

## CHAPTER 5: PREDICTING THE FUTURE

But as for certain truth, no man has known it,  
Nor will he know it; neither of the gods,  
Nor yet of all the things of which I speak.  
And even if by chance he were to utter  
The final truth, he would himself not know it:  
For all is but a woven web of guesses.”

*Xenophanes*<sup>1</sup> (my emphasis)

We can only measure the past Abnormal earnings of a firm from a firm’s financial statements. We saw in Chapter 2 that the past is a trip already taken by equity investors. The value of a firm is its value today, which is related to the trip the firm is expected to take *in the future*. We need to ask what do we expect a firm’s economic profit or cash flow will be in the future? The answer is: *no-one knows for sure*. Some argue it is too difficult to predict a firm’s future economic profit or cash flow; in other words, that it is not practical to understand a firm’s value by really engaging with a firm’s economic and business realities. Rather, some would argue, it is much better to attempt to predict the price someone else might be prepared to pay for an equity interest today or in the future.

Such an attitude can easily lead us to rely on ‘comparables’, or perhaps on the market value of various assets of a firm. These approaches do not involve connecting to what a firm is doing to add value to equity investors (nor, for that matter, to add value to debt investors, employees, customers, suppliers, the general community or the environment). However, with skill and effort we can estimate a firm’s future economic profit or cash flow with perhaps greater insight than others. Forecasting a firm’s *equity* economic profit requires us to forecast three things: Return on equity (ROE), the required rate of return on equity ( $\rho_E$ ) and the book value of Ordinary shareholders’ equity (BV). Forecasting a firm’s *enterprise* economic profit requires us to forecast three similar, but slightly different, things: Return on net operating assets (RNOA), the required rate of return on a firm’s operations (WACC) and the book value of Net operating assets (NOA).

Forecasting a firm’s cash flow requires us to forecast a firm’s free cash flow, which can be expressed as Operating income minus change in Net operating assets ( $OI - \Delta NOA$ ). This requires us to forecast OI and NOA as well as the required rate of return on a firm’s operations (WACC). When we remember  $RNOA = OI/NOA$ , we can see that forecasting a firm’s free cash flow requires us to make the same forecasts as we need to make to forecast a firm’s economic profit for the enterprise. We will see in this chapter that to forecast a firm’s economic profit or cash flow, we will need to forecast Profit margins (PM, which is  $OI/Sales$ ); Asset turnover (ATO, which is  $Sales/NOA$ ) and Sales growth. The difference between forecasting a firm’s equity economic profit and its enterprise economic profit is that to forecast a firm’s equity economic profit we also need to forecast its Net financial obligations (NFO), or in other words its level of gearing or borrowings. When forecasting a firm’s economic profit for the enterprise (or free cash flow) we do not need to do this.

In this chapter, we will look at forecasting *two* of the three drivers of economic profit or cash flow: RNOA and NOA. RNOA is Return on net operating assets. This is the Operating income (after tax) that is being generated by a firm's operating activities. All other things being equal, the greater the RNOA the more will be a firm's economic profit; and if RNOA exceeds a firm's WACC, the greater the NOA the more will be a firm's economic profit. The issues with estimating and forecasting the required rate of return on operations (WACC) will be dealt with in Chapter 7.

We need to forecast RNOA and NOA intelligently and sensibly; and with a degree of confidence so that we would be prepared to rely on our forecasts as a basis for making investment decisions. To do this, we need to understand the *drivers* of RNOA and NOA in the past and then forecast these drivers: how they might change in the future. The accounting 'drivers', merely passengers on the journey of the firm, are not the actual drivers of a firm's RNOA and NOA. The actual drivers of a firm's RNOA and NOA are the specific economic and business drivers of a firm's activities. It is these realities we want to better understand so we can better predict how these might change in the future.

## 5.1 Forecasting Return on Net Operating Assets

To forecast Return on net operating assets (RNOA) we first need to forecast the economic and business drivers of a firm's RNOA. We then need to estimate the effect of these future economic and business drivers of a firm on its future accounting 'drivers' of RNOA and on a firm's future RNOA itself. In this way, we can turn a forecast of the economic and business drivers of a firm into a forecast of its RNOA. To analyse a firm's RNOA we need to be able to intelligently engage with a firm's restated financial statements. Figure 4.2 (included in Chapter 4, Section 4.3) describes the three aspects to an analysis of ROE: leverage, profitability and efficiency. As we will be focusing on analysing RNOA (rather than ROE), we will look at analysing *two* of these aspects: profitability and efficiency. We will not be forecasting a firm's leverage.

As we break a firm's financial statements into bits we can increase our understanding of the aspects of a firm's financial statements which are influencing, or leading to, the headline figure of RNOA. By combining these insights from the financial statements with other sources of information (on the economy, industry and the firm) we can form judgements about how to connect the accounting 'drivers' of RNOA with specific elements of the economic and business realities of a firm. It is these economic and business realities that are the real drivers of RNOA. The accounting numbers, including the specific accounting 'drivers', are simply passengers on the journey of a firm.

The accounts are passengers

We use financial statement analysis to help us know what adds value to a business. A key concept to remember is that the financial statements are not themselves the realities of a firm. Rather, they are the financial statements. We need to understand specific, key elements of the financial statements as part of our analysis of the financial statements. But we need to do much more. We need to engage with the economic and business drivers of a firm. As any teenager knows, there is all the difference in the world between being a passenger in a car (which we could have been doing all our lives, perhaps having started out being strapped into a baby capsule) and first hopping 'behind the wheel' and being a driver. *All the difference in the world*. The financial statements are passengers, not drivers, in the real world of business. They are going along for the ride, but to understand the ride and where it is going we need to focus on the economic and business drivers of a firm, using the financial statements (and other information) to help us do this.

Restating financial statements and breaking the financial statements into bits to identify accounting 'drivers' involves mainly technical skills that can be learnt largely from reading books such as this Study Guide, watching videos and attending classes (and reinforced with practice). However, the connection of the accounting 'drivers' of Return on net operating assets (RNOA with the economic and business realities *driving* these accounting 'drivers' of RNOA requires skills and insights which can only be developed with real understanding, experience and application. This is not a mechanical, 'turn the handle', 'no-need-to-think' process. It is quite the opposite. It requires real skill and insight; and in this there is a potential advantage for us.

Most people we know will get jobs, earn money, learn how to drive, own a car or a house, get married (or live with someone), operate a bank account, use ATMs, surf the net, and so on and on. There are many things in life that most people we know seem to master and be able to do quite well. But there are other things in life that not many people we know may be able to do well. For example, most people seem able to get married (or live with someone) but much fewer are able to stay married (or live with someone) for life, and far, far fewer are able to stay married (or live with someone) for life in a fulfilling, developing and rich relationship. Not many are able to do this.

The reason for this is that it is far easier to get married (or decide to live with someone) than it is to maintain a strong, positive relationship for 50 years. It is far easier to do some things in life than it is to do some other things. We can tell which things are easier to do and which are harder to do by seeing how successful most people are at different things. If most people can do something quite well or adequately, then it is probably quite straightforward to do. If very few can do something well, then it is probably not so easy. It would be sensible for us to focus our attention and energy on those things that are harder to do. We can simply master the easier things along the way, as we go.

