

CHAPTER 8: GOING FORWARD

Although the last, not least.

William Shakespeare, *King Lear*

Financial statements tell stories. They tell stories about the economic and business realities of firms. Anyone can read these stories. But we do need to be careful and not take everything at 'face value'. Financial statements need to be skilfully analysed. We also need to read the stories provided by financial statements in the context of other sources of information. In our unit you have had the opportunity to learn the DCF and economic profit approaches to analysing financial statements and to valuing businesses. There are other approaches, and they can all have a place in the armoury of an accomplished analyst. Most importantly, our unit has provided you with a way of thinking about financial statement analysis. This can be a foundation on which you can develop and build your own understanding of how to use financial statements to help you connect to the economic and business realities of firms.

Financial statement analysis often involves looking at ratios: comparing two or more elements of the financial statements with each other, or with other information such as listed share prices. This can help to bring into sharp focus for us relationships and help us identify key economic and business realities of our firms. Analysis involves us breaking things into bits to better understand what is going on. We have seen that breaking things into bits and looking for key relationships is what financial statement analysis is all about. In this chapter, we will think about how we can use the 'good thinking' and ideas of accounting and finance to help us change the way we view business reality; to make personal sense of this reality in the same way as an accounting or finance professional might engage with, understand and make personal sense of the messy realities of business.¹

8.1 Two Frameworks

Our unit has given you two frameworks, or ways of thinking, for using financial ratios to understand the value generation activities of a firm and to value the equity of a firm. These frameworks, these ways of 'sense-making', of understanding, of 'putting things together in our minds' are ways that can help us understand what a firm's financial ratios are telling us. It is one thing to be able to calculate a whole lot of ratios, but a totally different thing to make sense of them. In Appendix 3 there are web addresses that can link you to common financial ratios that people often calculate to help them understand what is going on in a firm. But how do we make sense of all these types of ratios we could calculate? What do they tell us? How do we read these messages from financial ratios that express certain relationships between two or more aspects of a firm?

The DCF and economic profit frameworks are two ways of making sense of various financial ratios of firms. They are two ways of using the financial statements of a firm to quantify our qualitative assessments of the economic and business realities of a firm. The reason we want to quantify our assessments about a firm is that economic transactions occur at a price, expressed in dollars. To operate in capital markets, we need to be able to summarise our opinions, assessments and information about a firm's economic and business realities into a single dollar figure.

There is much about financial statement analysis which we have not covered in our unit. And there are a range of economic decisions various stakeholders in a firm may wish to make based on an analysis of a firm's financial statements and other information. These include management making capital investment decisions within a firm; bankers making decisions about debt investments in a firm; competitors assessing the financial position and likely future competitive strategy of a firm; regulators assessing whether a firm is using its market power to unfairly extract economic rents; business suppliers and customers wishing to assess the financial stability of a firm; employees wanting to know if they are fairly sharing in the value creation activities of a firm; and community groups wanting to understand the impact of a firm's activities on areas of wide social concern (for example, the environment).

There is much more that a firm can contribute to its stakeholders than providing value to its equity investors. There is value it can add to customers, employees, suppliers and the community more generally. Successful firms generally add significant value to a range of stakeholders; and to provide value to equity investors usually requires businesses to provide value to many other stakeholders as well. The two frameworks we have used in our unit have focused on one aspect of how we can know what adds value, that is value to the equity investors of a firm.

Theory about value

We have looked at the theory of how to measure what adds value. We saw that finance theory tells us that the value of an asset is the present value of the cash flows we can expect from that asset. Dividends are the cash flows an equity investor can expect from their equity investment. The value of an equity interest in a firm would be the present value of the expected future dividends: the discounted dividend (DD) approach. Based on this thinking, we could value the equity in a firm by forecasting its future dividends and then discounting them to a present value. In reality, of course, firms do not have an infinite life. They are either liquidated or taken over eventually. This means that equity investors will at some future time receive a final effective dividend on their equity interest.

The DD model forms the theoretical basis for many approaches to financial statement analysis and fundamental analysis, to 'knowing what adds value' for equity investors. If we have a comprehensive income approach to the firm's accounting in its financial statements (as largely underlies International Financial Reporting Standards), we can re-express the DD model as our economic profit model²:

$$V_E = BV_0 + PV \text{ of } AE$$

where BV_0 = Book value of equity; and AE = Abnormal earnings

We have seen in Chapter 6 above that if a firm's financial activities do not materially add value, this can be restated as:

$$V_E = BV_0 + PV \text{ of Abnormal OI}$$

We can express the value of equity based on a DD model (that is, the present value of expected future dividends) in terms of an economic profit model (that is, the Book value of equity plus the Present value of expected future Abnormal OI). We can also express the value of equity as the present value of expected future cash flows. The theory, or thinking, behind each of these approaches is the same. They are all based on the notion that the value of the equity in a firm is based on the present value of future pay-offs to equity investors to eternity. The DD model uses dividends as the measure of payoffs to equity investors; the discounted cash flow (DCF) model uses the present value of cash flows; and the economic profit model uses the current book value of equity and Abnormal OI. In the long-term, all

these will give the same measure of value for equity because the present value of dividends, the present value of cash flows and the current book value of equity plus the present value of Abnormal OI will be the same in the long term.

