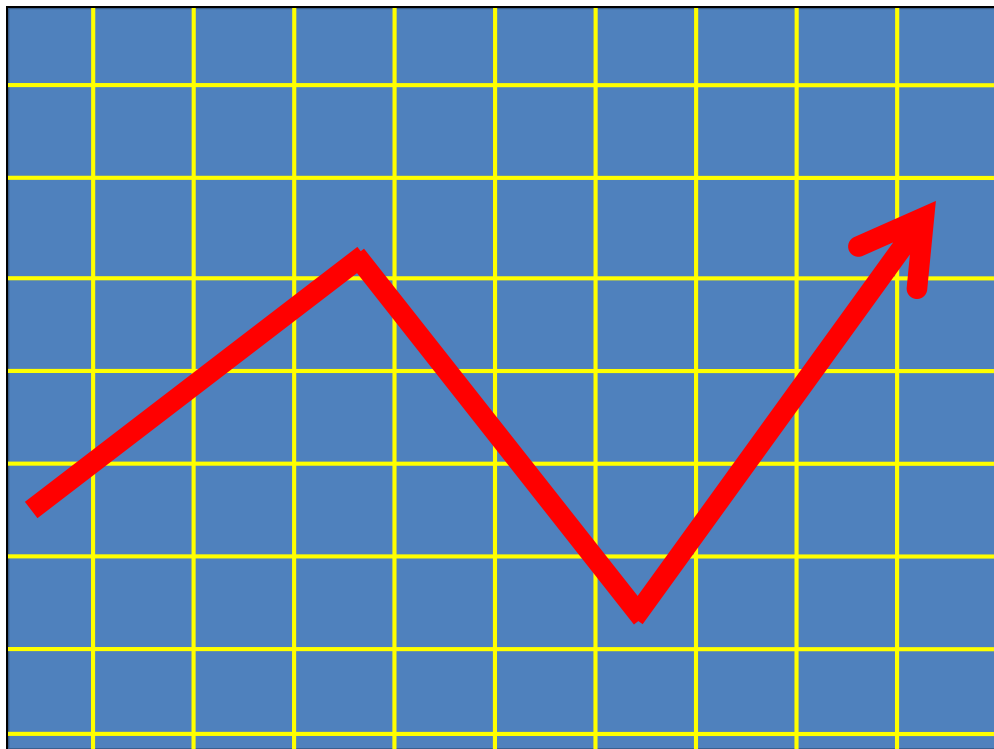


# *Manage for All Seasons*

**Surviving recessions and riding booms**



*Graham Godbee*

# *Manage for All Seasons*

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## **Book Title**

The title is derived from Robert Bolt's play on Thomas More: *A Man for All Seasons*. Henry VIII executed More for not endorsing Henry's first divorce.

The title for Bolt's play was taken from a description of Thomas More in 1520 by Robert Wittington: "*More is a man of an angel's wit and singular learning. I know not his fellow. For where is the man of that gentleness, lowliness and affability? And, as time requireth, a man of marvelous mirth and pastimes, and sometime of as sad gravity. A man for all seasons.*"

The title reminds us that management is for all seasons, not just boom or bust.

## Preface and Guide to Using the Book

Use this book in whatever manner meets your needs.

You do not need to read the whole book or any part in order. The Chapter headings indicate the main topic areas and you can choose what is of particular need or interest to you now.

Each chapter has examples and cases to illustrate the issues and to assist in relating the topics to your circumstances.

At the end of each chapter, there is a summary with some key take away points.

If you finish the book with a few new thoughts or something to ponder, then it has been worthwhile. At the end of the day, if you avoid some of the major mistakes, you have improved your chances enormously of not failing and of outperforming most other businesses.

While the writing style tries to be entertaining (or at least not as boring as listening to an accountant), the ideas and messages are serious. They are based on extensive research, practice and rigour. The book is intended to be thought provoking. You may not always agree with the ideas and that is fine. At least be challenged and think about them.

The following descriptions give some guide as to which chapters may be of most importance or urgency for you.

**Pondering Life's Big Issues?** Then **Chapter 1** is for you. It is about having a balance and setting the big goals. Most of us are too busy working **in** the business to ever get our heads up high enough for long enough to work **on** the business. Just what do you want to achieve and do you have a plan to work towards it?

**Feeling Depression About Recession** Chapter 2 provides some balance about the “greatest financial crisis of our time” (as described by Kevin Rudd). The 2007/8 greatest financial crisis passed and was followed by the resources boom. The resources boom had passed by 2015 and was replaced by housing growth. The housing downturn came and was hit by the Covid19 pandemic – a truly global shock to the world economy. Recessions will pass and there will be a new era of growth, followed by another downturn followed by some growth followed by....

After the longest period of sustained economic growth in Australia, the 2007 downturn reminded us that no economy is bullet proof. The 2007 global recession

was a bit of triple whammy, so asset price deflation lasted longer than normal and the high growth of the previous two decades may come to be referred to as “the good old days”. [By the way, technically Australia was not in recession in 2007 or 2008. Economists define a recession as two consecutive quarters of negative growth. Australia had one quarter of negative growth. The next quarter, after much pump priming came in at growth of 0.1%]. However, a full blown recession for 2020 is almost certain – unless it turns into a depression!

**Chapter 2** offers some balanced information about company failure rates and the causes of failure. Some facts help offset the doom and gloom merchants. It is rarely as bad as many commentators make out. Even the big failures so far in 2020 like Virgin Australia and many retailers, were already sick and tottering before Covid19 came along.

Finally, there are probably bigger issues to face in the coming years than the passing parade of booms and recessions (see Chapter 16).

**Chapter 3** gives a heads up on how recessions go and pan out. It helps to have some balance and remember that a new day will still dawn. Recessions can provide opportunities for those who are prepared. As well, our economy and your business will likely be changed somewhat on the other side of any recession. Start preparing for the new world now.

**Help, I’m Drowning!** If short term survival is your greatest need, then go to Chapters 4 & 5 immediately. In Chapter 4 you will find a survival checklist and short term actions for staying in business long enough to complete this book. Chapter 5 looks at that critical management tool: the short term cash flow forecast. Let us check that you are not trading your business while insolvent. Otherwise, you could lose more than your business!

If it is still going pear shaped, you made need to then jump to Chapter 14 to look at restructuring your business.

**How Fast Can I Grow?** How fast can you grow your sales without blowing apart your company’s financing? This is a fundamental issue and we have a simple but effective calculation. I have seen this equation in bank spreadsheets but the bank credit officers do not know what it means. When it is explained to them, they are gob smacked and think it is the best thing since sliced bread or loan covenants. So will you. The explanation is in Chapter 6. There is even have a spreadsheet for you to download and have the answer calculated for you. By the way, growing your

sales too fast is the leading cause of business failure in boom times. It is known in the credit industry as overtrading.

**Where Am I?** You need to know how you are performing and what you own and what you owe. This is why the accounting system exists. Alas, few managers fully understand what the three main accounting statements really mean: balance sheet; income statement; statement of cash flows. We do not want to make you a bookkeeper - you are more important, you are a manager. But we provide some common sense explanations of accounting, accountants and accruals.

Your first year accounting course is in chapter 7.

**Understanding cost behaviours** is critical in managing your business. How do fixed and variable costs behave? How many sales do you need to break-even? Chapter 8 shows the essential tools to understanding the costs in your business.

**Being your own analyst** The accounting statements describe what is happening. But you need to **analyse** – what does it mean? Reading the accounting statements is just the beginning. You add value to your business by understanding what the numbers are saying and where your business is heading. Chapter 9 shows more analytic techniques than are known or used by most business analysts.

**Ratio analysis** is one of the most common and primary analytic techniques. Chapter 10 shows the fundamental ratios and what they mean. You can add to their power by benchmarking or at least doing trend analysis.

**How Much Debt is Too Much?** Chapter 11 should have been read by bankers around the world before the financial crisis of 2007 – 2011 and perhaps by resources companies before 2015. One thing the financial crisis tells us is that we should not trust bankers on how much to borrow. Again, the theory has been around for a while and it is mostly common sense. It is just that rationality and common sense are not always found in finance. We will show the issues to consider on how much debt to take on.

**Short Term Improvements** Now that you have improved your survival rating (since Chapter 4), we can look a little further ahead. In fact, even while in survival

mode, you should have been giving some thought to the medium term. Chapter 12 looks at general principles and actions on improvements and turnarounds. Chapter 13 considers short term (out to about 18 months) survival and improvement actions.

**Medium Term Improvements** What about those goals you set back in Chapter 1? Longer term, how are you going to position your business in a rapidly changing world? What are the key issues you must address? For most of us, we are not about to fail but we do have concerns about improving returns and safety over the next few years. Chapter 14 is the longest chapter since it considers the issues and techniques for medium term strengthening and improvement of your business. Here you will find the secret tool of most large consulting firms: Du Pont Analysis. We also consider restructuring issues for more radical actions.

**Longer Term Positioning and Growth** strategies are outlined in Chapter 15. We need to predict future trends and develop flexible strategies to guide us along the way.

**Boom and Bust** It isn't called the economic cycle by chance. There will be more booms and recessions. After all the hard work this time, do not give up the hard yards during the next boom period. There are already thunderclouds on the horizon beyond this recession. Consider the big issues beyond booms and recessions and stay in shape with chapter 16.

Feel free to print and share the pages – just please always acknowledge the copyright.

So when you are ready, and in your own time, dive in.

## **About the author:**

Graham Godbee has been a teacher, economist, finance manager, marketing manager, director, consultant, father and bottle washer.