If I walked down Swanston Street in Melbourne, I could probably find many people who are able to flick through a firm's financial statements and look at the pictures and some of the headline comments and say something about what a firm does. However, many of these same people might feel intimidated by the raft of numbers and footnotes in a firm's financial statements. If I asked people who had studied accounting and finance at Monash University in Melbourne, I might find many of them are able to analyse a firm's financial statements by calculating a few ratios of various types.

Yet if I walked up St Georges Terrace in Perth, or King William Street in Adelaide or Queen Street Mall in Brisbane, or asked graduates of business schools from the University of New South Wales in Sydney through to the University of Auckland in New Zealand, I would likely find very few people able to make meaningful assessments about a firm based on its financial statements: *very few*. The reason for this is that few people can intelligently connect a firm's financial statements to its economic and business realities. Even fewer will be able to sensibly and intelligently forecast these economic and business realities of a firm and then connect them to forecasts of a firm's key accounting 'drivers' and to its value. This is what this chapter is about.

It is a journey into an area that is hard to do in practice. But just as you do not need to be particularly intelligent, good-looking, wealthy, or have a first-class Honours degree in Psychology to have a successful marriage, so you do not need to be particularly intelligent, good-looking, wealthy, or be some sort of financial guru to be successful in analysing financial statements. Just as anyone can, potentially, have a successful marriage, so anyone also can, potentially, be successful and capable in analysing financial statements. A key to having a successful marriage is to give the relationship a priority in amongst all the other things we could be doing; to focus on the relationship with the other person. A key to being able to analyse and use financial statements and to know what adds value to a firm is to focus on the relationship between the likely future economic and business drivers of a firm

and the firm's key accounting drivers. Anyone can learn these skills; but few do.

In this chapter, we are at the *heart* of financial statement analysis. It also happens to be the bit that is the most difficult to do. Very few people can do it well. Indeed, many do not even try to engage with a firm's economic and business realities. Yet here lies the opportunity. Equity investing is a relative game, a game of buying and selling equity investments in firms with other equity investors. To be successful at this game, 'all' you have to do is be better than average at assessing the value of firms. You only need to be better than average to be successful. This is not something like getting a driver's license or opening a bank account, which most people we know in life seem able to master. No, this is one of those things that few seem able to do particularly well: *how to predict the future*. To be good at financial statement analysis we will need to be good at nothing less than predicting the uncertain future better than some others, better than average.

### Economic and business drivers

To the extent we are looking at the past, our efforts are of little direct relevance to understanding the value of a firm. Rather, we need to engage with and make judgements about how the economic and business drivers of a firm's Return on net operating assets (RNOA) and Net operating assets (NOA) could be expected to *change* in the future. We also need to be able to convert these judgements into numbers, into the future accounting drivers of RNOA and NOA, and form a credible, convincing and intelligent forecast of RNOA and NOA. This process may be many things, but it is not technical or mechanistic. It is an art form, not a science. It is more like playing a bass guitar in a rock band, than seeking to find a phone number in a Yellow Pages directory; more like hang-gliding off Coronet Peak (near Queenstown in the South Island of New Zealand) from a 1,200 metre high take off point, than staying home and watching a travel show on TV.

It is in our assessments about the future that we can arrive at views of value and be able to make money. The game of investing and of financial statement analysis is a game played out by imaginings of the future. Remember, we are interested in the trip we might take with a firm in the future as an equity investor, not with the past, which is a trip that has already been taken by others. We will first consider the issues of forecasting the economic and business drivers of a firm's RNOA. We will then consider the issues of identifying the accounting 'drivers' and then identifying and forecasting the economic and business drivers of a firm's Net operating assets (NOA).

In Chapter 4, we identified the following key economic and business drivers of Ryman Healthcare's Profit margins (PM) and of its RNOA:

- Strong development margins and growth in residential property values.
- Strong demand for retirement village units. This is due to:
  - about 3% per year population growth in the 75+ age group in New Zealand and Australia.
  - a growing *proportion* of people in the 75+ age group in New Zealand and Australia who wish to live in retirement villages.
- Ryman Healthcare's significant capacity to develop, own and manage retirement villages.
- Rate of turnover of occupation rights for Ryman Healthcare's existing retirement village units of about 7 years.
- High occupancy levels of Ryman Healthcare's retirement village units, serviced apartments, rest homes and hospitals.

We now need to ask ourselves, how do we expect these drivers to change in the future? For example,

residential property values in New Zealand and Australia have increased strongly in recent years but in the past year or two have largely stopped growing and, indeed, may be falling in some cities and areas. What do we expect to happen with residential property values in the future? There has been strong growth in demand for retirement villages in recent years in New Zealand and Australia, driven by a growing population of people over 75 years old in New Zealand and Australia, and, more critically, an increasing proportion of those over 75 years of age wishing to live in retirement villages. Do we expect this to continue, or to change? Based on an assessment of a range of information, including economic forecasts and potentially a wide range of 'soft' information from various sources, we could form a judgement (with varying degrees of confidence) about how we think these key economic and business drivers of Ryman Healthcare might *change* in the future.

We might form a view about some of the key economic and business drivers of Ryman Healthcare's Profit margins (PM) and of its Return on net operating assets (RNOA) as follows:

- Reduced levels of expected future growth in residential property values.

For example, we might forecast growth in residential property values (and in future revaluations of Ryman Healthcare's properties) of:

<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>0%</b>	<b>0%</b>	<b>5%</b>	<b>5%</b>	<b>7.5%</b>

Note: years ending 31 March.

These forecast growth rates are much less than in recent years. For example, in New Zealand national house prices rose by about 0.4% in 2018 after growth of about 5.8% (2017), 14% (2016) and 11% (2015); and in Australia national house prices fell by about 3% in 2018 after growth of about 5% (2017), 10% (2016) and 9% (2015). These forecast growth rates reflect our view that we expect zero growth in house prices in the years ending 31 March 2019 and 2020 and then for growth to start to steadily increase again. Note also that the growth in residential property values will not only influence Ryman Healthcare's future Operating income (OI) through the level of its property revaluations. The growth in residential property values will also influence the price at which Ryman Healthcare can sell and resell its occupation rights and will affect its profit margins (PM) on these sales and resales. Also, the price at which Ryman Healthcare can sell and resell its occupation rights will influence its level of management fees (which are calculated as a percentage of the selling price of occupation rights).

Another aspect of residential property values is that we can expect them to change in significantly different ways in different cities and regional areas in New Zealand and Australia. For example, Ryman Healthcare in Australia only operates in the greater Melbourne area; so, we should focus on future house prices in the Melbourne area. We could also decide to forecast residential property values for different cities and regions in New Zealand and apply these to Ryman Healthcare's properties in these different cities and regions. However, to be able to do this we would need to make some assumptions about the proportion of the value of Ryman Healthcare's properties that are in different cities and regions in New Zealand, as Ryman Healthcare does not disclose such a breakdown of its property values.