The DCF and economic profit approaches represent powerful frameworks, or ways of thinking about, how a firm adds value to its equity investors. The extent to which a firm is expected to be able in the future to generate cash flow or Abnormal OI (that is, returns more than the cost of the capital the firm is using to generate these returns) will drive the extent to which the value of a firm exceeds the book value of its equity. Another way of thinking about the economic profit framework is that the value of a firm's equity is based on the book value of the net assets the firm has employed in its business (that is, the book value of its equity) plus the present value of any 'upside' from the expected or perceived growth options the firm has for the future. This is calculated as the abnormal (or extra) operating income after tax (Abnormal OI) the firm is expected to generate in the future in addition to its cost of capital. This could, of course, work in reverse where a firm earns less than its cost of capital.

As we have seen, a common valuation approach is the discounted cash flow (DCF) approach. This is an approach favoured in finance courses and in finance theory and by many analysts and finance professionals. This is also based on the DD approach, where future expected cash flows are substituted for dividends.³ The DD, DCF and economic profit approaches are all theoretically sound approaches to valuing the equity of a firm or calculating an enterprise value of a firm. They are each based on the same concepts or ideas about what makes an equity investment in a firm valuable. They each provide a framework to help us connect our analysis of a firm's financial statements and of our expectations about the economic and business realities of a firm, to measures of value of a firm or its equity.

Many practitioners and analysts in the world's capital markets that subscribe to the value of fundamental analysis of firms also subscribe to the theory we have been discussing⁴. It is generally accepted that the DD approach is almost impossible to implement in practice, due to the difficulty of making long-term forecasts of dividends. Forecasting dividends involves forecasting a firm's dividend policy which is a decision made by a firm's management and directors and can be influenced by a range of factors in addition to the expected future earnings or cash flows of a firm. Also, dividends are a transfer of value between a firm and its equity investors and are not a measure of the creation of value, which is what we are fundamentally interested in understanding. If you asked most practitioners and analysts they would say they do not value a firm based on its discounted dividends, but many would say they use a form of the DCF or economic profit approaches.

As with many things in life, what we say we do can sometimes be rather different to what we do. Both the DCF and economic profit approaches impose significant challenges on those seeking to use them in practice. The key difficulty is the need to prepare detailed forecasts for a variety of aspects of a firm including profitability, growth and the cost of capital for several years (say, 3-5 years) into the future. This is not an easy task. Many would argue that it is not possible to make these forecasts (or at least not practicable, based on cost-benefit considerations of the amount of time and energy required to make these forecasts and the actual benefit to be derived from having made them).

For these reasons, some would argue that the DCF and economic profit approaches are, like the DD approach, not practicable to implement in many cases. Instead, they would argue, we are better to focus on how others might value or view a firm. If, indeed, the average period equity investors hold their investments in listed companies is about 18 months, then it might seem to make pragmatic sense to attempt to predict what we expect other equity investors might be prepared to pay in 18 months' time rather than attempt to make an assessment of its intrinsic fundamental value and then be prepared to 'wait it out' until the market agrees with our assessment.

Some would argue that given so many factors are required to be forecast in a DCF or economic profit valuation (such as various profit margins, asset turnovers, net capital investment) over a lengthy period, say at least 3-5 years, that not even a firm's management with all its intimate knowledge of their firm is able to make such forecasts, let alone those of us standing outside of a firm with so much less information. Indeed, some would argue that a lot of factors needed to make detailed forecasts must be effectively 'guessed' or are questions of 'judgement' and intuition. They would suggest that seeking to make explicit judgements concerning all these factors and then including them in, say, a long-term forecast of a firm's Abnormal OI (that is, its economic profit) is a questionable activity. Surely, they would argue, it is better to face up to this difficulty, to not delude ourselves into thinking it is otherwise, and instead to simply bundle up all these judgements into the estimation of just one item, a firm's price multiple, usually a Price-to-earnings (P/E) multiple.

This is tantamount to saying there is no workable theory that can direct the practice of financial statement analysis. If such is the case, we need to revert to implicit 'smoke and mirrors' and circular reasoning that is based, essentially, on speculative 'outguessing' of other people speculatively 'outguessing' what we may be guessing and so on. Indeed, we do find our capital markets from time to time go through speculative bubbles with no theory firmly grounding participants' views of value independent of sentiment and guessing what actions other market participants might do in the future and how share prices might move in the future.

It is difficult to forecast a firm's Abnormal OI or cash flow. It takes time, energy and skill. It may well be that some analysts in our capital markets lack one or more of these attributes. Indeed, analysts in listed share markets often only publish short-term (that is, one year) forecasts of earnings and only a small proportion appear to include a long-term growth forecast for earnings (that is, an annual expected growth rate in earnings) for, say, a 3-5 year period.⁵ So how do capital market participants form their view of the value of equity in firms? Many do this by estimating next year's earnings and applying a multiple to these earnings based on a consideration of the price earnings multiples of comparable firms.