He came out of university in 1975, ready to start his career, just in time for the stagflation phenomena. He managed to pay off his mortgage with his redundancy pay from a major corporate in the 1980's.

His own business managed to survive and even prosper in the recession of the early 1990's by advising the banks! If you can't beat them and don't want to join them, at least consult to them!

He has taught finance and strategy at Macquarie University's Graduate School of Management since the mid 1980's and been a Visiting Fellow in the University's Centre for Money, Banking and Finance.

Along the way, he has been a director of an international sporting goods manufacturer, a printing company, investment company, supermarket chain and mining prospectors. The range of consulting clients is more diverse.

His PhD was about forecasting corporate distress and failure. There are few facts about predicting but that has not stopped many people from making outlandish statements.

So having "been there and done that", here are some of his thoughts and lessons.

*Happy is he who gains wisdom from another's mishap*

- Sententiae c43 BC

# Introduction

## Letter to the Business Owner and Manager

Dear Entrepreneur,

These are dire times.

The greatest financial crisis in our times, according to former alternating Prime Minister Kevin Rudd, the IMF and many others. Kevin was later to learn the old economist's joke about the difference between recession and depression. Recession is when you lose your job; depression is when I lose my job. Still, he was able to overcome his personal depression and to prove in 2013 that not only John Howard can claim the Lazarus title – for a while. Since then Australia became the butt of world jokes with the revolving door on the Prime Minister's suite. Still, we do not have Donald Trump!

But in 2008 and 2009, all was doom and gloom for the economy if not yet for Kevin. The future was bleak and we were all doomed. Like John O'Brien's bush character Hanrahan, "*We'll all be rooned*"

What a load of hype and tripe!

Recessions come and recessions go. So do boom times. That is why it is called the **economic cycle**! Honestly, we are on record as announcing this to business seminars in the dark days of 2007.

So why all the hyperbole and dramatic comments?

Perhaps politicians have been so used to taking the credit for the boom times, they were worried that voters might consider politicians responsible for the bad times too. That would be so unfair. But if we talk about it being a global crisis of unprecedented proportions and that we are not immune, then how can we blame the politicians? The media of course, likes drama to sell newspapers and attract television audiences to make their (dwindling) advertising revenue.

Ironically, one of the leading players causing the global recession in 2007/8 was the Royal Bank of Scotland which needed a Government bailout. In early 2016, this bank pronounced that 2016 was going to be "cataclysmic" and advised clients to sell everything and just hold cash and high quality bonds! What a turnaround in attitude!

True, many businesses go through tough times. Sales and cash flow can come under pressure and you may perhaps be under more pressure than normal. This can happen in either a recession or boom times!



But that does that mean we shut up shop or bemoan our luck? You could, but that would be a self-fulfilling action.

Recessions and tough times can have upsides and silver linings.

Recessions help clear out much rubbish. There have been poor business managers surviving and even prospering in the good years, soaking up precious resources and basking in undeserved glory. Recessions help to clear out these incompetent managers.

Likewise, there are entire products or industries that have managed to survive in the boom times that will either disappear or be radically reconfigured. The big 3 American car companies continued to make behemoth SUV's when their market kept wanting smaller cars. Who will shed a tear for their CEO's when they turned up to the US Congress seeking billions of dollars in handouts? Each CEO flew to Washington in each company's private jet. We may shed a tear for the displaced workers but not for those CEO's.

And the epitome of greed: the Wall Street bankers? There is no need to shed a tear for them either. When Merrill Lynch was forced to sell out to the Bank of America, in order to survive after losing \$US118 billion, you will be pleased to know that the last act of the incumbent managers was to bring forward their bonus payments totalling \$US127 million for the top executives. While racking up the losses in 2008, CEO John Thain spent over \$US1.2 million redecorating his office.

The senior executives of American Insurance Group took the billions of public funding for their bail out and used \$US165 million of it as termination bonuses to the executives who had caused all the losses.

If some of these managers and their excesses are removed by the recession, then it is a bonus. In Australia, if some of the excessive termination payments to executives of large public companies are curbed, then also good. Even in 2016, Clive Palmer agreed to the Queensland Nickel Refinery to go into administration putting at risk the redundancy payments of the workers. But fear not, Clive Palmer had already secured all the assets of the refinery in other companies he owned, safe from claims of workers and administrators.

What about us? More importantly, what about you?

When we look at a recession as part of an ongoing cycle, we realise that we need to manage our way through the recession just as we need to manage through a boom time. The major difference is: you have to be good in boom times, you need to be **great** in recessions.

And Covid19 looks like being a long recession. Mind you, in most countries, recessions go for about 5 quarters. In Australia, even our rare recessions have

generally been short. Truly, we have been the Lucky Country. But Covid19 and its global effect could well see us needing to bear a longer than usual recession.

The United States now has more people unemployed than during the Great Depression. But be wary of doomsday prophets and statistics. The numbers are in absolute terms and the American workforce is several times larger than in the 1930's. So, in relative terms, the percentage of unemployed is much lower than the Great Depression. Also, when sanctions ease, most will be reemployed quickly unlike the Great Depression which took many years.

Even the ABC has been peddling logarithmic graphs and saying Australia was just a week behind Italy or the UK in the crisis for cases and deaths. In reality, Australia was not even a tenth of the way there. However, journalists of all colours are not averse to hyping up a crisis.

So, these notes are here to help you with a business tune up. It is a get fit book for your business, applicable for good times and bad.

After each recession, you and the economy will hopefully come out fitter and ready for the next challenges. You are likely to be changed and your markets and industry are likely to be changed. There will be some hardships but also some opportunities and gains.

The good manager minimises the hardships, maximises the gains and is prepared to grab the best opportunities.

Let us get to work!

# 1. Goals: Personal and Business

Before plunging into the serious aspects of business survival and performance, we should first stop and think about what we are trying to achieve.

If you are running your own business, you are probably a “hands on” person who likes to jump in and do “things”. Otherwise, you would not be such an achiever.

We are all guilty of becoming immersed in the business and dealing with day to day crises and minutiae. There is just so much to do and so little time. We are working so hard in the business.

But what do you ultimately want? Where do you want to be going?

Many of us spend 10 or 20 years in the business and then one day we look around and we are still doing the same day to day tasks. We have missed the opportunities to maximise the value of our business or to have the business set up for a life beyond us or we have missed the even bigger questions about our personal life.

Too many “successful” business people have taken small businesses to billion dollar businesses and their own personal wealth to hundreds of millions of dollars or more. But too late they have realised they did not figure out what was really important. Often, the wake up call has been divorce, alienation of family and friends, cancer, some other health issue or any combination of these.

So what do **you** want to achieve?

Answering this question, allows you to have a perspective for all that follows. You can judge if your other decisions are in line with your big goal(s).

## 1.1 Personal Goals

The meaning of life is more complex than 42 (as per the Hitchhiker’s Guide to the Galaxy). Your personal goals are just that. They are unique to you.

Personal goals can be ANYTHING and have been known to include:

- Altruism
- Noticed for what you do
- You haven’t actually thought of a goal
- Time to be flexible in your life
- Hate working for others
- Income (be rich)
- Nepotism (pass it on to the children)
- Good times

Your personal goals can certainly change over time as your circumstances change: family situation; health; age; life experiences. It pays off though, to have some personal goal(s) to keep a perspective on what you are doing. You will find that much of the time, you are just marking time or being distracted by minor details from looking at the big picture. Unless you believe in reincarnation, you only have this life in which to achieve your goals.

If you have not done so already, think about and write down your personal goal(s). Check on them every year to see if you are on track. Feel free to modify or totally recast your goals if you want to – they are, after all, your goals to do what you please.

## **1.2 Personal Goals and Business Goals**

You may be one of those characters where business goals are everything or at least have primacy. This may be especially so in your 30's and 40's and if you are male.

As you get older, you do not necessarily become wiser but the testosterone levels normally drop and we start acting a little more balanced (women would argue men become a little more like the rest of the human race).

It sounds glib, but the testosterone levels are a real factor. Testosterone levels are being shown to be a major contributor to the gung-ho bank lending and trading behaviour that led up to the 2007 financial crisis.<sup>1</sup> This was combined with a dysfunctional bonus system that rewarded short term gains at the expense of long term pains and the herd principal. The phrase “running with the bulls” can be applied to the financial markets.

It is sad to see many executives and business owners who sold their souls to the corporate world and who defined themselves by their job. They then retire or quit or are fired and they can no longer find a meaning to their life. If you want to see a sobering movie, rent “*About Schmidt*” with Jack Nicholson in the lead role.

As a quick test, see how you describe yourself next time someone asks: “So, what do you do?” Most of us will answer by giving our job description. See if you can describe yourself as a person other than by work reference.

You have personal and business goals. Hopefully, the business goals will be a subset, or a means to an end, for your personal goals.

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<sup>1</sup> See the work of Dr John Coates, behavioural economist at Cambridge University

## 1.3 Business Goals

Having decided on personal or life goals, you can now think about business goals. These are often more short term than personal goals. Business goals may be an end in themselves or merely a means to a personal goal (e.g. financial independence).

As with personal goals, business goals can change and evolve over time. Starting off, you may be about survival and consolidation. Later, you may want to take on a growth phase. Later in life, you may be thinking about succession planning and setting up the business to be able to run without you.

Decades ago, when Bob Ansett was on the speaker circuit at \$3,000 per hour, he would say you were in business either to make profits or have fun. Considering his Budget Rent a Car suffered demise and Bob went to trial over the failure, it is doubtful if he retained either fun or profits. He did remain on the speaker circuit though. If you are smart, you will try to have one or the other and if you are clever and a little lucky, maybe both. But you need to have some goal(s) to work towards in order to profit.