Whether this level of detail in our analysis was valuable or worth the extra effort would depend on whether it provided sufficiently more useful forecasts to justify the extra effort. In any analysis of a firm there will always be a pragmatic question of considering the costs and benefits of applying extra or less effort in various aspects of an analysis. We will need to focus our efforts and energies on understanding those aspects of the economic and business realities of a firm that will give us the more useful insights into the value of a firm.

- Continued strong sales growth

For example, we might forecast growth rates for each source of Ryman Healthcare’s sales (or operating revenues) for the next five years (2019-2023) as set out in Table 5-1 below.

**Table 5-1 Ryman Healthcare Sales Forecast Assumptions: 2019-2023**

<b>Care Fees</b>	<b>Increase by 15% each year</b>
<b>Sales of New Occupation Rights</b>	<b>700 units each year</b>
<b>Resales of Occupation Rights</b>	<b>Total Sales of Occupation Rights 7 years previously</b>
<b>Management Fees</b>	<b>Increase by 15% each year</b>

Note: years ending 31 March.

Underpinning these sales forecast assumptions might be projections concerning overall market growth based on future growth in the New Zealand and Australian population of people over 75 (and the proportion of people over 75 choosing to live in retirement villages), combined with projections about the future market shares Ryman Healthcare might be able to achieve in this market.

- Maintenance of Ryman Healthcare’s significant capacity to develop, own and manage retirement village units.
- Maintenance of the existing rate of turnover of occupation rights to existing retirement village units of about 7 years.
- Continued high occupancy levels.

There might be a range of other key economic and business drivers of Ryman Healthcare’s RNOA we might forecast. Based on our judgements about several future economic and business realities of Ryman Healthcare we could then forecast the key accounting ‘drivers’ of Ryman Healthcare’s RNOA. For example, our forecasts of zero and then reasonably steady increases in growth in residential property values will significantly affect Ryman Healthcare’s future OI and PM. However, the more depressed property markets should also provide Ryman Healthcare with the opportunity to purchase sites for future developments on more favourable terms. Also, it may be able to negotiate better terms with various building contractors. These factors could assist Ryman Healthcare to maintain its margins on selling new occupation rights in the face of weaker residential property markets.

We might also forecast that Ryman Healthcare’s current Asset turnover (ATO) of 0.25 might continue unchanged over the next few years with its Sales growing at a similar rate to its NOA. This might lead us to make the forecasts of these accounting ‘drivers’ as set out in Table 5-2 below. You will note that I have not set out the forecasts of OI that would underpin my forecasts of PM. However, I am forecasting a decline in profit margins over the next three years which would then recover in 2023.

**Table 5-2 Forecast of Ryman Healthcare’s Accounting ‘Drivers’ of RNOA: 2019-2013**

	2019	2020	2021	2022	2023
PM	55%	50.0%	50.0%	50.0%	55.0%
ATO	0.25	0.25	0.25	0.25	0.25

Note: years ending 31 March.

From these forecasts we can make our forecasts of RNOA for the next few years, which are set out in Table 5-3 below.

**Table 5-3 Forecast of Ryman Healthcare’s RNOA: 2019-2023**

	2019	2020	2021	2022	2023
RNOA*	13.8%	12.5%	12.5%	12.5%	13.8%

\* RNOA = PM x ATO

Note: years ending 31 March.

However, forecasting Ryman Healthcare’s RNOA for the next few years will not be sufficient for us to forecast the firm’s economic profit for this period. We also need to forecast Ryman Healthcare’s future Net operating assets (NOA) for the next few years. Before we do this, we will need to understand more of the past of a firm than simply its RNOA (which we looked at in Chapter 4). First, we will need to consider the past accounting ‘drivers’ of Ryman Healthcare’s NOA.

## 5.2 Accounting ‘Drivers’ of NOA

A firm’s economic profit is its Return on net operating assets (RNOA) in excess of its cost of capital (WACC) times the amount of Net operating assets (NOA) the firm has invested in its business earning that level of RNOA. This can be expressed as:

$$\text{Economic profit} = [\text{RNOA}_t - (\text{WACC}-1)] \times \text{NOA}_{t-1}$$

You will remember we use the subscripts (such as  $t$  or  $t-1$ ) to refer to the time period. If RNOA exceeds a firm’s WACC, the greater the book value of Net operating assets (NOA) the greater will be a firm’s economic profit.

We can separate the effect of sales on the change in Net operating assets (NOA), as follows:

$$\text{ATO} = \frac{\text{Sales}}{\text{NOA}}$$

and,

$$1/\text{ATO} = \frac{\text{NOA}}{\text{Sales}}$$

$$\text{NOA} = \text{Sales} \times \frac{\text{NOA}}{\text{Sales}} = \text{Sales} \times \frac{1}{\text{ATO}}$$

Thus,

$$\Delta \text{NOA} = \Delta (\text{Sales} \times \frac{1}{\text{ATO}})$$

This expression shows that the change in the book value of a firm's NOA is driven by changes in its level of sales; and by changes in the amount of NOA needed to be put in place to generate a dollar of sales (1/ATO).

Growth in sales will typically be the primary accounting driver of a change in the book value of a firm's NOA. This is because growing sales usually requires investment in NOA such as additional Inventory, Property, plant & equipment, and Accounts receivable. The amount of investment in NOA required to support each dollar of growth in sales will be determined by 1/ATO (that is, the inverse of ATO), which is the relationship between NOA and sales. Typically, the ATO of a business does not vary greatly over time, unless a firm's business operations have undergone some reasonably substantial restructuring or if a firm enters an unexpected economic downturn. For most firms, sales growth is usually more important than change in 1/ATO as an accounting driver of change in NOA.

Good and bad sales growth

Sales growth is a key driver of increasing the book value of NOA and increasing economic profit (and cash flow) and the value of a firm (from the point of view of equity investors). But we know our sales force and marketers could generate sales growth by discounting prices, offering additional benefits to customers, increasing a firm's product range to increase customer choice (and so increase the inventories of a firm and the general complexity and costs of its business) and so on. This could all be great for customers, but I have seen several businesses destroy substantial value for equity investors by uncritically pursuing strategies such as these to grow sales. Clearly, some sales growth will add substantial value to equity investors while other sales growth will not. Some sales growth will be 'good' (value creating) and other sales growth will be 'bad' (value destroying) for equity investors.

Yet our formula showing the relationship between change in NOA and change in sales seems to imply all sales growth is good for equity investors. After all, if we increase sales we increase NOA which increases economic profit and value to equity investors. It seems many sales people and marketers can implicitly or explicitly think this way. However, change or growth in NOA depends on the *interaction* between sales and ATO. Growth in sales that keeps ATO unchanged will lead to growth in NOA. But growth in sales that reduces ATO (for example, by requiring higher levels of inventory per dollar of sales to support a more diverse product range, or by increasing accounts receivable per dollar of sales to support more generous terms of trade with customers) would also lead to growth in NOA.<sup>2</sup> However, is this necessarily a 'good thing' for equity investors?