8.2 Price Multiples

Price multiples are widely used in practice to value firms, and for many form at least part of the basis of knowing what adds value. One reason for their widespread popularity is they seem to be practical to use. They seem to work relatively easily and, importantly, can be readily accepted by others as a basis for value. We are often able to use price multiples to persuade people about what equity interests in firms are worth. There is no need to produce detailed forecasts of earnings for many years into the future. Instead, we simply select the item of interest (such as earnings, book value of equity, net tangible assets, sales or cash flows), calculate price multiples for comparable listed firms based on their listed share prices and then use these multiples of comparable firms to value a firm.

Others do the work

In this way, we rely on the share market to do the work for us, to carry out the difficult task of forecasting the future profitability, growth and cost of capital for our comparable firms. We then simply assume or guess this is appropriate to the firm we are analysing. We can also look at the multiples at which comparable firms may have been purchased or sold recently, for example based on the price paid (or offered) on a listed takeover bid or the multiples at which some comparable private companies may have been purchased recently, to the extent we are able to gain this information. Almost every day in the financial media we can see examples of this approach. It certainly seems to make sense.

Essentially, under this approach, the value of a firm is simply what someone is likely to pay us for it. The best and easiest way to find this out is to look at what people are paying for comparable firms. After all, why should the value of our firm be different to what people are prepared to pay for similar firms?

Most people are familiar with such thinking in residential real estate markets. We fly into Perth in Western Australia for the first time and want to buy a three-bedroom house in the suburb of Shenton Park in which to live. The vendor of one house is asking \$1.2 million for their house. How do we know if this is a reasonable or fair price? After all, the vendor of the house will want as much as possible for it, and we will want to pay as little as possible for it. What do we do? Well, we get a list of the prices of all the comparable three-bedroom homes that have sold nearby recently. They will all be slightly different to the house we are considering buying. Some might be on a busier road, some might have a larger or smaller garden, some might have a double garage and others a single garage, or be in better or worse condition, or be on a 'better' street. All the comparable houses will be slightly different. But they will all be sufficiently like the house we are thinking of buying to help give us an idea about how much we will need to pay for the house.

That is also how the thinking goes with looking at comparables of a firm to determine its value. Such an approach is not independently assessing the value of a firm but is rather assessing its likely price. *Price is what you pay; value is what you get.* Price and value are not always the same thing, although they sometimes may be. If we want to buy a three-bedroom home in Shenton Park in Perth we will usually need to 'meet the market'; both the vendor and the purchaser of the home will look at the price at which comparable homes have sold in the area recently, and this will help to set the range of prices within which negotiations for the purchase of the home will take place. If everyone in the market adopts this approach, then that is how houses will be priced and we can rely on it. Indeed, most people do in residential property markets.

However, the *value* to you of a home that we intend to live in ourselves is difficult to put into monetary terms, to put a dollar value on it, as it is about the consumption we will get from living in the home. This is difficult to put into precise dollar terms. The maximum we could reasonably *pay* for a home is easier to put a dollar figure on. It is the amount of capital we have to purchase a house plus the amount we can (reasonably) borrow from a bank based on our current and expected income levels and current and expected interest rates. How much we might pay for a house is easier to determine than what it is worth. By looking at recent sales of comparable properties we have essentially left it to others to determine value, what it is worth to us. Indeed, we could expect that those who bought and sold the comparable properties did the same thing as us; simply looked at recent sale prices of comparable properties.

If we are looking to purchase a home as an investment property it is easier to determine its value to us in dollar terms. We can estimate the rent we are likely to receive, the expected outgoings and expenses (such as maintenance costs and council rates) and calculate the net rental yield (the rent after expenses divided by the asking price for the property). We can also think about the expected capital gain on the property (by forecasting possible house prices in the future based on economic and other forecasted data) and consider whether the return on investment is sufficient. In this way, we can compare our view of value to the price in the market.

The use of comparables in valuing firms seems pragmatic and practical and is indeed widely used. However, such an approach is not grounded in any theory about the value of a firm. It is not grounded in a fundamental analysis or assessment of the economic and business realities of a firm. It is rather grounded in other people's assessments who may, in turn, be relying on other people's assessments

and so on in a type of round-robin (if not, indeed, in a type of 'pass the parcel' game). There is a disengagement or distance from, rather than engagement with, the economic and business realities of firms. By relying on 'comparable' price multiples we are not using a firm's financial statements to personally connect to reality. Rather, we are using them (and a firm's share price) as a type of proxy, or stand-in, for reality. We are keeping well away from the 'swampy lowland', messiness and confusion of a firm's actual business activities in the past, present and future. Further, the use of comparables has its own difficulties to implement in practice. There are difficulties in identifying comparable firms that are sufficiently like our firm; and difficulties in analysing what is driving the multiple for the comparable firms and to then relate this to our firm we are 'analysing'.

In my opinion, the use of comparables in practice suffers from greater implementation difficulties than from using either the DCF or economic profit approaches. This is because the use of comparables requires us to understand the economic and business drivers of each comparable firm and to assess how these might differ to those of our firm, essentially requiring us to analyse not only the firm we are looking at but each of its comparable firms as well. This is a significant task if we are to attempt to do it properly.