Business goals can include:

**Performance**

**Robustness** (being able to withstand the bad times)

**Opportunism**

**Flexibility**

**Independence and importance**

**Time** – not so much free time but more control over time

There are many others, such as wanting to provide a great service or to begin a dynasty or to change the world, as per Rupert Murdoch.

Just be cautious about a couple of possible goals. Dynasties do have a way of imploding. The old Chinese saying that “wealth does not cross three generations” is seen time and again. The first generation starts the business, the second generation grows the business but the third generation is more into a life of ease and luxury and fritters away the business.

As well, it is quite a burden to place on your children that they should follow in your footsteps (unless you are in the business of land mine clearance). The children will have their own interests and life goals.

A second dangerous goal is turning a hobby into a business. “I like making cakes / woodturning / organising parties”, etc. So you start up a business doing the hobby. Not only do you now have to perform quickly and then market, price and organise production, but you are doing an occasional task full time. The enthusiasm for the hobby is soon lost, together with most of your capital.

## **1.4 Big Hairy Audacious Goal**

The Big Hairy Audacious Goal (or simply BHAG) was put forward by Jim Collins and Jerry Poras<sup>2</sup> in 1996. A BHAG can be used to gain focus for team effort. Collins pointed out that a bad BHAG comes from bravado and is probably unattainable. A good BHAG is challenging but comes from understanding the market and your capabilities.

A BHAG is a bit like a vision statement but much more objective with numbers and a time frame: it is a finishing line, so we can know when we have crossed it.

Having a BHAG or big goal is useful for focus and strategy. If you want to grow profits at say 5% per annum, then you can probably do this through operational improvements and natural market growth. It is not a big deal. But if you want to say double sales and profits in the next 5 years and have a global presence, then you will need to shake things up and go out and do something different.

It is not essential to have a BHAG, but you could find it interesting and motivating.

## **Case Example**

Paul Morris was CEO of AutoNexus, a unique part in Australia of the UK based Inchcape Group, which is big on car dealerships and related activities.

AutoNexus carried out pre-delivery work on new cars: paper work of importing, storage and detailing plus carrying spare parts for dealers. It had been doing much the same for many years when Paul took on the role of CEO.

Paul Morris set about challenging his team and set a goal of \$x million operating profit by 2010. An opportunistic acquisition came along that was great value and added considerably to the capabilities of AutoNexus. Good management saw this reap rewards so that the 2010 profit goal was going to be achieved a year or two early.

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<sup>2</sup> Collins, J. & Porras, J. (1996) *Building Your Company's Vision*, Harvard Business Review, Vol. 74, Issue. 5, pp 65-77

Rather than sit on their laurels and enjoy the scenery, Paul proposed a new BHAG or stretch goal to more than double profits again in a few years. However, considerable analysis and understanding of the markets and opportunities could not identify where all this growth would come, especially under the realistic constraint of limited capital expenditure.

So, very sensibly, the stretch goal was scaled back a little to what could be achievable with a great deal of effort and focus.

Such a challenge could not be met by just doing operational improvements, (although they would still be sought). It meant that the business would need to evolve in its capabilities and systems, find new customers and enter new markets. In short, AutoNexus would need to transform and continue evolving.

A sidelight from the analysis was that AutoNexus at the start of 2008, reckoned that the new car market in Australia was peaking and would fall. This was despite the booming economy and registrations of vehicles running at record levels and most other pundits forecasting boom conditions to continue. The outlook forecast by AutoNexus made the diversification even more imperative as a defensive strategy, just as much as a growth strategy.

When the bottom later dropped out of the new car market, AutoNexus and Inchcape were several months ahead of their competitors and in much better shape. A couple of years later, the market was booming again as the Australian dollar surged and imported cars became cheaper. Remember – it is an economic cycle! AutoNexus was still in good shape to ride up on the following boom too.

The case shows the value of a motivational stretch goal but being realistic with one that is achievable and based on analysis rather than bravado or testosterone.

## **1.5 Take Aways**

Every day you will be drawn into the business. As the business owner or leader, you need to get your head up occasionally. Rise above the daily issues and remember the big picture: work on the business. Where are you trying to go?

Then, rise even further and remember the big picture of life. What does it all mean and what do you want? All this will give a purpose and a direction and also a sense of balance. Have fun and make profits!

## 2. Company Failure Rates

### 2.1 Don't Panic

If you are reading this chapter, you probably are not about to fail.

Just the fact that you are interested in and concerned about failure, shows that you are aware and not so gung ho that you have no touch with reality.

#### **Example:**

Back in the 1990's, the author was looking over a business for sale that was in receivership. The company made tractor wheels.

That was not the original plan. The original intention was to make prestige "mag" wheels for cars. However, the second hand equipment was so poor, that the wheels it made would disintegrate if the vehicle went faster than 60 kmh. There is not much call from street racing hoons for showy magnesium wheels that are speed limited to 60 kmh. Consequently, the target market was adjusted to tractor wheels!

So the business "plan" was going off the rails (or the road) very quickly.

Anyway, a quick walk around the factory and a cursory glance at the books confirmed that this business was a dead duck – it would never fly.

Within 15 minutes, this was conveyed to the receiver. He just sighed and agreed. The receiver admitted he had already placed the advertisements for the auction sale of the plant and machinery and he expected only to get scrap value. All very realistic!

Then the receiver confided that the former owner of the business still had not come to this reality. The former owner still thought the business would be resuscitated and he had plans for global expansion with similar plants in Mexico, Brazil and Spain.

Optimism is an essential ingredient for entrepreneurs but it does need to be balanced with large dollops of reality and rationality. Know when to fold and cut your losses.





## 2.2 What is Failure?

There are so many myths about company failures. So this chapter will give you some facts and hopefully a sense of balance.

Surprisingly, in the field of business failure there are few facts or even definitions.

The difficulty is that there is no universally agreed cut-off point between success and failure. Rather, it is a continuum with considerable overlap depending on assessment and perspective. Even the continuum concept perhaps needs refinement. It is argued here that there is some discontinuity between distress and failure. There is some trigger (even luck) involved which may or may not see the business leap across from distress to outright failure.

Even the term “business” can be vague. There is considerable confusion in the literature over business bankruptcy – much of the statistics on bankruptcy are actually about personal bankruptcy. Indeed, businesses do not go bankrupt. They go into administration, receivership and liquidation but not bankruptcy. Bankruptcy is for people.

In Australia, a personal bankruptcy can be classified as to whether it was caused by business failure but bankruptcy is still that of an individual. As well, the term “business” is subject to interpretation: do we mean incorporated businesses or do we also include other business structures such as sole traders (which are included in bankruptcy statistics), partnerships, trusts, public (government) organisations and so on?

In broad terms, some of the grades along the spectrum are shown in the graph below.

Outright Success    Moderate Performance    Poor Performance    Losing Value    Shrinking / Exit    Distress    Failure    Wind Up



Characteristics of each grade include:

**Outright Success**                      Consistently (say over 7 years) able to earn returns (profit) above the cost of capital. Able to readily access external capital if needed on favourable terms. Strong and reasonably consistent operating cash flow. Favourable industry and competitive position.

**Moderate Performance**              Returns close to average for its industry and generally above the cost of capital. Generally has a reasonable

operating cash flow. Average industry attractiveness and competitive position.

**Poor Performance**

Returns hover around the cost of capital in most years but there is more volatility. Operating cash flow typically only about 20% above profit. Below average industry attractiveness and competitive position.

**Losing Value**

Considerable volatility in returns and operating cash flows. Returns are 2/3 or less of the cost of capital. For a public company, market capitalisation has drifted lower over a sustained (5 years or more) period. A long standing example would be Mt Isa Mines in Australia until taken over by Xstrata or Qantas or Fairfax Media or ....

**Shrinking / Exit**

Performance and operating cash flow are insufficient to attract new funds or service stay-in-business investment and financing needs. This results in steady attrition of assets, either by non-replacement of depleted assets and/or disposal of assets to provide funds. Operating cash flow is insufficient for all “stay-in-business” or replacement capital expenditure. The business is shrinking away or will be sold cheaply or voluntarily wound up. An example would be ABC Learning Centres for a decade before wind up in 2009.

**Distress**

Returns are poor, probably losses. Operating cash flows can barely meet financing needs or worse. Actions are no longer at the discretion of the owners or their agents (i.e. directors and professional managers). At least some creditors are able to demand immediate actions that are not in the interest of the owners. Asset disposals are forced and attractive investments must be foregone. Owners may wish to sell but it is difficult to find buyers except at “bargain” prices. Typically, value of the business has at least halved in a period of two years or less. There is either a major restructure or turnaround or else the business will proceed to wind up (probably forced). An example would be Pasminco in 2000 and its successor OZ minerals in 2009. Do they ever learn?

## **Failure**

Distress jumps to failure at some trigger. The KMV failure prediction model would look at market value being less than the value of debt. In practice, there can be many final triggers leading to a formal cessation of business or appointment of administrators. However, such formal acknowledgement of failure follows the more fundamental assessment that the condition of the company is either irretrievable or that greater value to at least one party can be achieved by administration rather than corporate survival.

Within the “Failure” category, there is a subset continuum from Chapter 11 type workouts, to schemes of arrangements, to administration through to wind up and liquidation.

## **Wind Up**

The final stage of a process that started some time earlier is the formal wind up and liquidation. This is the highly visible “failure” that is readily recognised but not necessarily the most valuable point of investigation. Examples include HIH, Allco, ABC Learning, Ansett. Some wind ups have continued for well over ten years.

