Chapter 10

SHAREHOLDER VALUE ADDED

(Economic profit)

One of the most important developments in corporate finance during the 1990s was the rediscovery of the concept of economic profit developed by an English economist, Alfred Marshall, in the 1890s. Economic profit evaluates a firm's, division's or business unit's financial performance over a specific time period. A firm with positive economic profit is creating value for its shareholders. Negative economic profit destroys value: shareholders would be better off making an alternative investment.

Economic profit travels under many guises, depending on which firm of consultants you are talking to. The most widespread term is EVA™ which is the acronym for Economic Value Added. Others use Shareholder Value Added (*SVA*) or Cash Flow Return on Investment (*CFROI*).

JUST ANOTHER NUMBER?

Accounting profit is the figure struck after all expenses and taxes are deducted from the firm's revenues during the period under evaluation. These expenses include interest paid to the holders of the firm's debt obligations (bankers and bondholders). However, there is no explicit treatment of returns to shareholders – i.e., what is the cost of equity?

Another shortcoming of financial accounting performance figures is that they do not incorporate a figure for risk. Thus, senior management is not able to discern

whether a project's performance has delivered a return that is commensurate with its risk.

Thus, traditional measures, using accounting data, have been found to be poor predictors of future shareholder returns. Companies with a value maximisation objective desire internal measures for evaluating strategic initiatives and ongoing performance which provide an accurate reflection of value creation. Many firms have adopted shareholder value measures for internal use because they have been found to be a more accurate predictor of shareholder returns than accounting measures.

The measurement combines a firm's financial return, capital used in generating the return and a measure of the firm's risk in a single figure. Economic profit uses the same tools as those employed in a discounted cash flow valuation: cash flows (not accounting profit), cash invested in the business and the Weighted Average Cost of Capital (*WACC*).

Accounting measures typically evaluate only one or sometimes two of the above, but never all three. For example, return on equity and Return On Capital Employed (*ROCE*) use data from both the income statement and balance sheet – however, they do not take account of the project's or business's risk.

BENEFITS OF SVA

The SVA approach is consistent with investors' views of drivers of shareholder returns. Investors understand that

a company or project must earn a return in excess of its cost of capital (risk) in order to create value for the suppliers of capital. It is academically sound, being based on Discounted Cash Flows (*DCFs*) and WACC. In addition, studies indicate there is a greater correlation between shareholder return and SVA measures than there is between shareholder return and traditional accounting measures including earnings per share, return on equity and others.

It is easily understood by managers and will influence operational decisions to enhance value. Managers can invest in high-return projects, reduce the amount of capital devoted to low-return projects or reduce the cost of capital. It also makes the cost of capital clearly visible to managers. Many operating managers are unaware of the concept of cost of capital. By using SVA with its capital charge, senior management are able to 'monetise' the cost of capital and ensure that managers seek to minimise the capital used.

SVA provides a single figure for financial performance allowing management to concentrate on a single monetary figure in determination of performance. Many companies use SVA in the financial portion of a balanced scorecard assessment programme.

Finally, it is easy to measure and implement. The SVA calculation is relatively straightforward and can be employed at both business unit and corporate levels.

Many companies have adopted measures like this to judge their performance internally, across business

units and with their peer group. Prominent examples include Coca-Cola, Boots, LloydsTSB and VEBA.

CALCULATION OF SVA

SVA is a single period performance measure of whether a business has created or destroyed value. Put simply, a firm creates value when its ROCE is greater than its cost of capital. ROCE is a function of *Net Operating Profit After Tax* (*NOPAT*) and invested capital, while the cost of capital is determined by the return expected by the market – i.e., WACC.

NOPAT measures return by adjusting operating profit for corporation tax. The NOPAT figure used in economic profit calculation is the same figure as derived in the DCF valuations introduced in Chapter 8 (Box 8.2). NOPAT is the pre-interest, post-tax operating profit earned by the company or business unit.

Capital employed or invested capital is the amount of resources required to generate the return. In the following simple examples, we define invested capital as shareholders' funds plus total debt (both long-term and short-term). For simplicity of calculation, the examples in this book use the book value of shareholders' funds.

Some approaches to SVA (notably EVA and CFROI) make several adjustments to invested capital to more accurately reflect the current value of assets and to take account of certain items that are often expensed on an income statement, but have a useful life of more than

1 year. One of the main items that is typically expensed is Research and Development (*R&D*), but the value of R&D done in 1 year often continues for many years.