The use of comparables is of value as a 'market check' on the result of our own analysis of the value of a firm, in the same way as the firm's current listed share price (if the company was listed) provides such a 'reality check'. If the firm we are analysing is a private firm that is not listed, then the only way to compare our estimate of value with the current market's assessment is by using comparables. Also, as a general comment, I would suggest comparable price multiples should be calculated on an enterprise or unlevered basis, to avoid the effect of differences in leverage between comparable firms and the firm we are valuing.

Take a short-cut, rather than comparables

In my view, rather than use comparables, if we wish to simplify the valuation task we are better to simplify the DCF and economic profit approaches to valuing a firm. This is because the DCF and economic profit approaches are theoretically sound and are based on us independently forming our own view of the value of a firm based on our own connection to and assessment of the economic and business realities of a firm. This is fundamental analysis, as discussed in Chapter 1. The real issue here is one of philosophy or ways of thinking about business reality. In 'valuing' a firm, am I seeking to determine its intrinsic value independently of what 'Mr Market' thinks, or in other words doing fundamental analysis; or am I seeking to predict its future share price (by assessing how the share market values comparable firms)?

It is part of the philosophy or thinking of our unit that it is not the role of the analyst to predict share prices. Rather, the role of the analyst is to assess value and to simply assume that the market value of the firm will reflect this value in the future, if my assessment of value (based on my expectations of the economic and business realities of a firm) is correct. The question for you to think about is 'what do you think'? You get to choose what philosophy you prefer. It is a good time to think about this. Whatever you decide, you will not be lonely. There are many people who hold a range of opinions and views on this issue.

Criticising the practical use of comparables (as well as its lack of theoretical base or connection to intrinsic value) does nothing to address the significant challenges to implementing the DCF and economic profit approaches. In the following discussion we will focus on the economic profit approach, but the same sort of issues would apply to the DCF approach. One way to simplify the economic profit approach (without abandoning its theoretical base) is to throw up our hands in the air and say it is

simply not possible to forecast a firm's Abnormal OI; full-stop. Impossible. This approach is to assume the Abnormal OI of a firm follows a 'random walk'. The firm's Abnormal OI will 'walk' into the future, but it is anyone's guess where it will walk to: to the left, or the right, or up or down.

It is a bit like ballroom dancing with a partner who could step anywhere at any time; it is impossible to predict where they might step to next. Dancing with such a partner is not likely to lead to a great tango. However, given we do not know where they are likely to dance to next, our best guess of where they might go to next is where they are standing right now. This would be the closest point to where they are going to step to next compared, on average, to anywhere else we could guess. This is a random walk. In such a situation, where we have no idea how to forecast a firm's Abnormal OI, our best guess about a firm's expected future Abnormal OI would be its current Abnormal OI. This could be expressed as follows:

$$\text{Forecast Abnormal OI}_1 = \text{Abnormal OI}_0$$

Also,

$$\text{Forecast Abnormal OI}_2 = \text{Forecast Abnormal OI}_1, \text{ etc}$$

This is another way of saying that the current economic and business drivers of a firm's Abnormal OI are expected to continue as they are forever and that any changes to these economic and business drivers in the future are completely unpredictable. Our forecast of Abnormal OI for all periods into the future (that is, to eternity) would be current Abnormal OI, that is Abnormal OI₀. Such an approach greatly simplifies our economic profit model since the present value (PV) of Abnormal OI would simply be a perpetuity. Our economic profit model would be:

$$\begin{aligned} V_E &= BV_0 + \text{PV of Abnormal OI} \\ &= BV_0 + \frac{\text{Abnormal OI}_0}{(\text{WACC} - 1)} \end{aligned}$$

Our value of equity would be the book value of equity plus current Abnormal OI divided by the cost of capital for operations.

We could also include in our random walk some allowance for 'drift'. For example, we may not know where our dance partner may put their next step in the tango, but we may expect that we will drift progressively to one side of the dance floor over time as our partner is left-handed and has some tendency over time to favour their left foot. In the context of our economic profit model, this would mean we could include growth, for example, either by a constant growth rate each year (for example, 4%) or by a constant amount each year (for example, \$1 million). It would still be random, like the situation that we would not know where our dance partner will step to next, but over time we can expect this 'drift' of our random 'dance partner' to occur.

For example, if we were to assume a constant growth rate in Abnormal OI, we could express our economic profit model as:

$$V_E = BV_0 + \frac{\text{Abnormal OI}_0}{(\text{WACC} - g)}$$

where g is the expected growth rate in Abnormal OI.

You should note, however, that we still need to assess WACC, the cost of capital for our firm. As we

saw in Chapter 7 above, this is difficult to calculate based on any theoretically-grounded model, so we still have a problem in implementation. However, this can be alleviated by carrying out some sensitivity analysis. We will now look at how we can use this simplified economic profit model to value Ryman Healthcare. We will also look at how we can improve it by engaging with, and forecasting, a firm's economic and business realities.