Even at the scale of Distress or Wind Up, there are several sub categories.

Bickerdyke et al.<sup>3</sup> make the distinction of:

1. Solvent failures: the business is not sufficiently successful for the owners and they exit the industry but without owing any debts.
2. Insolvent failures: catastrophic failures where bankruptcy and/or liquidation is involved.

For small businesses in Australia, solvent failures are the majority of cases, estimated at perhaps 80% of all small business failures. Yet there is little data on such failures – most data is concentrated on the 20% of the catastrophic failures where creditors lose some funds.

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<sup>3</sup> Bickerdyke I., Lattimore R. & Madge A., “Business Failure and Change: An Australian Perspective”, Staff Research Paper, Productivity Commission, Commonwealth of Australia, December 2000.

## 2.3 Lack of Data

On top of the problems of defining business failure, there is a lack of reliable data.

To put it bluntly, in most cases, there are not enough failed companies to undertake significant statistical analysis. This has affected just about every study and has certainly led to considerable “massaging” if not outright fudging of the data by researchers.

The Basle Committee on Banking Supervision<sup>4</sup> considers data limitations to be the first of two key reasons for the difficulties in applying credit risk models within banks. The other reason is the long time frame required for model validation (i.e. the time taken for a predicted company to fail or not).

*“Data limitations: Banks and researchers alike report data limitations to be a key impediment to the design and implementation of credit risk models. Most credit instruments are not marked to market, and the predictive nature of a credit risk model does not derive from a statistical projection of future prices based on a comprehensive record of historical prices. The scarcity of the data required to estimate credit risk models also stems from the infrequent nature of default events and the longer-term time horizons used in measuring credit risk. Hence, in specifying model parameters, credit risk models require the use of simplifying assumptions and proxy data.”* (pp. 2 & 3)

Basle (or the Bank of International Settlements) is the bank to the world’s banks and conducts research and sets standards. Basically, it is admitting that the data is poor and limited, making it difficult for banks to predict business failures.

## 2.4 Myths, Maths and Marketing

So we have problems even defining what is failure and we have major difficulties obtaining useful data.

This makes life difficult if you are trying to market services to businesses about avoiding failure. What are you to do? Well, you can fudge the figures. It is known that 92% of all statistics are made up and the other 12% are incorrectly calculated!

Following, are some claims made about business failure. Note that most of these claims are made by people trying to sell their services to a scared market.

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<sup>4</sup> Basle Committee on Banking Supervision, Credit Risk Modelling: Current Practices and Applications, Bank of International Settlements, April, 1999

The alarmist view also helps to sell newspapers and business television programs. They generally follow the old maxim: “never let the facts get in the way of a good story.”

### **One**

“Most businesses fail in the first two years”

- Rana Pala, Partner of Sydney accounting firm, BDO

### **Two**

*An independent report [by accounting firm Grant Thornton] on business bankruptcy has concluded that the rate of company failure in Scotland is at its highest for nearly nine years.” - BBC World News*

**The survey concluded that there had been a 36% increase in the number of court liquidations.**

While the “facts” are true, the information is misleading. The report failed to mention that the 36% increase was just between one quarter and the next and represented a rise of just 10 liquidations from 92 to 102. Wait a moment: that is only an 11% increase anyway, not 36%. Even the maths is wrong.

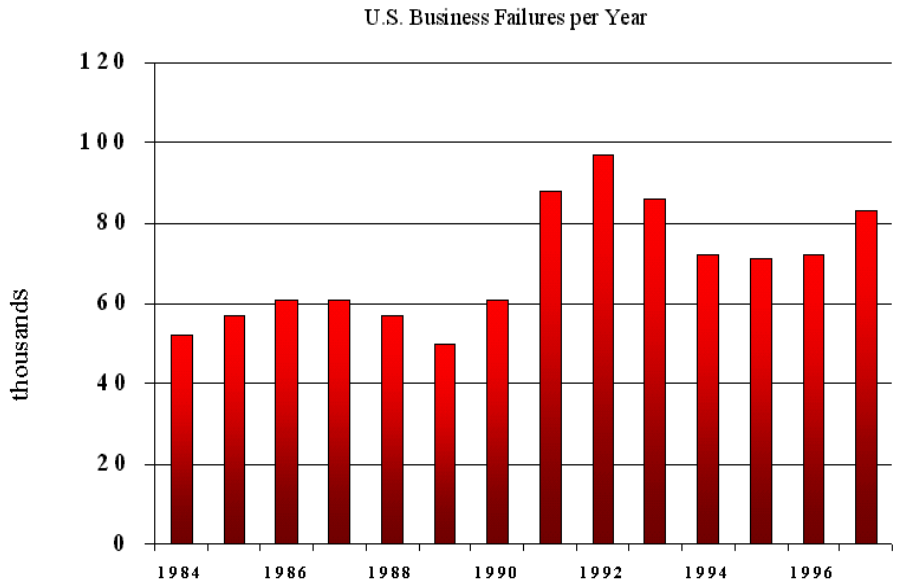
### **Three**

**Quarterly Business Failure Rate Begins to Rise**

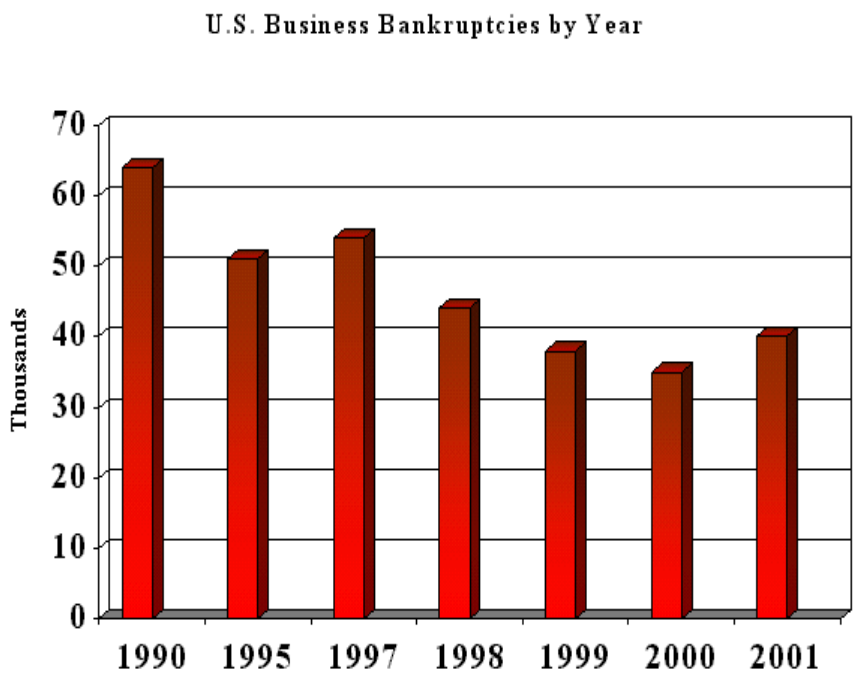
- Banner headline on the UK Dun & Bradstreet web site

Like the BBC article, it was only a change from one quarter to another. In fact, the business failures were still at low levels and still below that of the corresponding quarter in the previous year.

**Four** If the figures are a problem, use graphs. Below is the graph of business failures used by Dun & Bradstreet on USA



Next, are the figures provided by the US government for some of the same period.



The Dun & Bradstreet figures are generally 30% to 40% higher than the US figures. We might say this is a definitional problem. However, Dun & Bradstreet normally uses a very tight definition of failure (was there any loss to creditors) which should give lower figures since there are failures where only the business owners lose but creditors are paid out in full.

**Five** Mind you, can we trust information put out by the US Government?

### **Business Failure Rates**

- Each year over 1 million people start a business
- By the end of the first year, 40% will fail
- Within 5 Years More Than 80% (800,000) of these growing businesses will fail

(Source: The eMyth Revisited, Michael E Gerber, US Department of Commerce)

Interestingly, these figures of 40% or so of businesses failing in the first year and 80% failing within 5 years has become an urban myth and is quoted in many places. But no-one can point out the source of the figures or provide any validation.

**Six** The statistic above has certainly been grabbed by others, as seen by the article below, which adds additional mythical statistics about employment.

*Although small businesses employ one-half of the country's work force and create two out of every three new jobs, the Small Business Administration reports that 80% of all new businesses fail within the first five years.*

<http://www.mrtc.org/overview.html>

**Seven**

## **Are You Planning to Fail?**

### **Why should I read this Article?**

Very few people set out to fail when they go into business. Yet the statistics point to a very high failure rate amongst new businesses.

Opening web page of Australian accounting practice, Stubbs, Wallace & Partners

## **Eight**

*The statistics quoted in Episode one of Taking Care of Business are failure after the first year - 32%, after three years – 62% and after ten years 92%.*

From the ABC TV program, Small Business in Australia

**Nine** This one is so dire, you wonder why anyone would ever start a business.

*It's been estimated that over 82% of all new businesses fail within the first 3 years!*

*And the remaining businesses that are “making it” are only breaking even. If that isn't bad enough, only 3 – 4 % of new businesses actually make a sizeable profit after 5 years! Why?*

*Article written on <http://cashflowmarketing.com>*

## **Ten**

*The bad news is that statistics show the overall rate for small business failures is very high. In fact, there is about a 75 percent failure rate over a five-year period from business commencement.*

*<http://www.tcp.ca/1996/9611/9611SOHO/Success/Success.html>*



**Eleven** Try and make sense of this next one.

### Business Failure

It is a fact that only about 50% of small businesses are still trading after their first three years from initial set up. There are many reasons why this happens but there is only one conclusion: business failure.