We know that economic profit = [RNOA – (WACC-1)] x NOA. We also know that profitability (PM) and efficiency (ATO) are key accounting drivers of RNOA (that is, RNOA = PM x ATO). Actions to grow sales that reduce ATO will increase NOA but will also reduce RNOA. Depending on which effect is greater, this type of sales growth may increase or reduce economic profit and so either add or destroy value to equity investors. Equally, growth in sales that reduces PM (for example, through reducing prices while keeping costs constant), will also increase NOA and reduce RNOA. Again, depending on which effect is greater, this type of sales growth may either add or destroy value to equity investors. I could go on, but enough said. It is critical to be able to distinguish between sales growth that adds value and sales growth which destroys value to equity investors. The economic profit framework provides a conceptual way of thinking about this and can help us to identify ‘good’ and ‘bad’ sales growth in a firm.<sup>3</sup>

Individuals, particularly those in sales and marketing, who can deeply understand the inter-relationship between sales growth, PM and ATO for a firm are extremely valuable people to have around in any business. Also, to be able to assess the value of a firm, we need to be able to clearly identify expected future sales growth that adds value to equity investors and that which does not. It is an important part of knowing what adds value. Ryman Healthcare’s past growth in book value of NOA is set out in Table 5-4 below. As Table 5-4 indicates, there has been a strong growth in Ryman Healthcare’s NOA in this period, increasing about 3.5 times from about \$800 million in 2012 to about \$2.7 billion in 2018, with impressive growth rates of between about 15% and 30% each year. This strong growth in NOA has been a significant contributor to the growth in Ryman Healthcare’s economic profit (and growth in value to equity holders) during this period.

**Table 5-4 Growth in Ryman Healthcare’s NOA: 2012-2018**

	2018	2017	2016	2015	2014	2013	2012
<b>NOA *(\$m)</b>	<b>2,753.1</b>	<b>2,189.4</b>	<b>1,697.4</b>	<b>1,359.4</b>	<b>1,086.4</b>	<b>916.9</b>	<b>797.8</b>
<b>Growth (%)</b>	<b>25.7</b>	<b>29.0</b>	<b>24.9</b>	<b>25.1</b>	<b>18.5</b>	<b>14.9</b>	<b>-</b>

\* Average NOA figures are used

Note: years ending 31 March.

The key accounting drivers of Ryman Healthcare’s NOA during this period are set out in Table 5-5 below. A key driver of the strong growth of NOA of Ryman Healthcare has been its strong sales growth, which has grown about 2.7 times from \$257.0 million in 2012 to \$694.1 million in 2018. This was also supported by a decrease in Ryman Healthcare’s ATO (from 0.32 times in 2012 to 0.25 times in 2018).

We can analyse Ryman Healthcare’s sales into the following three main types of revenue or income streams:

- Care fees
- Management fees
- Fair value movement of investment properties.

**Table 5-5 Accounting ‘Drivers’ of Ryman Healthcare’s NOA: 2012-2018**

	2018	2017	2016	2015	2014	2013	2012
<b>Sales (\$m)</b>	<b>694.1</b>	<b>614.2</b>	<b>535.7</b>	<b>444.7</b>	<b>377.2</b>	<b>300.2</b>	<b>257.0</b>
<b>Growth (%)</b>	<b>13.0</b>	<b>14.6</b>	<b>20.5</b>	<b>17.9</b>	<b>25.7</b>	<b>16.8</b>	<b>22.1</b>
<b>ATO (times)</b>	<b>0.25</b>	<b>0.28</b>	<b>0.32</b>	<b>0.33</b>	<b>0.35</b>	<b>0.33</b>	<b>0.32</b>
<b>Growth (%)</b>	<b>(10.1)</b>	<b>(11.1)</b>	<b>(3.5)</b>	<b>(5.8)</b>	<b>6.1</b>	<b>1.6</b>	<b>1.2</b>

Note: years ending 31 March.

The previous growth in each of these items is set out in Table 5-6 below. Ryman Healthcare has experienced strong growth in each of these main revenue or income streams. Care fees have grown strongly during this period, increasing 2.1 times from \$126.9m in 2012 to \$270.5m in 2018. However, Care fees have been growing more slowly than each of the other main revenue or income streams of Ryman Healthcare. It should be noted I expect the profit margins from Care fees (for running nursing home and hospital beds) to be significantly less than the profit margins from its other activities.

Another interesting aspect to Ryman Healthcare’s past growth in sales is its growth in Management fees. These are a relatively minor part of its total sales, representing about 10% of sales and have been growing at a similar rate to total sales. It has also demonstrated the most consistent growth of any of Ryman Healthcare’s revenue or income streams, growing between 14.3% and 20.5% each year. This is a high-quality revenue stream, as it is predictable and growing strongly. And a major part of Ryman Healthcare’s sales is the Fair value movement of investment properties. This has increased 3.4 times from \$101.9m in 2012 to \$351.5m in 2018. Its proportion of total sales has increased from 40.0% in 2012 to 50.6% in 2018.

You will note that sales and resales of occupation rights of retirement village units are not included in Ryman Healthcare’s sales. This is because Ryman Healthcare retains most of the rights and obligations of ownership of the retirement village units, with occupation rights effectively being ‘life-long’ leases over the retirement village units given in exchange for interest-free loans. This is important to bear in mind. There are some risks Ryman Healthcare is taking in retaining ownership of a large portfolio of retirement village units. Should demand for retirement village units falter in New Zealand and Australia, Ryman Healthcare might find itself exposed to the risk of losses as it seeks to resell occupation rights in its retirement village units in the future.

**Table 5-6 Ryman Healthcare’s Revenue Growth Rates: 2012-2018**

	2018	2017	2016	2015	2014	2013	2012
Care fees (\$m)	270.5	227.4	209.4	182.4	165.3	148.4	126.9
Growth (%)	19.0	8.6	14.8	10.3	11.4	17.0	20.0
Management fees (\$m)	70.1	61.0	50.6	43.4	36.6	32.0	27.3
Growth (%)	14.9	20.5	16.7	18.7	14.3	17.4	16.8
Fair value movement of investment properties (\$m)	351.5	325.0	274.6	217.6	174.0	118.9	101.9
Growth (%)	8.2	18.3	26.2	25.1	46.3	16.8	26.1
Sales (\$m)	694.1	614.2	535.7	444.7	377.2	300.2	257.0
Growth (%)	13.0	14.6	20.5	17.9	25.7	16.8	22.1

Note: years ending 31 March.

We have examined the accounting ‘drivers’ of the strong growth in Ryman Healthcare’s Net operating assets (NOA) from 2012 to 2018. We have seen the central importance of sales growth as the primary driver of growth in Ryman Healthcare’s NOA. Yet we know these various accounting ‘drivers’ or numbers are not really driving the performance of Ryman Healthcare, but are themselves merely passengers on the journey. In the next section, we will look at one more aspect of a firm’s past we need to consider before predicting the future, namely the economic and business drivers of these accounting ‘drivers’ of NOA: the *real* drivers of NOA.