8.3 Forecasting

Let us see how we can use this simplified economic profit model to value Ryman Healthcare. We know that the current Abnormal OI₂₀₁₈ of Ryman Healthcare is \$176.3 million, its current BV of Equity₂₀₁₈ is \$1,940.5 million and our estimate of its cost of capital (WACC) is 8% per year.⁶ Based on the assumption of Ryman Healthcare's Abnormal OI being a random walk with no drift (that is, we have no idea where our Abnormal OI 'dance partner' is likely to step to next), then our economic profit model for Ryman Healthcare would be:

$$\begin{aligned}
 V_E &= \frac{BV_0 + \text{Abnormal OI}_0}{(WACC - 1)} \\
 &= \frac{\$1,940.5\text{m} + \$176.3\text{m}}{0.08} \\
 &= \$1,940.5\text{m} + \$2,204.2\text{m} \\
 &= \$4,144.7\text{m}, \text{ or about } \$8.28 \text{ per share.}
 \end{aligned}$$

We could also run a sensitivity analysis of Ryman Healthcare's cost of capital for the firm, say of between 6% and 10% per year. The impact on our assessed value of Ryman Healthcare of running this sensitivity analysis is set out in Table 8-1. From this table, we can see our value of Ryman Healthcare would lie between about \$4.9 billion or \$9.76 per share (WACC = 6%) and about \$3.7 billion or \$7.41 per share (WACC = 10%). Quite a range, but all values are substantially less than Ryman Healthcare's share price on 15 January 2019 of \$11.16 per share. This suggests that 'Mr Market' considers Ryman Healthcare's current Abnormal OI is likely to grow.

Table 8-1: Ryman Healthcare with No Growth – Sensitivity Analysis on Cost of Capital (WACC)

	Cost of Capital for Operations (WACC)				
	6%	7%	8%	9%	10%
Value of Firm	\$4,878.8m	\$4,459.1m	\$4,144.7m	\$3,899.4m	\$3,703.5m
	\$9.76	\$8.92	\$8.28	\$7.80	\$7.41

So much for our random walk view of Ryman Healthcare's Abnormal OI with no growth. If we add in drift, say a 4% growth rate (that is, we have no idea where our Abnormal OI 'dance partner' is likely to step to next, but we expect to drift over time to one end of the dance floor, or in other words for there to be growth in Abnormal OI over time), then our economic profit valuation of Ryman Healthcare would be:

$$\begin{aligned}
 V_E &= BV_0 + \frac{\text{Abnormal OI}_0}{(\text{WACC} - g)} \\
 &= \$1,940.5\text{m} + \frac{\$176.3\text{m}}{(1.08-1.04)} \\
 &= \$1,940.5\text{m} + \$4,407.5\text{m} \\
 &= \$6,348.0\text{m, or } \$12.70 \text{ per share.}
 \end{aligned}$$

We could also run a sensitivity analysis of Ryman Healthcare’s cost of capital for the firm, say of between 6% and 10% per year. The sensitivity, or impact, on our assessed value of Ryman Healthcare of varying its cost of capital for the firm in this way is set out in Table 8-2. From this table we can see our value of Ryman Healthcare would lie between about \$10.8 billion or \$21.51 per share (WACC = 6%) and about \$4.9 billion or \$9.76 per share (WACC = 10%). A rather wide range, which again shows quite a degree of sensitivity to the level of WACC.

Table 8-2: Ryman Healthcare with 4% Growth – Sensitivity Analysis on Cost of Capital (WACC)

	Cost of Capital for Operations (WACC)				
	6%	7%	8%	9%	10%
Value of Firm	\$10,755.5m	\$7,817.2m	\$6,348.0m	\$5,466.5m	\$4,878.8m
	\$21.51	\$15.63	\$12.70	\$10.93	\$9.76

Adding ‘decay’ to our random walk

We noted earlier that thinking of Ryman Healthcare’s Abnormal OI as a random walk is another way of saying that our best guess is that the current economic and business drivers of its Abnormal OI will continue as they are forever, and that any changes to these economic and business drivers in the future are completely unpredictable. As we saw in Chapter 7 above, forever is a long time. Indeed, it is an eternity. We know that the current economic and business drivers of a firm’s Abnormal OI are not likely to persist forever. Increased competition in the provision of retirement villages in New Zealand and Australia, a gradual slow-down in the rate of increase of the proportion of those over 75 years old in New Zealand and Australia that enter retirement villages, a slow-down in the growth rate of Ryman Healthcare’s development of new retirement villages, and so on, may eventually reduce the opportunities for Ryman Healthcare to earn additional Abnormal OI in the future.

If we think that the current economic and business factors driving Ryman Healthcare’s current Abnormal OI will gradually become less favourable for Ryman Healthcare over time and the current Abnormal OI of Ryman Healthcare reduce, or decay, over time, then we can introduce a ‘decay’ factor into our simplified economic profit model and forecast a gradual decline each year in Abnormal OI, as follows:

$$\text{Forecast Abnormal OI}_1 = \beta \text{ Abnormal OI}_0$$

where β is the rate at which the Abnormal OI of Ryman Healthcare is estimated to decay over time. If