Business failure is not only common with new start-ups but also with businesses that have been around for some time regardless of how successful they are.

[http://www.bizhelp24.com/small\\_business/business\\_failure\\_introduction\\_1.shtml](http://www.bizhelp24.com/small_business/business_failure_introduction_1.shtml)

[Just to add a touch of reality here, you should know that if businesses are no longer trading, business failure is NOT the only conclusion. The evidence shows that business failure is a **very minor** reason. Much more prevalent is that the owners retired, or just shut the business down to make more money elsewhere (e.g. in a large corporate) or that the business was sold to someone else or the owner died, rather than the business actually failing.]

**Twelve** The next one also confuses departure with failure but even more dramatically. If you find the maths too tricky, a graph was provided.

### A Business Failure Epidemic

*At the end of 10 years, all but 10% will have shut their doors. That's a 90% failure rate!*

*Nearly 50% will fail in the first 12 months!*



**Thirteen** This is my all time favourite.

*Only 10 – 12% of Australian small businesses survive the first 10 years in business.*

[Now for the punch line]: *By the way, this is one of the few definitive conclusions on this issue. Most others are drawn from purely statistical sources which do not reflect reality.*

<http://www.profitclinic.com/SmallBiz/ResInfo/DntGo/90pcFail.html>

## Fourteen

Just to show that little has changed, the Sydney Morning Herald quoted a Sydney partner of accounting and insolvency practice, PKF on 4 April 2009. The partner, John Lord, said: *“In good times, between 5% and 6% of companies fall over. When there’s a recession or a depression, 12% to 15% fall over.”*<sup>5</sup> One can only hope he made this statement to the newspaper a few days earlier – on April 1<sup>st</sup>.

PKF’s own statistics show that nationally, just over 1,000 companies had winding up applications made against them in the 3 months to March 2009. This is still not failure and on an annual basis, still represents far less than 1% of companies.

## Fifteen

The final statistic may be true because it talks of distress, not failure – an important distinction. Dun & Bradstreet’s Australian CEO, Christine Christian, stated in April 2009, that nearly 130,000 Australian are at a higher level of distress over the next 12 months. This was the largest ever risk downgrade that Dun & Bradstreet had ever done in a 6 month period<sup>6</sup>

## 2.5 A Few Facts

**Only a small proportion of companies fail.** Only a small percentage cease to exist in any year, and that is mostly due to factors other than failure as cited above (life style changes of owners, take over, death and so on).

The most exhaustive study done in Australia was by the Productivity Commission.

The Commission found that in the two year period of 1994 to 1996, 6.1% of businesses ceased operating. Less than 10% of these were due to bankruptcy proceedings. By 1999 – 2000, even this low rate fell by two thirds. Failure rate was down to 3.6 per 1,000 companies. **That is less than 1% of all companies, new and established.**

Despite the alarmist statistics quoted by Dun & Bradstreet for America earlier, a less publicised analysis of their data base in America in 1995 showed that 70% of a sample of 800,000 businesses, were still operating nearly 9 years later.

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<sup>5</sup> Carson, V., Sydney Morning Herald, 4 April 2009 weekend Business p.1

<sup>6</sup> Sydney Morning Herald, April 25, Business p.10

Yes, companies do fail – both big and small. Maybe some more fail in a recession. But the vast majority survive. Even COVID19 will not kill the otherwise healthy companies. But if the business is weak, in a rotten, declining industry, too much debt and poor cost control, etc, then a short term sickness could be fatal.

## 2.6 How to Fail Without Even Trying

You normally need to do something (or several things) that is very dumb in order to significantly boost your chances of failing. Then if you hit some bad luck rather than good luck, you are on your way out.

Most studies agree it usually comes back to management.

When we ask the owner / operators of failed businesses what went wrong, we instead hear all sorts of excuses:

Major customer defaulted

Competition proved too fierce

Bad luck with the operations

Staff did not support the vision

Market changed on us

New technology made us obsolete

Banks did not support us

High interest rates

The only trouble with such excuses is, for every business that fails in an industry, there are usually dozens more that did not fail.

In the early 1990's, the author was invited by a then small Australian bank to go through its bad loan book. This was the time of 18% plus interest rates on business loans. Anyway, while most of the failed operators blamed the economy and high interest rates, analysis showed that the interest rates were a significant factor in only a few of the cases (and even then not the sole or major factor).

Much more prevalent were a series of dumb business decisions, expansion beyond market demand or business capabilities, milking the business to support holiday homes or other extravagances and so on.

One way to understand what is happening is to undertake some **fundamental analysis**. It means looking at the fundamentals or main drivers of business success or failure.

Fundamental analysis operates at three main levels:

1. Macroeconomic: what is happening in the economy e.g. recession, boom, interest rates, exchange rates)
2. Industry: industry characteristics e.g. intensity of competition, industry attractiveness, product life cycle, technological change, risk factors
3. Firm Company safety and profitability e.g. SWOT analysis, competitive positioning, gearing, profit margins, capital asset intensity, asset turnover

We generally find that it is at the micro level – the firm – where we have the greatest impact on business failure. In a booming economy and profitable industry, fools can still go bust. In a recession and in a dog industry, good operators can still succeed – albeit it is tougher and requires more skill.

Many credit models and analysts, look at the financial ratios to see if a company is about to fail. An evolutionary divergence in predicting corporate failure was presented by John Argenti<sup>7</sup>, in a famous study in 1976 (and further developed in 1983). Argenti found that the ratios are at the end of the story. The problems started many years previously and with poor management decisions. Rather than apply some statistical technique to available data, Argenti instead sought to understand corporate failure and why it occurred.

All industries and businesses face competition and changing markets. But some companies go out of their way to make it worse or make themselves more fragile to change. For example, they were too highly geared (too much debt) in a volatile industry; or they expanded too rapidly beyond their capabilities; or systems and structure did not adjust to changing circumstances; or they launched a major project without adequate analysis and so on.

Even these mistakes will not normally prove fatal but then poor management will compound the problems by making further bad mistakes such as borrowing more to get through a “bad period” or restructuring needlessly or cutting service to customers or failing to control costs. Then the good people get fed up and leave. Customers get annoyed and also go elsewhere. The company is in a steep downward spiral to crashing.

From observations and interviews with owners, analysts, bankers, auditors and liquidators, Argenti developed a theory on corporate collapse, or at least

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<sup>7</sup> **Argenti, J.** (1976). *Corporate Collapse: The Causes and Symptoms*. **John Wiley & Sons**

observations of the reasons leading to failure. These reasons were placed in a framework showing their interrelationships and their effects over time.

Argenti's causes extended beyond financial ratios. In particular, he was wary of data based on financial accounts because of their restricted availability (not standardised, not all information available and often late) and the difficulty in verifying the veracity of the accounts. Indeed, some researchers have used the late submission of accounts as a predictor of distress (e.g. Keasey and Watson<sup>8</sup>). The issue of verifiability due to creative accounting is receiving current attention from several researchers.

Argenti concluded that businesses fail for similar reasons and in a similar manner. The prime unifying cause is poor management decisions. These decisions may have been made many years prior to the actual collapse of the company.

Dick Smith Electronics failed in 2016 going into receivership and liquidation. One retail analyst laid the failure back to 1980 when Woolworths bought the business and redirected it from electronics part to a retailer of electronic goods. This put it into direct competition with stronger and more competent competitors such as JB Hi Fi, Harvey Norman, Bing Lee and others.

Woolworths sold out in 2012 to a private equity firm, Anchorage Capital. The price was supposed to be \$115 million but Anchorage only paid about \$20 million in the cash. The rest was paid later by asset stripping the inventory. More than 10 new stores were opened in 2012 / 13 to give the impression of sales growth but average store sales were falling.

Some dressing of the accounts enabled Anchorage Capital to refloat the business in 2014 and pocket some \$500 million.

But the business was weakened and staggering. Coming into the Christmas trading period of 2015, the company was desperate for cash flow and commenced a sale that was described by commentators as "suicidal" with discounts up to 80%. Losses, negative cash flow, depleted stores, too much debt and more saw the management call in the receivers in January 2016.

The problems began with the wrong strategy and positioning, followed by asset stripping and unprofitable expansion and then accelerated with steep discounting of prices. Failure was almost guaranteed.

Rather than just list the symptoms of the poor management, Argenti organised them into a framework of processes or stages through which the distressed firm passes.

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<sup>8</sup> Keasey, K. and Watson, R., "Non-Financial Symptoms and the Prediction of Small Company Failure: A Test of Argenti's Hypothesis", Journal of Business Finance and Accounting, 14, 3, 1987, pp. 335-354

**Stage 1 is a list of management defects:**

A. Management

- i. Autocratic Chief Executive (one person rule)
- ii. Combined CEO / Chairman
- iii. Weak board
- iv. Weak finance function
- v. Unbalanced management team (lacking broad skills)

B. Information Systems

- i. No budgetary control
- ii. No cash flow forecasting
- iii. Poor costing knowledge

C. Change

- i. Unable or unwilling to adjust to a changed operating environment

**Stage 2 Management mistakes compound these defects:**

A. Gearing

- i. Levels of gearing too high for the operational risks of the business

B. Overtrading

- i. Growing too fast leading to difficulties in funding growth and ever higher levels of gearing

C. The Big Project

- i. Overconcentration of assets and management time in one project

**Stage 3 is the symptoms:**

This last stage is more effect than cause and the symptoms are less important in Argenti's analysis than the defects or the management mistakes.