### 5.3 Economic and Business Drivers of NOA

History is not a catalogue but ... a convincing version of events.

A.J.P. Taylor

Just as my younger son enjoyed breaking things into bits to help him understand how things work, so we can break a firm’s financial statements into bits (or, in other words, analyse them) to help us understand what parts are causing certain changes to other parts of the financial statements. For example, in the case of Ryman Healthcare, we can see how certain changes in various elements of its sales have influenced and driven its growth in Net operating assets (NOA). Yet we are not interested in what makes the financial statements ‘work’ or ‘tick’. We are interested in what makes firms ‘work’ or ‘tick’. We need to take the step to move from the accounting ‘drivers’ to the actual economic and business drivers of a firm. We are interested in understanding the economic and business realities of a

firm because these are what we need to predict to form judgements about a firm's outlook or future. The better we understand the past economic and business drivers of a firm the better chance we have of intelligently and sensibly predicting them.

To do this we will need information in addition to the financial statements of a firm. We will need to look at relevant economic and industry data, of which there can be a surprising amount available from a range of sources. For example, there are industry bodies in the retirement and healthcare industry and a range of economic and industry statistics are available. We can compare the retirement and healthcare industry in New Zealand with that in Australia and in other countries such as the US and UK. We can make a range of enquiries about a firm. For example, we can 'mystery shop' our firm.

I happened to do this for Ryman Healthcare many years ago (in 2007) when living in Wellington, New Zealand. Ryman Healthcare has several retirement villages in Wellington. In early 2007, one of these, Malvina Major Retirement Village, was undergoing a major extension and was selling occupation rights to 46 new units. Ryman Healthcare advertised an 'open day' one weekend in March 2007. You needed to be 60 years of age or more to be able to be a resident in a Ryman Healthcare retirement village. I did not meet this criteria. So, I asked my parents if they would accompany me on a 'mystery shopping' outing to the Malvina Major Retirement Village 'open day' and provide me with suitable cover. We turned up shortly after the 10am opening time for the 'open day'.

My parents were 81 and 75 years of age at the time, in good health and living comfortably in a small house next door to my family, which had been thoroughly renovated a few years ago. They had no interest in moving into a retirement village. However, my mother quickly adopted the mode of an enthusiastic potential purchaser, as did my father. The construction of only a few of the new units was completed, although the new community facilities were largely completed, which included a great home theatre, a large community area with a bar, as well as a gym and an indoor swimming pool (which I was told had only been filled with water the day before).

I was struck by the number of people at the 'open day' so early in the day. Tours of about 10 people were being conducted every few minutes through a 'show unit', which was fully furnished, as well as to the swimming pool and gym. We were offered some well-presented finger food and orange juice or water in the community area before we met with a sales advisor who took my parents through the pricing of occupation rights. We were given floor plans of various units, as well as excellent brochures that set out clearly a lot of the key information. The Ryman brand name was prominent on all the material, although there were also quite a lot of references to the name of the retirement village, Malvina Major.

The person who took our tour said she ran a Ryman Healthcare retirement village in Invercargill (at the far south of New Zealand) and was very pleased to have a trip to Wellington to show people through Malvina Major Retirement Village. She referred to the retirement village in Invercargill as 'my' village and that 'I' was building nine new units in 'my' village at present. Even allowing for the 'sales situation' we were in, she seemed genuinely positive about her job and working at Ryman Healthcare. Many people working for large organisations would refer to 'their' village and that 'they' are building new units. This person seemed to feel real ownership of, and commitment to, 'her' village. The other staff conducting the 'open day' also gave an impression of being positive about their jobs and satisfied with the 'value add' and contribution they were making to their customers.

I was also impressed with the high level of specification of the new extensions to the Malvina Major Retirement Village. The 'show unit' we saw was well designed, with a lot of attention to detail. The quality of the bathroom, kitchen and general finish and level of specification of the unit were excellent.

We were also told that about 28 of the 46 units in the new extension had already been sold prior to the 'open day'. Many units on the various plans certainly had 'Sold' stickers on them. Ryman Healthcare appeared to be able to sell new units off the plan and, judging by the reaction of potential purchasers at the 'open day', it appeared it would have little difficulty selling the remaining new units at Malvina Major prior to their completion.

The price of occupation rights to each of the units (in 2007) was between about \$300,000 and \$400,000, with most about \$320-350,000 each. Units with a harbour view were \$20,000 more than the equivalent units without a harbour view (but which, it was pointed out, had 'afternoon sun', a valuable commodity in hilly Wellington). Units on higher levels were also more expensive than those on lower levels. Garages, or undercover car spaces, could be purchased separately, and we were told there was about one garage or car space for every two units. I was impressed by the apparent quality of construction. Given Ryman Healthcare retains ownership of the retirement villages and is responsible for their on-going management and maintenance it seems they have every incentive to ensure construction is carried out to a high standard in keeping with an 'owner-builder' approach.

I talked to a few prospective purchasers who attended the 'open day' and could see they were genuinely impressed with what they saw. The sales pitch of the sales advisors was relatively 'low-key'. The approach adopted was to get people's individual contact details on arrival. Prospective purchasers were then taken on a tour of the 'show unit' and the community facilities. After the tour, prospective purchasers met with sales advisors who explained the cost of the occupation rights and the other expenses. The sales advisor then suggested the prospective purchasers think about it and then contact them in a few days if they would like to discuss it in further detail and to consider specific units that were available for purchase. My parents received a follow-up mailing of further information and an invitation to have a free lunch at Malvina Major Retirement Village.

There was certainly no 'hard sell'. This approach was quite respectful of the elderly prospective purchasers and recognised the significant nature of the decision for them. It also indicated to me they were having little difficulty selling occupation rights in the units and were also focused on ensuring the occupation rights were not miss-sold and that they would have 'happy' and satisfied on-going residents. I also took the opportunity to walk through the rest of the Malvina Major Retirement Village with my parents. Although I had driven past the retirement village on many occasions, it was only after walking through it that I realised just how big it was. It had been built in several stages and all was of a high standard of presentation. The names of residents were by the door of each unit, and based on the units we walked by, almost all were occupied by individual women, with a small number occupied by couples and very few occupied by individual men.

I was impressed with the extent and quality of the various common areas, including an excellent dining room (which we saw functioning at lunch-time, which is when they serve the main meal for each day to those who use that service), a bowling green, billiard and games rooms, gyms and hairdresser. Residents I spoke to were friendly and positive about 'their' retirement village. I also spoke to some staff. I was impressed by staff at the reception desk at the main entrance, by nursing staff in the rest home and by the general feel or impression I got about how the village was being managed and operated.

In the rest home, everyone appeared to have an individual room and en suite bathroom. The large atrium in the middle of the rest home was impressive and pleasant. Also, the extensive availability of emergency buttons in common areas and in units throughout the village (nursing staff will respond to these) underscored the support residents had available. It did occur to me that it would take nursing staff some time to get from the rest home and hospital at one end of the retirement village to residents

at the other end, given the sheer size of the facility.