$\beta = 0$, then we would be assuming Ryman Healthcare’s Abnormal OI would decay completely (that is, disappear) within one year; if $\beta = 1$, we would be assuming there would be no decay in Ryman Healthcare’s Abnormal OI. A figure of 0.6 for β would be a reasonably typical figure to use, which I will assume for Ryman Healthcare, as follows:

$$\begin{aligned}
 V_E &= BV_0 + \frac{\beta \text{ Abnormal OI}_0}{(WACC - \beta)} \\
 &= \$1,940.5\text{m} + \frac{0.6 \times \$176.3\text{m}}{(1.08 - 0.6)} \\
 &= \$1,940.5\text{m} + \$220.4\text{m} \\
 &= \$2,160.9\text{m} \text{ or } \$4.32 \text{ per share.}
 \end{aligned}$$

We could also run a sensitivity analysis of our ‘decay’ factor for Ryman Healthcare, say of between 0.4 and 0.9. The impact on our assessed value of Ryman Healthcare of running this sensitivity is set out in Table 8-3. From this table, we can see our value of Ryman Healthcare would lie between about \$2.0 billion or \$4.09 per share ($\beta = 0.4$) and about \$2.8 billion or \$5.64 per share ($\beta = 0.9$). This compares to a value of \$4.1 billion and \$8.28 per share with no ‘decay’ factor and a cost of capital (WACC) of 8% (see Table 8-1 above).

Table 8.3: Ryman Healthcare with Decay – Sensitivity Analysis on Decay Factor

	Decay Factor					
	0.4	0.5	0.6	0.7	0.8	0.9
Value of Firm	\$2,044.2m	\$2,092.5m	\$2,160.9m	\$2,265.3m	\$2,444.2m	\$2,822.0m
	\$4.09	\$4.18	\$4.32	\$4.53	\$4.89	\$5.64

Note: 8% cost of capital for operations (WACC) is used.

The assumption that Ryman Healthcare’s Abnormal OI will decay over time through the inclusion of a decay factor in our economic profit model, makes our model an autoregressive model. This means that our forecast of Abnormal OI will automatically regress to (or move towards) zero over time in the face of competitive pressures that will compete away its abnormal earnings (or economic rents), or in other words its earnings greater than the firm’s cost of capital.

You can see that in this form of a simplified economic profit model we are suggesting that the value of equity for Ryman Healthcare is its current book value of equity plus its current Abnormal OI, weighted by its cost of capital for equity and the extent to which its current Abnormal OI is expected to persist. Yet we know that by engaging with a firm’s current economic and business realities (and understanding their relation to a firm’s accounting drivers) we can form judgements about how these current economic and business realities might change in the future. We will now look at how we can form worthwhile judgements about the future economic and business drivers of a firm and be able to implement an economic profit (and DCF) valuation in practice.

Economic and business realities

If we are unable to forecast the economic and business drivers of a firm and are unable to forecast a firm's Abnormal OI, we effectively fall back on seeing a firm's Abnormal OI as being a random walk, with or without drift and with or without decay. As we saw in the case of Ryman Healthcare, this gives limited insights into the value of a firm. However, to the extent we can form judgements or opinions about the expected economic and business drivers of a firm, based on sound analysis and research that can help us connect to or engage with a firm's reality, we should be able to gain some further insights into the value of a firm.

In considering Ryman Healthcare, we have seen in Chapter 5 in Section 5.4 above, that it is possible to forecast Abnormal OI more intelligently and carefully than simply throwing our hands in the air and assuming a random walk for Abnormal OI (with or without drift or decay). To the extent we can gain useful insights into a firm's economic and business drivers, meaningfully forecast these drivers and then appropriately link these forecasts to estimates of value of a firm, we can form sound, useful judgements about the value of a firm.

The key skills we need to be able to conduct financial statement analysis, to be able to know what adds value, are an ability:

- **To reformulate a firm's financial statements so they can be in a form ready for an economic profit (or DCF) analysis.**

We need to ensure the operating and financial activities of a firm are clearly separated (to permit focus on the enterprise). This first step largely requires technical skills which can be learnt in our unit on Financial Statement Analysis and reinforced with practice.

- **To clearly identify the key accounting drivers of a firm's performance.**

This also largely requires technical skills which can be learnt in our unit on Financial Statement Analysis and reinforced with practice.

- **To clearly link these accounting drivers to the actual economic and business drivers of the firm.**

Now we are starting to get into issues that require some judgements, personal experience and understanding of business realities. These skills are not possible to learn in our unit on Financial Statement Analysis. The 'good thinking' and ideas discussed in our unit can help us change our own view of how we look at firms and their financial statements. This is an important start, but only a start.

- **To forecast the key economic and business drivers of a firm and to carefully link these to forecasts of a firm's accounting drivers and to forecasts of its Abnormal OI.**

To do this well requires us to engage in understanding the economic and business realities of a firm and sensibly dreaming about its potential futures. These skills lie at the heart of financial statement analysis. *This is where it is at.*

- **To convert our forecasts of a firm's expected future Abnormal OI into a value for a firm. This includes making assumptions beyond our forecast horizon.**

Some elements of this are reasonably technical, such as calculating present values, and can be

learnt in our unit on Financial Statement Analysis and reinforced with practice. However, as we saw in Chapter 7 above, handling well the calculation of continuing values and intelligently making assumptions beyond our forecast horizon are difficult skills to develop and master. This typically requires experience as well as exposure to and discussion with other capable practitioners.