A. Financial Signs

- i. Ratios
- ii. Negative operating cash flow

B. Creative Accounting

C. Other Signs

For example, low morale, assets deteriorating, senior managers departing, falling market share

Argenti's prime work was with large corporations. However, other researchers, including Keasey and Watson have applied Argenti's framework to small companies with some success, helped by Argenti's reduced reliance on financial ratios.

The author has seen similar symptoms in not for profit organisations, even extending to government agencies and university business schools. The astute analyst gains foresight of doom and failure, several years before it is apparent to most observers.

On the other hand, the one-man rule approach is more normal for small businesses and is therefore less of a discriminator between successful and failed companies. Thus we tend to look more closely at the other factors when assessing the small business.

## **2.7 How Difficult Is It To Fail?**

We have seen that all businesses face risks and difficulties but most survive. Bad luck can play a part in it but generally we require management to do some dumb things to increase the likelihood of bad luck being significant.

As a corollary, there are some profitable businesses that made it because of a surprising string of good luck, despite poor management. But the examples are rare. Nathan Tinkler became a billionaire because he was entrepreneurial and pulled off two great deals with coal mines. However, the shortcomings were too much and he could not survive his many poor decisions!

So how easy is it to fail? You might note that most commentators talk about the high failure rate among small businesses and not so much about the large public companies, even though they make dramatic headlines when they do fail. So are big businesses generally better managed than small businesses?

Well, there is no evidence to support that view. What we do find about big businesses is that they are so big, it takes a few hits in order to sink them. In particular, diversified big businesses have the advantage of being able to jettison non essential assets and business units to raise cash in order to survive. The analogy is like that of a hot air balloon starting to sink. If you progressively throw weights overboard, you will keep floating longer. We have many examples of this in the corporate world: AWA, Pacific Magazines, Fairfax Media and more recently Rio Tinto. Small businesses do not have this luxury.

Even BHP in the 1990's was an example. Several very poor investment and operating decisions saw BHP wounded (wasting several billion dollars on Magma

Copper in the USA, a few billion dollars on the hot briquetting plant in Western Australia plus several hundred millions on various other projects). Was BHP going to fail? Not likely. All throughout this period, strong cash flows were coming from the oil division and from other parts of the company. Plus debt was not excessive. The company did halve the share price in a couple of years and shareholder anger saw both the Chairman and CEO removed and the new CEO had to be appointed from outside the company. The result was the entry of Chip Goodyear as CEO and the merger with Billiton. But BHP was in little danger of actually going under.

There are other reasons too why small businesses may fail more than large businesses. Small businesses are normally more constrained in raising additional funds. The old joke about banks is also true: if you owe the bank \$50,000 and cannot repay, you are in trouble; but if you owe the bank \$500 million and cannot repay, then the bank is in trouble. Certainly, banks are more ready to wind up a small client (especially when they are usually well covered by security) than a large customer (especially when the normal security coverage is less than half of the loan amount).

## 2.8 Take Aways

Be wary when people start quoting horrendous statistics about small business failure. We are vague in defining what is “failure” and the data is usually very poor. The reality is that failure is rare.

However, before you become complacent, failure does occur. More commonly, companies get into distress. This happens frequently and causes loss and angst. Extreme distress may lead to failure. However, there usually needs to be some trigger (even “bad luck”) to push the company from distress to outright failure.<sup>9</sup>

While there is a tendency to blame external factors, it usually comes back to management. Distress or failure does not suddenly happen – it is usually developed over several years.

A final note of caution is offered to bankers. Banks manage to achieve a much higher rate of distress or failure in their loan books than is found in the general population of businesses.

This is not because bank lenders are very poor at picking good businesses (or more acutely, at picking and not taking on bad businesses). What happens is that banks tend to naturally select those businesses which will most likely face financial distress!

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<sup>9</sup> Godbee, G., “The Leap to Failure: Distinguishing Between Corporate Distress and Failure Prediction,” 2004



How so? As we will see later in this book, two of the most prevalent factors in causing distress are too rapid growth of the business and too much use of debt. These two factors can be interrelated by growing fast using debt funding. It is a poor combination as soon as anything goes wrong. But in the good times, these businesses seem to be favoured by bankers as great customers: they are growing and using more of the bank's products.

Just hope that nothing goes wrong like a downturn in the economic cycle!

## 3. Looking At Recession

### 3.1 Recession and Australia

During 2008 there were very mixed signals about whether Australia was in recession or heading for recession or would avoid recession.

By late 2008, USA and much of Europe were well into recession. The youth unemployment rates in countries like Greece and Spain soared past 50%.

The technical definition of recession used by economists is two consecutive quarters of negative GDP growth. However, even in good times, we can find some parts of the economy that are depressed. Likewise, even in recessions, some sectors do well such as grocery retailing, cosmetics and toys.

By early 2009, the Federal Government and the Reserve Bank of Australia (RBA) were both acknowledging that Australia was headed for recession or was already in one.

This was despite a strong fight put up by the Federal Government and RBA to avoid recession. This included interest rate cuts and a \$30 billion+ fiscal spending spree.

Confidence and job vacancies were falling and inventories were high.

NSW was probably already in recession by 2008! Some industry sectors were hurting badly even before any official recession: retailing; restaurants, resorts and new car retailing.

Now as the statisticians and economists look back, we technically did **NOT** have a recession. The economists' definition of a recession is two consecutive quarters of negative GDP growth. We had one quarter of negative growth and with all that federal fiscal pump priming, just managed to scrape in with 0.1% of GDP growth in the next quarter. So technically, not a recession.

This is probably small comfort to those in various States and industries that did it really tough.

If you want to feel some comparative relief, feel some sympathy for New Zealanders. They hold the record for the most recessions for the most recessions of any OECD country since 1960: 13 recessions. Indeed, the Global Financial Crisis led to the deepest recession in 30 years in New Zealand with 5 quarters of consecutive decline.

### 3.2 Could We See It Coming?

There are many commentators who are wise after the event. But the best analysts are those who see it before hand and act upon it. As mentioned in Chapter 1, analysis of the car industry by AutoNexus in late 2007 and early 2008 saw strong storm warnings while the rest of the industry was looking at record sales. AutoNexus acted.

By early 2008, this author was telling the Macquarie Graduate School of Management (MGSM) that recession was fast approaching if not already here. A presentation was organised and made to the public a couple of months later.

On the other hand, working with Westpac, we thought the recession was coming earlier – we even thought there was a strong chance of recession in 2005 and got it wrong. But we knew it was only a matter of time and Westpac generally stayed more conservative in its lending practices than most of the other banks and certainly much more conservative than the foreign banks operating in either Australia or in their home countries. In particular, Westpac was wary about lending to the many highly leveraged property deals.

We also saw the collateralized debt obligations (CDO's) issued by American banks to cover their irresponsible housing lending, being marketed to Australian banks and other institutions. Westpac looked at these CDO's when they were being marketed by Citigroup and others. Westpac decided it could not understand the risk profile in these CDO's and wisely decided to avoid them. While this meant losing some business at the time to the more aggressive lenders, it has paid off many times over during the hard times. So why did so many local governments in Australia invest in these CDO's?



### 3.3 The Forces for Recession

They were conflicting. Old joke: you could lay all the economists end to end, and you still would not reach a conclusion.

The following points were what we looked at in mid 2008 on whether Australia would hit recession or not. This was while the Government and the RBA were saying we would avoid recession and continued to say so for another 6 months.

#### **Pro's for Avoiding Recession:**

Australia was coming off a high base with low unemployment.

We have one of the strongest and more regulated finance sectors.

We never got to the debt binge level of USA and Europe.

Federal government had been running surpluses for many years. Apart from avoiding unnecessary expansion, it means strong federal finances and ability to borrow and sustain deficits.

Federal Government and RBA already being expansionist.

Superannuation guarantee keeps putting funds into investment.

Baby boomers (were?) leaving the workforce.

A big export market, ASEAN (16%) was still growing in most of 2008 and was strong apart from Singapore.

China was (and is) going through outstanding economic growth and demanding iron ore, coal and gas (which the Lucky Country had in spades).

We have low rental vacancy and pent up demand for dwelling construction plus immigration.

### **Cons Against Avoiding Recession:**

USA and Europe in recession. For how long? In the end, derived demand for consumer goods would hurt China, ASEAN and other buyers of our products and services?

China was affected short term in the GFC despite the comments about economic growth above. The world's biggest steel region (Tangshan in Northern China) shut down half of its steel capacity. Spot iron ore and coal prices fell below contract prices for the first time in 5 years (but from very high levels).

The credit crunch continued to bite. GMAC and GE pulled out of car financing here. Other companies were retreating to save their homelands.

Banks had the opportunity to ration credit: pick better customers, raise pricing, put in more restrictive covenants.

Job vacancies starting to decline at an accelerating rate. Rising unemployment would follow.

Share market and property value falls and drops in job vacancies all have impacts on confidence, spending and retirement. Consumer and business confidence are down.

Worry about inventory build up: rose 4% to year ended June 2008.  
(Now run down again though).

Retail spending starting to fall. This was in 2008. It has generally continued to fall. By 2013, apart from cars, Australians were generally saving more and spending less.

**Conclusion:**

Ned Flanders: I need to know  
– is God  
punishing me?



Rev. Lovejoy: Short answer,  
“yes” with an “if”; Long answer,  
“no” with a “but”.

With thanks and acknowledgement  
to The Simpsons

Overall, USA and much of Europe were in recession by late 2008 and remained so for another 12 months. They have bounced around since with talk of double dip and even triple dip recessions. Australia has so far avoided a technical recession and retains its longest ever run of boom times. But times are tougher and some industries are going through major structural change.

