e.g. line managers should only be accountable for the risk-types they manage) simplifies the EVA analysis of the major line units by limiting the risk dimensions and cost allocation types that should be undertaken.

#### **4.5 SUMMARY AND CONCLUSIONS**

From management’s point of view profitability is the effectiveness with which management has employed both the total assets and the net assets as recorded on the balance sheet. The effectiveness is judged by relating net profit to the assets utilized in generating the profit. From the owners’ point of view (the

shareholders in the case of a company) profitability means the returns achieved through the efforts of management on the funds invested by the owners.

Once market share was the best predictor and guarantor of profitability. However, in the last decade the classic rules of strategy have broken down in a fundamental way. Large, well-known companies succeeded fantastically in winning market-share but did not enjoy the profitability that was supposed to follow. In recent years several of these companies have reversed their strategic thinking about market share and profitability and initiated radical changes in their business designs, achieving in the process some of the success that had been eluding them.

Success in today's marketplace depends on how profit is really made in an industry, where the "profit zone" is (that area within a specific industry in which profit is allowed), and how the business model should be designed in order to reach and operate in the profit zone. Profitability must be understood for each company in its own terms. Companies who have become almost habitually customer-centric and profit-centric are known as "reinventors". They change their business design every five years and expect that process to continue.

A variety of key factors, drawn from several research traditions, seem to work together to produce better-than-average performance. Elements of environment, strategy and organization (can be divided into structure and climate or culture) are important in explaining differences in financial performance. Environment and strategy variables dominate in strength of impact, with strategy providing the most consistent effects. The following causal factors stand out in terms of the consistency with which they affect alternative measures of performance:

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Measures of financial performance take a variety of forms. These measures differ from each other on several dimensions, and many issues concern the choice of which particular financial measure to employ. For example, measures may be absolute, return-based, internal, external, a level for a single period, a mean or a growth rate over several years, or a variability about a mean or a trend.

The following measures are often used to measure financial performance:

- Profit margin
- Return on assets
- Return on equity
- Earnings per share
- Price/Earnings ratio
- Excess value
- Return on capital
- Economic value added

The above-mentioned measures were all considered in order to determine the most appropriate measures of financial performance for the purposes of this study (refer to section 5.5.2).