- **To realise the uncertainty of our judgements about the future and the need for a safety margin between our view of value and what we pay for an equity interest in a firm.**

This is a simple, but powerful, idea. If you remember little else from our unit, remember this idea.

In summary, the key skills for an analyst are:

- Strong grounding in and connection to the economic and business realities of a firm; and
- Ability to turn qualitative assessments about this reality into meaningful assessments of value in dollar terms. This requires a sound understanding of theory and of techniques to implement the theory thoughtfully and consistently.

The good news is not many can do these things well. Developing our capabilities in these two key areas should give us an edge over most people in the capital markets. We can ourselves become part of one of the significant anomalies or mysteries of finance theory: that value investing can achieve stronger returns than the average equity investor receives. Of course, to be a value investor, we need to know what adds value. In our unit, we have had the opportunity to learn how we can do this.

8.4 It Is Now Up to You

Success is not final. Failure is not fatal. It is the courage to continue that counts.

Winston Churchill

It is my desire that our unit will help you develop a life-long interest in improving and growing your skills in analysing financial statements and in allocating scarce capital. This is a skill, an interest, and for some a passion, which will always be needed in our communities. It can also help you to change the way you view business and how you make sense of the financial statements of firms. I leave you now with a personal challenge: to develop your own tools in your professional and personal business and investing lives. Our unit gives you a starting point. This is something useful and not to be underestimated. You never get anywhere unless you start. But the journey is yours and it can take you a long way further than we have gone together in our unit.

Financial statement analysis requires a mixture of technical skills and judgements. Technical skills can be learnt. Courses, seminars, conversations, working alongside skilful practitioners can all assist us in learning these technical skills. It also requires genuine application and persistence by us. Genuine interest – even passion – can help us to persevere in any endeavour until we reach real proficiency and skill. This means not just learning a few words, a few concepts, or some disconnected facts. It does not mean memorizing these things and reproducing them in assessments and being awarded grades. It does not mean getting a degree I can frame and put up on the wall. It does not mean having proud and excited parents at my university graduation. Real proficiency and skill means none of these things.

Real proficiency and skill in financial statement analysis means more than learning imitation accounting or imitation finance. It means more than pretending to be able to analyse a firm's financial statements, either pretending to myself or to others. In this, financial statement analysis is no different to learning to play a musical instrument, drive a racing car, or fly an airplane. Talent helps; it sure does. Some people can pick up a musical instrument and quite quickly play with a degree of competency, composure and feeling. It is the same with financial statement analysis. Some people will find they have a real talent for it and are able to quickly master the technical skills and have a real, immediate 'feel' for developing the capabilities to be able to make the judgements involved. Some people can quickly master the ability to use financial statements (and other information) to help them connect to what is really going on with a firm and to know what adds value.

For others, for most of us, mastering the technical skills can be more difficult. As with musical instruments, so with financial statements. For everyone, no matter how talented, it takes practice. Yet with a degree of perseverance, application and genuine interest and pleasure, these technical skills can be mastered by many people. In fact, a lot of the technical skills are not that difficult. There is certainly no great mystery surrounding them. However, becoming good at making sound judgements cannot be learnt quite so readily as mastering the technical skills. Again, it requires some talent, but also action, mistakes, successes and disappointments. It requires working with and getting alongside seasoned and experienced individuals. It involves becoming an active part of a community of practitioners in accounting and finance, and in business more generally.

In financial statement analysis, judgements need to be made about the past, present and future; and all are difficult. The most important judgements in financial statement analysis relate to the future; and who knows what the future will hold? Yet in allocating scarce capital to competing potential uses these judgements need to be made. Indeed, these judgements have real effects and real impacts on real people's lives. These judgements need to be made by someone. Why not by you? And why not make these judgements with skill and insight so that you are able to positively contribute to the futures of our communities? Financial statement analysis can help us understand the economic and business realities of firms; but it also empowers us to be able to influence and change these very realities. We can learn to use financial statements (and other sources of information) to engage with the economic and business realities that involve real resources and real people's lives.

Ever wondered why in Australia we have plenty of food, clothing and shelter? Why we have cars, and phones, and entertainment options, hospitals and medical centres and, indeed, tertiary institutions? Real, genuine, grinding poverty has been largely (though not totally) eradicated in our country. All aspects of our economy and society have required material resources to be applied to their development and creation *in the past*. They did not just come out of thin air. Previous generations have left an economic and social legacy for us based, partly, on how well, or how poorly, they have allocated capital to competing uses in the past.

I sat on the board of the Dressmart Group of companies for several years with a fellow investor and director, John Bougen. In 2003, John, along with his cousin James Irving, travelled to every country in the world in 167 days. They made it to 191 countries. At that time there were 193 sovereign nations; they managed to miss two of them (quite careless, I thought). But they did manage to make it into the Guinness Book of Records for their efforts. No one in the world has yet been so misguided as to attempt a similar feat. I thought John Bougen was completely crazy to do what he did (I still do). He sat in planes and other forms of transport as he criss-crossed the globe, setting foot (on average for less than a day each) on the land of (almost) every nation in the world. For all the insanity of doing this, John did gain a quite unique perspective on our human world. He saw an unusual cross-section of the world; he saw

at roughly the same time the nations of the world. He asked a child in each country what their dream was and took their photo. He included a number of these photos and dreams in a book, "My Dream: Listen to the Children".⁷ It made the top-sellers list in New Zealand for a while.