Putting it very baldly, NSW was probably in recession from early 2008 despite some fudged statistics. As with failing businesses, this was largely due to a series of very poor management decisions by the government over a long period. By 2016, thanks to the construction boom, NSW was the leading economic performer. Again, it is a cycle of booms and recessions.

Some sectors are typically hit hard in recession: much of retail and discretionary spending like travel and cars.

Another old economics joke (from an old economist): An economist is someone who can tell you tomorrow why today did not happen as they predicted yesterday.

### **3.4 The Credit Crisis and Recession**

Following are some views on the “greatest financial crisis of our lifetime” (the phrase used by Kevin Rudd in his dramatic address to the nation).

We have had other crises and we will have more despite the “world’s greatest treasurer,” Paul Keating, once saying that Australia would not have a recession because he had his hands on the levers. When the recession of his time came, he then pronounced it was “*the recession we had to have.*”

Leaving aside the Great Depression, we have had several more recent crises. There was the credit crunch of 1960; stagflation in the mid 1970’s; deep recession in early 1980’s and again in the early 1990’s. Who can forget interest rates of 20% in the late 1980’s?

Then Australia became truly the lucky country (in addition to well managed). We were largely immune from the “Asian Crisis” of 1997. We missed the global recession of 1999 to 2001, partly helped by the Sydney Olympics. There was a bit of a flutter in 2001 but the first home buyer’s scheme came to the rescue (and caused a bubble in housing prices). When we talk of the current fall in the Australian dollar’s value, remember April 2001 when it fell below \$US0.48.

We also had some weakening around 2005 and 2006 but not much.

Basically, we have not had a recession since 1991.

We have also had several credit crunches. The 1960 one was short but sharp – we even had deflation in consumer prices.

What the 2007 / 08 credit crisis showed is how integrated are the world’s finances. We have never seen a credit crisis spread so rapidly and efficiently. It was a long time in the making with central banks and others warning of the looming US crisis for several years. But when it came, it burst quickly. Collective greed and madness

held sway for years until fear rose to the fore. Even Alan Greenspan, then head of the US Federal Reserve during the boom years, admits he may have made mistakes.

It was not entirely without forewarning. The problem of lax US house lending practices had been discussed for more than a decade and a crisis predicted. Even the rapid spread of the recession from America was predicted in a 2005 research paper in the Reserve Bank of Australia:

*The increasing integration of the world economy in recent decades, through the liberalisation of trade and capital flows, has raised the possibility of a more rapid transmission of business cycle fluctuations across countries, especially those originating in large economies such as the United States.<sup>10</sup>*

Some Australian banks (and local governments) were linked to the US disaster by buying the collateralised debt obligations (CDO's) of packaged mortgage loans of US banks.

Commonwealth Bank and Westpac were relatively unscathed here. However, all banks are integrated because most Australian banks have relied on global interbank lending to supplement their deposits as a source of funds. This wholesale funding basically dried up as banks no longer trusted each other. About 45% of Australian bank funding was coming from overseas institutions. The days of relying just on depositors' funds went many years ago.

Smaller banks and the investment banks without access to any deposit funds did it tough. There was a \$100 billion flight of depositors' funds to the safety of the big 4 before 2008 had ended (CBA picked up \$35 billion of it) and it continued with the Government's guarantee just to the banks' deposits.

### **3.5 Recession: Depth and Duration**

Let us get some balance and views about any recession.

First, recessions are not uniform. They vary over time and by region.

Most recessions (negative GDP growth) last for about a year (4 quarters). The overall drop in GDP is low at about 2%.

However, in about 1 in 4 recessions, a housing price bust coincides with the negative economic growth. In about 1 in 6 recessions, a credit crunch coincides.

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<sup>10</sup> Andrews and Kohler, RBA Research Paper. 2005

The 2008+ recession achieved the triple whammy in the USA and Europe: recession with housing price bust and with a credit crunch. In large part, the low economic growth brought in housing price busts which went on to the credit crunch.

Such triple whammy recessions tend to be longer (5 quarters or more) and deeper (about 5% drop in GDP). Even after the economy begins to grow again from its lower base, the credit crunch continues (about 10 quarters) and the house price recession is even longer, up to 5 years. Interestingly, in Australia, housing prices only really started moving up again in 2013 – 5 years after the bust. By 2016, that price boom was ending.

Add to this the inventory build up and climatic concerns plus the drain on the USA of its failing wars and you see the reason for fear at the time.

(See Claessens, Kose & Terrones, who are IMF economists, for an article on 5 decades of financial crises and their predictions on how the 2008/9 recession was likely to pan out.)<sup>11</sup>

### **3.6 Covid19 Coronavirus Recession**

This is the classical economist exogenous shock. Much of the world has been hit with an unexpected crisis.

The shut down of economies has been staggering. Industries reliant on large gatherings of people have been stopped in their tracks and any easing of restrictions will only be an easing, not a return to what was once normal. So airlines, cruise liners, education, accommodation, restaurants, clubs and pubs and similar are devastated. If they also had high debt and large fixed costs, then in many cases it will be fatal.

The recession is likely to be long and many industries and social practices will be changed forever.

Some businesses will gain such as social media providers, hobby providers and DIY outlets.

Some businesses need to make fundamental strategic decisions on where they should operate, not just operational decisions on how to operate.

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<sup>11</sup> Claessens, S, Kose, M A, & Terrones, M E, [Global Financial Crisis: How Long? How Deep?](#), VoxEU.org



### 3.7 Living Through a Recession

Some quick thoughts and balance:

Famous economist, John Maynard Keynes may be having a revival with his paradox of thrift. This concept argues that while it is good for me or you personally if we are thrifty and save, if we all save rather than spend, then the economy will falter and we will all be worse off. Much of the stimulus packages given to consumers had minimal impact as concerned consumers saved (or paid off debts) or spent on imported goods (overseas holidays and cars).

Governments would be better off doing some much needed infrastructure spending but that takes more time and skill to implement. The splurges on school buildings and laptops were just designed to spend money quickly rather than wisely.

As Mike Smith, CEO of ANZ said, he has been through 7 economic crises in his business life. He said that good businesses should not be overly concerned.

Charles Dickens gave us Micawber's equation: *"Annual income twenty pounds, annual expenditure nineteen pounds nineteen six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery."* [As an aside, Micawber forgot his own advice and so he emigrated to Australia where he became a magistrate.]

Economist Joseph Schumpeter reminded us in 1942, recessions and companies going bust is not all bad. They do clear up some garbage and release resources for the new growth. *"This process of creative destruction is the essential fact about capitalism."*

Remember that in a recession, the vast majority of people are still employed. Australia has a strong social safety net. Our banking system is one of the strongest in the world. The federal government's finances are strong. There are bigger issues like global warming, aging populations, changing consumer expectations and atrocious infrastructure maintenance by the State governments!

### 3.7 Take Aways

Yes, Virginia, recessions occur. Recessions vary in style, scope and duration. Globally, the 2008+ one was big and long because of the triple whammy of falling production, credit squeeze and house price deflation.

Recessions do happen and so do recoveries. It is part of the economic cycle. If you are not made unemployed and your business survives, you usually come out the other side stronger and leaner.

You need to be a good manager during boom times and you need to be even better in down times. Recessions do tend to clear out a lot of the rubbish. Be prepared to change your business throughout the recession. There may even be opportunities.

Finally, there are bigger issues on the horizon including aging populations, resources scarcity, changing retail patterns, and global warming. Change is the one constant.

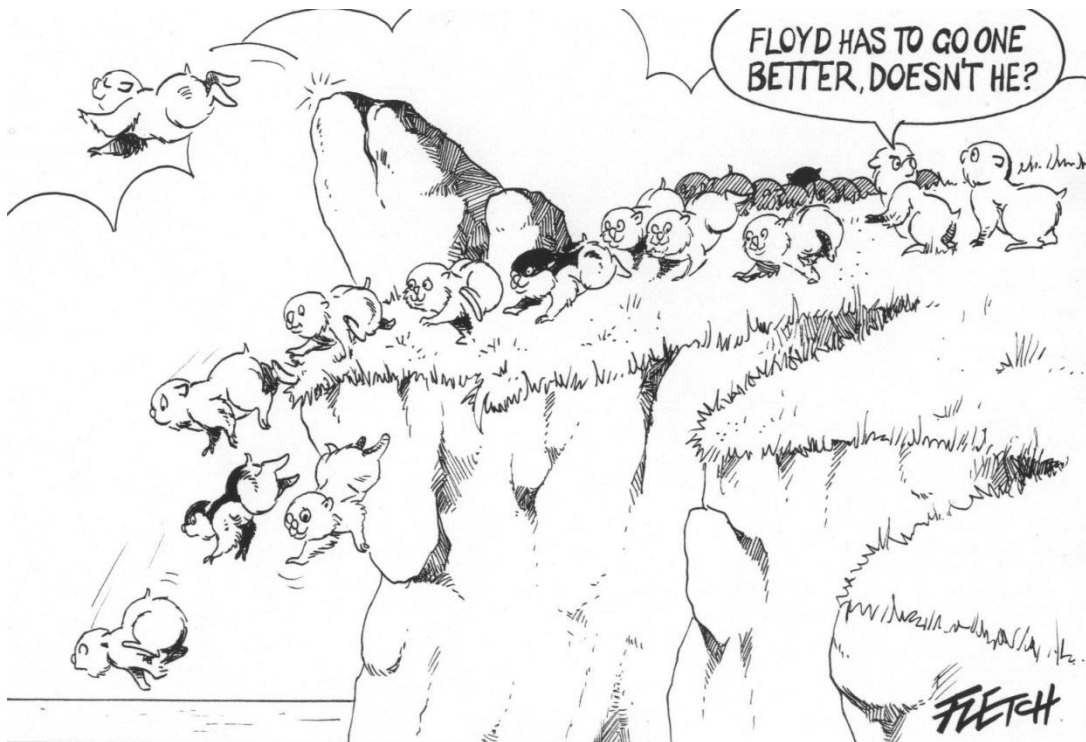
## 4. Survival Check

Before we go too far, we better check that you and your business will still be around by the time you reach the end of the book.