I listened to the sales pitch of a sales advisor who spoke to my parents. This person made it clear to my parents that the weekly service charge was \$79 per week, they would also need to pay for their own electricity in their unit, that there was a 4% deferred management fee capped after 5 years at 20% and that Ryman Healthcare retained ownership of units and bore any capital gain or loss on these units. I was also impressed with a brochure Ryman Healthcare provided prospective purchasers on the terms of the occupation rights. There was a section entitled “The Ryman Peace of Mind Guarantees” which was clear and specific.

‘Mystery shopping’ is a way of gaining some insights into the customer experience a firm is providing and to better understand ‘what is really going on’ with a firm’s actual delivery of its value proposition to its customers. It is important to realise that my ‘mystery shopping’ exercise only involved one retirement village and only one shopping experience at this village. It could be valuable to ‘mystery shop’ a few villages, for example one in Auckland and one in Melbourne, to see how consistent the customer experience is. We can also look at competitors’ retirement villages, do an internet search on the industry players (existing and potential competitors) to research their activities and intentions, and (if we have the budget) employ various industry experts to advise us. Sometimes a firm’s CEO or other senior manager may have recently left and may be available to consult. There are many ways to ‘kick the tyres’ of businesses and engage with a firm’s economic and business realities, to help us understand what is really going on.

The key to doing this well is to direct our research into a firm’s economic and business drivers based on our understanding of the key accounting drivers of a firm’s economic profit (or cash flow). This can focus our analysis and help protect us from an aimless ‘fishing expedition’ where we can waste time carefully analysing aspects of little importance while failing to focus on areas of critical importance. We need to use our initiative, common-sense, imagination and networks to obtain relevant other information to help us connect a firm’s accounting ‘drivers’ to its economic and business drivers. We can see that some of the key economic and business drivers of Ryman Healthcare’s Net operating assets (NOA) in the past have been:

- Strong market demand for retirement villages, driven by increasing numbers of people 75+ years in New Zealand and Australia, longer life expectancy and the increasing proportion of this age group choosing to live in retirement villages.
- Ryman Healthcare’s reputation, quality of service and effectiveness of its marketing, which have been important ingredients in its ability to achieve its sales and resales of occupation rights in retirement village units.
- Ryman Healthcare’s capacity to acquire suitable sites and develop retirement villages using its own development and construction team.
- Regulatory environment: Ryman Healthcare receives a large proportion of its Care fees from the government. Also, government has a strong interest in the aged care sector and, for example, continues to increase care subsidies for people in family homes. So, there is some regulatory risk surrounding this aspect of Ryman Healthcare’s revenue.
- Industry competition: an important factor to bear in mind when considering the actions of competitors is that most residents of retirement villages previously lived within a 10 kilometre radius of their retirement village. It is also difficult to identify and acquire suitable sites for retirement villages. There is an element of ‘local’ monopoly with each of the retirement villages, not totally dissimilar to that enjoyed typically by many regional shopping centres.

Once we move from examining accounting 'drivers' to considering economic and business drivers of a firm, experience and ability to make sound commercial judgements becomes critical. The focus shifts from engaging with the firm's financial statements to engaging directly with the firm's economic and business realities. As each firm will be different, sources of information and how these assessments and judgements are made will vary considerably. However, there are a few general principles to bear in mind. These are to identify the key accounting 'drivers' of a firm and to focus our examination on the economic and business realities of a firm that drive these key accounting 'drivers'. We will be essentially seeking to *connect* the accounting 'drivers' of the firm with its economic and business drivers. As we become more comfortable with our understanding of these linkages, we can make judgements about how these economic and business drivers might change in the future and to quantify the qualitative changes in these factors into accounting numbers and into measures of value.

## 5.4 Forecasting NOA

Forecasting Net operating assets (NOA) involves first forecasting the economic and business drivers of a firm's NOA. We can then estimate the effect of the future economic and business drivers of a firm on its future accounting 'drivers' of NOA and so forecast a firm's NOA. In Section 5.1 above, we discussed the issues involved in forecasting Return on net operating assets (RNOA). Similar considerations apply in forecasting NOA. Our identification of the accounting 'drivers' of NOA for a firm helps to frame our assessment of the firm's economic and business realities. We then focus on those aspects of reality that connect to the key accounting 'drivers' of a firm's NOA.

We are interested in those aspects of a firm's economic and business realities that will affect its sales and Asset turnover (ATO). Usually, a key aspect we wish to examine is a firm's sales. We can analyse what has been driving a firm's sales in the past. However, what was driving a firm's sales in the past has little direct relevance to the value of a firm. We need to engage with and make judgements about how the economic and business drivers of a firm's sales (and ATO) could be expected to *change* in the future; and we need to be able to convert these judgements into numbers, into the *future* accounting 'drivers' of NOA and then form a credible, convincing and intelligent forecast of NOA.

To forecast a firm's NOA we will focus on expected future sales growth and the amount of NOA expected to support this sales growth ( $1/ATO$ ). To do this we need to understand what economic and business realities have been driving a firm's sales in the past and how we think these might change in the future; and we then need to convert these forecasts of the economic and business realities into accounting numbers. As we saw in Section 5.2 above, Ryman Healthcare has three main revenue streams: Care fees, Management fees and Fair value movement of investment properties. Care fees are largely subsidised by government and can potentially be affected by future changes in government policy. However, except for an element of 'regulation risk', this revenue stream can be expected to be reasonably predictable and consistent.

As a successful, established operator, Ryman Healthcare is well placed to gain further new subsidies from government for new care beds and to continue to grow this revenue stream. Although Ryman Healthcare does not disclose its Profit margin (PM) on its rest home and hospital care activities, we could assume its PM on these activities is substantially less than that achieved on its other revenue streams. However, the integrated nature of its retirement villages, providing residents with access to different levels of care when they need it, is a critical aspect of its total value proposition to customers. As we set out in Section 5.1 above, Management fees are forecast to increase by 15% each year. They are driven by the past levels of sales (and resales) of retirement village units.

A key to forecasting the future Fair value movement of investment properties is to examine the amount of current and projected development activity of Ryman Healthcare; and the growth in residential property prices. The current level of development activity is substantial and on a scale not previously conducted by Ryman Healthcare. Ryman Healthcare has development sites to support its development activities for about 3-4 years, involving 16 retirement villages. Future growth depends on having a land bank at different stages of development: planning, design, consenting and construction. There does not appear to be any major constraint on its development activities over the next few years and the future supply of new integrated retirement village units can be expected to be greater than previously experienced by Ryman Healthcare.

We could forecast strong supply of new retirement village units and aged-care beds by Ryman Healthcare in the next few years. This will pose some challenges for Ryman Healthcare in its marketing and sales activities. It appears Ryman Healthcare has in previous years had greater demand for its retirement village units and aged-care beds than it has had supply. With a substantial increase in supply, Ryman Healthcare will need to increase its sales and marketing activities to ensure it is able to quickly sell completed units (and aged-care beds) and to ensure it maintains its high occupancy rates. I consider we can reasonably expect Ryman Healthcare will meet this challenge and that we will see substantial growth in the Fair value movement of investment properties over the next few years.