One thing John mentioned to me on his return from his trip was, "Almost everyone in the world is living in poverty". He saw enormous poverty throughout the world. One story he recounted was of a 12-year-old boy he met who was begging outside the airport in Medan, Indonesia. His name was Eki Mustakim. Eki told John his dream was to save enough money to buy a shoe-shine kit, so he could stop begging and become a shoe-shine boy instead. John wrote down his dream and took his photo. He then gave him US\$5, which he usually did to the children who allowed him to take their photo and who told him their dream. John then ran off to catch his flight.

As he ran off, the thought occurred to him that you could probably buy a shoe-shine kit for US\$5. By giving Eki that money, John had probably enabled him to fulfil his dream. From Eki's perspective, John had popped out of the blue, given him US\$5 and disappeared again; unthinkingly and, essentially, uncaringly as well. The economic legacy that billions of people alive today have inherited is one of poverty. Developing skills in financial statement analysis can help us contribute to our whole community and society, not just to ourselves, by becoming truly skilful at allocating scarce capital. This will touch many people's lives.

Conclusion

This is where the Study Guide ends. We have traversed some of the areas of financial statement analysis. My intention has been to give you some ideas and concepts on which to ground your practical analysis of firms in the future. This Study Guide and our unit can be a place to get started. It can help you to think about the issues involved in understanding what adds value in business. Our own perspectives will affect this, including the stakeholders' interests we may be concerned with. Financial statement analysis enables us to use a firm's financial statements to help us engage with and better understand a firm's economic and business realities. It also helps us to turn our assessments of these realities into dollar measures of value. In this way, we can intelligently and sensibly participate in the capital markets.

Financial statement analysis can be a chance for you to apply to real businesses what you may have studied in accounting and finance. If you have an accounting background, be careful not to focus on understanding a firm's financial statements, but rather seek to use financial statements to understand reality. If you have a finance background, do not let the apparent certainty of tentative finance theories blind you to the uncertainties, and basic messiness, of the real world of business. If you have neither an accounting nor finance background, do not worry that you may not understand some details of a firm's financial statements, nor some of the terminology, nor that you may not be familiar with some of the finance theories. You can approach financial statement analysis with 'fresh eyes' and that can more than compensate you for not having what can all too easily prove to be 'blinkers' from a 'superficial' understanding of accounting and finance.

This Study Guide and our unit gives you a framework, a model, a map or way of viewing an aspect of the world that can sit in your head. The DCF and economic profit frameworks can give you two ways of thinking about how to analyse financial statements. You can develop and enhance these approaches in many ways to enable you to become better and better at being able to analyse financial statements: to know what adds value.

FOOTNOTES

1. Some of the thinking and ideas discussed in this chapter draw significantly from Palepu, K.G. and Healy, P.M., *Business Analysis and Valuation: Using Financial Statements: Text & Cases*, Mason, Ohio: South-Western. 5th ed. 2013: Chapter 7.
2. See Chapter 3, Section 3.4.
3. See Chapter 3, Section 3.4.
4. Over the years there have been published several academic surveys and roundtable discussions of practitioners and analysts to see what they do in practice, as opposed to what they might do in theory. For an example of practitioners discussing what they do in a round-table discussion, see Harris T et al, "From Stock Selection to Portfolio Alpha Generation: The Role of Fundamental Analysis," *Journal of Applied Corporate Finance*, Vol.18, Nos 1, Winter 2006: 54-81.
5. Simon, A., "Self-selection of Analysts' Long-term EPS Growth Forecasts," Draft unpublished article presented to UTS Accounting Research Consortium in Sydney on 29-30 January 2007. Andreas Simon notes that of the nearly 2 million forecasts he examined in the US using the I/B/E/S Detail history database from 1994 to 2005, 12% contained long-term growth forecasts (that is, 2-5 years) while 88% only contained a one-year earnings forecast. Also, he noted that 43% of individual analysts only ever published one-year earnings forecasts during the period 1994 to 2005.
6. See Chapter 6, Section 6.2.
7. John Bougen, *My Dream: Listen to the Children*, Penguin. New Zealand 2004.

QUESTIONS

- 8-1. What is the value to you of having a theory about how firms add value? How does this help you to analyse and make personal sense of the financial statements of firms?
- 8-2. Engaging with the economic and business realities of firms is hard and difficult work. What could be wrong with letting others do this work and relying on listed share prices of firms, or of their comparable firms, to help us value firms? People hold a range of views on this issue. What do you currently think about this issue yourself? Why do you think this?
- 8-3. What is the likelihood that you will use in your professional and personal business and investing life the knowledge and skills covered in our unit? Why is that? What do you think you might use and what do you think you might discard or ignore?
- 8-4. What may have changed for you from studying our unit? Have you simply added to (or reviewed) your knowledge and store of facts about aspects of accounting or finance? Or have you changed the way you view some aspects of reality, ways you may view some aspects of what adds value in business? Discuss.