The cost of capital is the measure of the required return by investors in the company's debt and equity securities. It is the weighted average of the cost of debt financing and equity finance used by the company, or allocated to the division/business unit. The cost of capital incorporates a measure of the risk of the business. Businesses operating in higher risk sectors of the economy will have higher costs of capital. Similarly, businesses with an excessive amount of debt in their capital structure will be punished by the capital markets with a higher cost of capital.

Table 10.1 presents the summary income statement and balance sheet for a fictitious company.

There are two ways to calculate the economic profit of a company. Both are valid and will arrive at the same figure. One is called the *spread* method and the other the *capital charge* method (Table 10.2).

Table 10.3 illustrates the calculation of economic profit using the spread method. It starts by calculating the NOPAT for each of the 5 years ended December 2001 to 2005. NOPAT is divided by the opening capital (i.e., invested capital at the end of the prior year). The opening capital for 2003 is £372 million (the capital on the balance sheet at 31 December 2002). The capital employed calculation can be based on opening capital (as in this example), average capital employed during the

Table 10.1 Example of economic profit calculation.

	Summary balance sheet					
	Opening	2001	2002	2003	2004	2005
Working capital	0	33	41	48	55	54
Fixed assets	300	315	331	347	365	383
Net assets	300	348	372	395	420	437
Net debt	150	164	155	136	113	68
Equity	150	184	217	259	307	369
Total capital	300	348	372	395	420	437
		Summary – profit and loss				
Revenue		250	275	303	333	366
Cost of sales		125	137	152	166	183
Gross profit		125	138	151	167	183
Other expenses		50	50	75	75	75
EBIT		75	88	76	92	108
Interest expense		24	23	21	18	13
Earnings before tax		51	65	55	74	95
Taxation		18	23	19	26	33
Net profit after tax		33	42	36	48	62

year or on closing capital. The important thing is to remain consistent throughout the analysis.

It has been determined that this business has a WACC of 10%.

In 2001, NOPAT of £52 is divided by opening capital of £300, resulting in an ROCE of 17.3%. As the 17.3%

Table 10.2 Calculating economic profit.

Capital charge method		Spread method	
	NOPAT (£)		ROCE (%)
less:	(Capital employed (%) × WACC (%))	*less*:	WACC (%)
equals:	Economic Profit (SVA) (£)	*equals*:	Spread
		times:	Capital Employed (£)
		equals:	Economic Profit (SVA) (£)

Table 10.3 Calculation of SVA using Spread Method

		2001	2002	2003	2004	2005
EBIT		75	88	76	92	108
Tax (30%)		23	26	23	27	32
NOPAT		52	62	53	65	76
Opening capital employed		300	348	372	395	420
ROCE		17.3%	17.8%	14.2%	16.4%	18.1%
less:	WACC	10.0%	10.0%	10.0%	10.0%	10.0%
equals:	Spread	7.3%	7.8%	4.2%	6.4%	8.1%
times:	Opening capital employed	300	348	372	395	420
equals:	SVA	22	27	16	25	34

ROCE exceeds the firm's cost of capital, we know that the company has created value for its shareholders.

The 'spread' is determined by subtracting the WACC from the ROCE, resulting in a 7.3% spread for the company (17.3% – 10% = 7.3%).

To determine just how much shareholder value has been created, the final step is to determine the SVA by multiplying the invested capital (£300 million) by the spread (7.3%). This results in SVA of £22 million.

Limitations of economic profit calculations

Using balance sheet figures to calculate invested capital can distort the economic profit calculation. The balance sheet is comprised of items recorded at their time of purchase or periodic revaluation, thus it is based on historic costs. Fixed assets and some intangible assets are depreciated over time which will often lead to an understatement of their true economic value on a balance sheet. If an analyst relies solely on historic balance sheet figures to determine the invested capital, the figure for invested capital will be lower than otherwise expected, leading to a higher economic profit than deserved by the company or division.

For this reason, adjustments are made (up to 164 in the case of EVA), which leads to a second potential shortcoming in the calculation of economic profit. Wherever adjustments are made, they depend in part on the judgement of the manager or analyst involved.

Certain projects – particularly in their early, high-growth, high-investment stages – may result in a negative economic profit. This is in spite of a potentially

high net present value over the life of the project. Managers must be warned against excessive reliance and short-termism in their analysis of economic profit figures and ensuing actions.