We could make various enquiries to help us ascertain the likely future demand for retirement village units. For example, we could engage an industry expert to prepare a market report for us on expectations for future demand in the retirement and healthcare industry to assess whether future demand is likely to be able to absorb the substantial increase in Ryman Healthcare's property development activity (and of its competitors). A key economic and business driver of future demand for retirement village units will be an increasing proportion of people who are 75+ years in New Zealand and Australia wishing to live in retirement villages. This should substantially leverage the 3% growth rate in the population of people 75+ years in New Zealand and Australia to a much higher growth rate in demand. Underpinning this view would be the smaller proportion of this age group in New Zealand and Australia currently living in retirement villages compared to other countries, such as in UK and US.

Also, the assessment of risks on future demand caused by events such as health scares or allegations of abuse of residents in retirement villages by staff would need to be considered. It is likely Ryman Healthcare has a well-considered communication and PR plan (to residents, relatives, staff, government authorities and media) to handle such potential situations that may occur in Ryman Healthcare retirement villages to limit the damage to its brand and reputation. More importantly, Ryman Healthcare would need to ensure it has high calibre management in place in each of its retirement villages to ensure high and consistent overall standards in its retirement villages and prompt dealing with any individual 'problem' staff.

Having considered all these factors, I think a forecast of sales of occupation rights to 700 new retirement village units each year is appropriate. Each year, Ryman Healthcare also resells occupation rights to older retirement village units that have become available because the previous resident no longer occupies the unit (for example, has either died or moved into care). On average, residents occupy their retirement village units for 7 years. Ryman Healthcare's resales of occupation rights (and Management fees) are driven by the past level of sales and resales of occupation rights (as well as by growth in residential property values), with an average time lag of about 7 years. Because these have been growing strongly over the *past* 7 years, we could expect Ryman Healthcare to have quite spectacular growth in Resales of Occupation Rights over the *next* 7 years, even without any future growth in residential property values.



This would be based on growth in the occupation rights of existing Ryman Healthcare retirement units that are expected to become available for resale each year and the substantial growth in residential property values in recent years (and in the resale value of these occupation rights). These are solid, long-term growth prospects and is a powerful aspect of Ryman Healthcare’s business model. Another interesting aspect to consider is whether Ryman Healthcare may be able, at some point, to sell the ownership of its retirement villages to institutional investors. Securitising these assets to provide institutional investors with, say, commercial property yields could provide some substantial upside in the value of Ryman Healthcare’s property assets (potentially in the order of \$1 billion or \$2.00 per share) compared to its existing book values based on revaluations derived largely from residential property values.

This has been a discussion of some of the issues we would need to consider when developing meaningful forecasts of the economic and business drivers of Ryman Healthcare’s Net operating assets (NOA). There is the potential for different people to make a wide range of different forecasts of these economic and business drivers. There is also substantial scope for there to be different levels of quality of analysis underpinning these forecasts. This could be due to some analysts more thoroughly researching some aspects of Ryman Healthcare’s business (for example, Ryman Healthcare’s property development program); or it could be due to some analysts focusing their analysis more clearly on the key economic and business drivers of the accounting ‘drivers’ of Ryman Healthcare’s RNOA and NOA, rather than spending energy analysing aspects of Ryman Healthcare’s economic and business realities that have only minor or peripheral relevance to its RNOA and NOA.

Having considered a range of Ryman Healthcare’s economic and business drivers, we might determine five-year forecasts for Ryman Healthcare’s accounting ‘drivers’ of its Net operating assets (NOA) as set out in Table 5-7 below. Our forecast of each of Ryman Healthcare’s revenue streams and of its total sales is based on the sales forecast assumptions set out in Table 5-1, in Section 5.1 above. Our forecast of Asset turnover (ATO) is the same as the one we made of ATO set out in Table 5-2 above. From our forecasts of the accounting ‘drivers’ of Ryman Healthcare’s NOA we can calculate our forecasts of NOA for the next few years, which are set out in Table 5-8 below.

**Table 5-7 Forecast of Ryman Healthcare’s Accounting ‘Drivers’ of NOA: 2019-2023**

<b>\$m</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Care Fees</b>	310.0	360.0	410.0	475.0	545.0
<b>Management Fees</b>	80.5	92.5	106.5	122.5	141.0
<b>Fair value movement of investment property (\$m)</b>	370.0	387.5	407.0	427.0	448.6
<b>Total Sales</b>	760.5	840.0	923.5	1,024.5	1,134.6
<b>ATO</b>	0.25	0.25	0.25	0.25	0.25
<b>NFO</b>	1,068.7	1,068.7	1,068.7	1,068.7	1,068.7

Note: years ending 31 March.

**Table 5-8 Forecast of Ryman Healthcare’s NOA: 2019-2023**

<b>\$m</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>NOA*</b>	3,042.0	3,360.0	3,694.0	4,098.0	4,538.4
<b>Growth</b>	1.1%	10.5%	9.9%	10.9%	10.7%

\* NOA = Sales/ATO

Note: years ending 31 March.

We have forecast Ryman Healthcare’s RNOA (see Table 5-3, in Section 5.1 above) and NOA for the next five years. Along with a forecast of its cost of capital for operations (WACC), we could then forecast Ryman Healthcare’s economic profit for the next five years. We will discuss issues about forecasting a firm’s cost of capital in Chapter 7. At this stage, I have forecast Ryman Healthcare’s WACC to be 8% for each of the next five years. As a result, we can now forecast Ryman Healthcare’s economic profit for the next five years, which are set out in Table 5-9 below.

**Table 5-9 Forecast of Ryman Healthcare’s Economic Profit: 2019-2023**

<b>\$m</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>Economic Profit*</b>	175.5	144.0	158.7	175.3	250.5

\* Economic profit = [RNOA - (WACC-1)] x NOA

Note: years ending 31 March.

Ryman Healthcare’s economic profit in 2018 was \$176.2 million (RNOA was 14.4%, NOA (average) was \$2,753.1m and WACC of 8% was used). I am forecasting Ryman Healthcare’s economic profit to be similar in 2019 at \$175.5m, with economic profit then declining to \$144.0m by 2020, before it starts to increase steadily in 2021 and 2022 with a strong rise in 2023. The key reason for this is my forecast of zero growth in residential property values in 2019 and 2020, and slow growth in 2021 and 2022 before growing more strongly in 2023. This has the effect of reducing Ryman Healthcare’s RNOA (through reducing its OI and PM) and slowing somewhat the growth in Ryman Healthcare’s NOA. However, I am forecasting continued solid growth in sales which results in continuing strong growth in NOA (amplified by Ryman Healthcare’s low ATO). As set out in Table 5-3 in Section 5.1 above, RNOA is forecast to fall in 2019 and 2020, then remain the same in 2021 and 2022 before improving in 2023.

Equity investors are entitled to the returns from a firm to eternity (or until the firm is liquidated or taken over). For this reason, we cannot value Ryman Healthcare based on our forecast of economic profit (or cash flow) for the next five years. But we may not feel comfortable forecasting Ryman Healthcare’s economic profit (or cash flow) beyond the next five years. As we delve further into the future, everything becomes less certain and less able to be predicted. We find ourselves coming up against our horizon, the limit to how far we can reasonably see or forecast into the future. This raises the issue of what we should do as we come up against our forecast horizon.

## Beyond our forecast horizon

As we project our imaginations into the future, it becomes increasingly difficult to see the way ahead. We might be reasonably confident about our forecasts for our firm for the next year, less confident for the following year, and so on as we step forward in our minds into potential future realities for our firm. I live in Yeppoon, a town on the Capricorn Coast in central Queensland. We have beautiful views over the town, down the coast and across to the islands nearby. The skies are usually blue and clear. However, in winter sometimes a fog settles in over the town and then slowly rolls out to sea. On these days, there are no distant views, just a fog closing in and restricting my world to a few hundred metres in any direction. But then the fog will steadily lift, and my world opens again to a wide perspective and distant views.

Forecasting can be like this. Sometimes it can be most difficult to see very far ahead with any degree of confidence. It can feel like walking through thick clouds and fog in Yeppoon; it can have its own feeling of mystery and wonder, but the world is a very *uncertain* place once you cast your eyes just a short distance away. At other times, it can feel like having a clear view of a wonderful vista, able to see much further with considerable clarity and confidence. Whether we have a high or low degree of confidence in our projections, whether we feel confident to project many years into the future or just a few, we will still face a common problem. It is called the horizon. Regardless of how far or near the horizon is, it will always be there. There will be a limit to how far we can see with some degree of confidence.

There will always be a limit to how far into the future we feel comfortable projecting; a limit to how far forward we can 'see'. Whether this is a few or many years, our projections of economic profit (or Free cash flow) will only be for a *limited period* into the future. Yet equity investors are entitled to the returns from a firm to eternity (or until the firm is liquidated or taken over). How do we engage with, or understand, what might happen to a firm beyond our forecast horizon, beyond the limits of our ability to forecast a firm's future? We will look at ways to handle this issue in Chapter 7. However, before we start thinking about what may lie beyond our horizon, we still have a few things to consider about how to forecast into the future before we hit our horizons. We still need to consider the substantial benefits of focusing our analysis of a firm on its operations, on the enterprise of a firm, not on its equity.

## Conclusion

When analysing a firm's financial statements we need to focus on the future, not the past. Although understanding the past is important as a starting point to being able to predict the future, it has no direct relevance to the value of a firm. As we move into the realm of predicting, or forecasting, how aspects of a firm's economic and business realities might *change* in the future, we move away from dealing with events that have occurred and which we can know about with varying degrees of confidence, depending on the reliability of our sources of information. When we move from the past to predicting the future we move into the realm of *speculation*, or guess-work, about how these events in the past might change in the future, which are things we cannot know because of the simple fact they have not happened yet.

Indeed, it is likely our forecasts of the future will never happen in exactly the way we expect. Tomorrow will always hold some surprises. Most of us get 'into trouble' investing or allocating capital when we confuse what we can know about the past with speculation or guess-work. It is critical we keep the two clearly separated in our minds. Using an economic profit framework, we are interested in predicting the future expected economic profit (or Abnormal OI) of a firm. This requires us to predict

Return on net operating assets (RNOA), the required rate of return on operations (WACC) and the book value of Net operating assets (NOA). This chapter has looked at forecasting *two* of these three drivers of economic profit: RNOA and NOA. The issues with estimating and forecasting the required rate of return on operations (WACC) will be dealt with in Chapter 7.

In this chapter, we have forecast Ryman Healthcare's RNOA and NOA. We saw the key economic and business realities driving a firm's RNOA which we need to forecast are those that drive its profitability (PM) and efficiency (ATO), and in turn, drive Operating income (OI), sales and NOA. We also saw that the economic and business realities driving a firm's sales are usually key aspects to forecast when forecasting a firm's NOA, along with those aspects that drive its ATO. We also gained a sense in this chapter that we can analyse a firm by breaking it into bits, but that each of these bits are still related to, and influence, each other. We need to ensure we also look at the business overall and focus on how each of these bits relate to and influence each other.

You will also note that our forecasts of the economic and business drivers of a business are for a few years, for a finite period. Yet an equity interest in a firm entitles the equity investor to dividends from a firm for eternity (or at least until it is liquidated or taken over). We will look at ways to handle this issue in Chapter 7. We will see we need to calculate a continuing value at the end of our projections or forecast period, based on some simplifying assumptions about what may lie beyond our forecast horizon. Before we do that, we will consider how we can simplify our analysis by focusing on the enterprise or operations of a firm, rather than on its equity. We will see how we can focus on a firm's operations rather than also considering how it has financed those operations when valuing a firm. We will ask ourselves whether we can safely disregard the financial activities of a firm and focus our efforts on an analysis of a firm's operations, which may be more likely to influence value to equity investors. This is the question we will consider in the next chapter.

#### FOOTNOTES

1. Greek Philosopher who lived from 570BC to 480BC.
2. Growth in sales that is accompanied by an increase in ATO (for example, by a reduction in the level of inventories required for each dollar of sales through improved economies of scale achieved in a firm's warehouse and distribution operations) may or may not lead to growth in NOA. It will only lead to a growth in NOA if the proportionate increase in sales is greater than the proportionate increase in ATO. For example, a 5% increase in sales accompanied by a 10% increase in ATO would lead to a decline in NOA, not an increase. However, an increase in ATO would also increase RNOA (since  $RNOA = PM \times ATO$ ).
3. The DCF framework also provides a conceptual way of thinking about 'good' and 'bad' sales growth. As we have discussed previously,  $FCF = OI - \Delta NOA$ . FCF has the same accounting drivers of PM (OI/Sales), ATO (Sales/NOA) and sales growth as a firm's economic profit.

## QUESTIONS

- 5-1. Financial statements tell us about the past. They are a record of what a firm has done in the past. How can analysis of financial statements be focused on a firm's future? How is this possible?
- 5-2. What are the main differences between drivers and passengers? Do you think that the financial statements are passengers and that a firm's economic and business realities are the drivers? Why or why not?
- 5-3. "Financial statement analysis should focus on analysing financial statements. It should not involve assessment of vague, confusing and hard-to-pin-down qualitative factors that surround a business. We need to get to the facts, not to people's judgements."

Critically discuss this statement. Outline the reasons and thinking behind this statement. Then describe whether, based on your current thinking, you agree or disagree with each of the underlying reasons of this statement that you identify.

Note: It is perfectly acceptable, indeed it is expected, that you might have any of a range of views or opinions about this statement (and about many other issues in relation to financial statement analysis). I am interested in what *you* think and, most importantly, *why*.

- 5-4 Why do you think so few people can use a firm's financial statements to meaningfully assess its value? What do you think are the main barriers people face? What do you think are the main barriers *you* face in using financial statements to engage with the realities of firms?
- 5-5 "Without sales, a firm is dead. It will fail without sales. Thus, there is no such thing as 'bad' sales growth. The only 'bad' sales growth is *no* sales growth." Critically discuss.