Here we look at a number of immediate warning signs. Remember that most businesses do not suddenly run into trouble and that the root cause usually lies in poor management decisions over a period of years. But that does not help you now if you are in trouble.

So we will concentrate here on immediate danger signs and some immediate actions. In the next chapter, we will look at the ultimate tool: the cash flow forecast. It embodies all the analysis of this chapter into a single tool. However, it can be difficult and time consuming to develop for the first time, so we will begin here with some simpler and faster tools.

These tools or measures are in order of urgency. Do not be part of the herd rushing to oblivion, even if done with style. By the way, like business failure statistics, it is a myth that lemmings engage in mass suicide by jumping over cliffs – it was an evil exercise by Disney for a “wild life” film.



## 4.1 Degrees of Freedom

It is stressed that if action needs to be taken, the sooner the better. There is a natural tendency to procrastinate or to hope that things will get better.

However, the longer you wait, the deeper the hole gets that you are in. If you take action early, you have more choices. Leaving it to the last moment cuts down your choices and your ability to move. It is called **degrees of freedom**. Try to keep as many degrees of freedom and flexibility that you can. If you make a mistake in acting early, you usually have time to reverse it or correct it.

Remember, not making a decision is in fact making a decision: it is a decision to maintain the status quo (that is not working).

## 4.2 Cash On Hand and Burn Rate

Cash flow, of course, is the lifeblood of all businesses. It surprises novices that profitable companies often go bankrupt. The accrual accounting measure of profit is about measuring **performance**. It does not tell us about viability: will you still be around.

Cash flow tells us about **viability**. Do you have the cash to pay your bills on time? While this question is best explored by using the cash flow forecast, we can do some quick rule of thumb measures right now.

How much cash does your business have on hand right now: petty cash and cash at the bank? We can include some cash equivalents like some short term bank bills you own (not borrowings) and maybe some publicly listed shares that can be readily liquidated. Write down the dollar value.

Now, how much cash does it take to keep your business operating under its present modus operandi? Work it out on a daily or weekly basis. This is sometimes given the fancy term **cash burn rate** by finance people. Your outgoings will likely include wages, rent, consumables, interest, utilities and the like. If you need more equipment to operate, then include this capital expense. You will now have a daily or weekly cash burn rate. Divide this number into your cash on hand number and you have the number of days or weeks your business can run until the cash is gone.

### **Example:**

You have \$60,000 on hand (in the bank and in the safe). Your business goes through about \$5,000 of cash per week. So it will take  $\$60,000 / \$5,000 = 12$  weeks of operations until the cash is gone.

Note that this calculation assumes no cash will come into the business over this time. We can make an adjustment if money is coming in. If, for example, you can

be reasonably confident that \$2,000 will come in each week, then the net cash burn rate will drop to \$3,000 per week. In this case, there is then 20 weeks of cash available for operations.

(A more detailed analysis would be via the cash flow forecast, but our “back of the envelope” calculations above will not be too far out and can be done in a matter of minutes).

### **Case Study:**

David Willcox at Australian Survey Research at the start of the recession in August 2008, looked at his cash on hand and the burn rate. Customers were starting to thin out and existing clients were delaying payments. On his burn rate, David reckoned he could get through to about February 2009. However, he made the call that the recession and its effects on cash flow were likely to go beyond February 2009.

So David devised contingency plans: he had two fall back positions of reduced staffing and later reduced rental costs before a final position of putting the business on care and maintenance with minimal outgoings.

Wisely, David did not wait until February to go to his fall back positions – because then it is too late and the cash has all gone. He went to his first fall back position immediately and dropped to his second shortly thereafter. This meant he could ride the recession for more than a year before going to care and maintenance.

Interestingly, some customers came back earlier than expected and David and his staff have been very busy at the second fall back position (and profitable) with considerations of moving back up to the first fall back position. By 2016 the business was in boom mode and David was fielding offers to sell out for quite a few million dollars.

In the meantime, David worked on his business rather than in it. A more stable income stream would be more appealing to prospective equity buyers than ad hoc winning of survey contracts. David and his team built some sophisticated survey software that clients could use (under licence for very stable income). As well, marketing concentrated more on Government contracts.

Come Covid19 in 2020 and the company had guaranteed income that covered all fixed costs. The team was also able to operate from their homes in isolation using Zoom or other tools for team meetings and client pitches. Productivity actually rose and David is re-evaluating the need for a large fixed office post Covid19.

There are three key points about the robustness of the business. First, David looked at his cash flow burn and time left for viability. Second, he set up a number of contingency positions and knew how much time they would give him. Third (and

critically), he moved before he had to and thereby kept control. He maintained as many degrees of freedom that he could.

### 4.3 Near Cash

If the cash burn rate and amount of cash available has you concerned, are there other sources of cash available?

The obvious one is your overdraft. This is a line of credit.

However, if you are in trouble, it is likely that your overdraft is already at the limit, if not overdrawn. This is a major danger signal!

Indeed, if your overdraft is truly an overdraft, then it should only be used to cover short term, seasonal shortfalls in cash. Your overdraft should actually fall to a zero balance some times during the year.

If your overdraft is at or close to its limit most of the time, bankers have a term for it: **hardcore overdraft**. It is a warning that the business is stretching its finances and needs better financial management.

In a recession, bankers will look at instances of hardcore overdraft and start to wind it back (i.e. you must pay it off) which puts even more pressure on your cash flow just as times are getting tougher.

In any case, if you are at or near your overdraft limit most of the time, you should consider replacing that overdraft amount with more permanent funding: long term debt or equity. Overdrafts are generally expensive and can be risky.

Typically, an overdraft is **at call**. Even though you might think the overdraft limit is set until your next review date, that is not so. The bank has the right to call in your overdraft, often with just 24 hours notice. This is rare but possible. More likely, the bank will give notice that it wants the limit reduced (e.g. halved) and you have a month or two to achieve the reduction.

Other lines of credit are also possible. These are usually arranged by larger companies and the big public companies will typically have several lines of credit arranged with different lenders. These act like insurance policies or financial life lines. If the company needs to arrange funding urgently, it simply draws down one of its lines of credit. The line has already been pre-approved and the lender must forward the funds providing the loan contract is still applicable (for example, the borrower has not breached one of the pre-approved loan covenants).

Like any insurance policy, a line of credit will cost you, whether you use it or not (as does an overdraft line of credit). You will pay a fee on the undrawn amount,

maybe 1 to 2%. When you draw down the loan, you will pay the normal borrowing interest rate.

#### **4.4 Hollow Logs**

There may also be some hollow logs in your business where you have squirreled away a few nuts for winter. You may not even recognise these logs.

Your company may have some shares or investments not related to your core business that could be sold quickly. There may be some excess equipment that could be sold or some old stock that could be liquidated. Even if it is sold below cost, it still brings in some cash (and may give a tax deduction if a sold at a book loss).

More subtly, you may have other assets that can be rented out or otherwise used to generate cash. There may be excess office or warehouse space that could be sub-let. In the IT industry, skilled staff, especially for some programs, can be in short supply and high demand at certain times. We have seen examples where such employees have been sub-contracted out to other businesses for short periods for good returns. This not only saves on their costs when you are in a slack period but also brings in much needed revenue while still retaining these valued staff members.

#### **4.5 The Order Book**

This is your short term future. How far out is your order book? More importantly, what have been the trends in recent times? Is your order book thinning out because of less orders, shorter time horizon or the orders are diminishing in value? If it is all three and you have not gone on holiday, then you can have little doubt that at least your industry is in recession or perhaps the entire economy is.

In good times and especially in bad times, these are the trends you should be monitoring at least each week.

Note that many businesses do not even have the luxury of an order book. Industries such as retail or personal services often just have unpredictable or compulsive purchases. For them, keeping up customer awareness and playing a percentage game becomes essential. See section 4.6 re the percentage game.

Here is your “back of the envelope” table to complete to calculate your cash burn:

##### **Base calculation**

1. Amount of cash on hand: \$

2. Amount of cash in bank:	\$	
3. Total available cash: (add 1 & 2)	\$	
4. Weekly cash burn	\$	
5. Weeks of cash left (3 / 4)		weeks

#### **Adjusting for incoming cash**

6. Reasonably certain cash coming in per week (on average)	\$	
7. Adjusted weekly net cash burn (4 – 6)	\$	
8. Adjusted weeks of cash left (3 / 7)		weeks

#### **Allowing for near cash**

9. Near cash that can be liquidated	\$	
10. Cash plus near cash (3 + 9)	\$	
11. Extended cash burn rate (7 / 10)		weeks

Note: for the extended cash burn rate to apply, you need to ensure you have sufficient time to liquidate the near cash assets and achieve the expected sale price.

Obviously, if you have more cash coming in than going out, there is no immediate problem with cash flow.

## **4.6 Sales: Enquiries, Conversion and Collection**

Looking slightly longer term than the cash burn rate, is the efficiency of your operations for generating and collecting cash. If your order book is looking thin, this is where you look to take action.

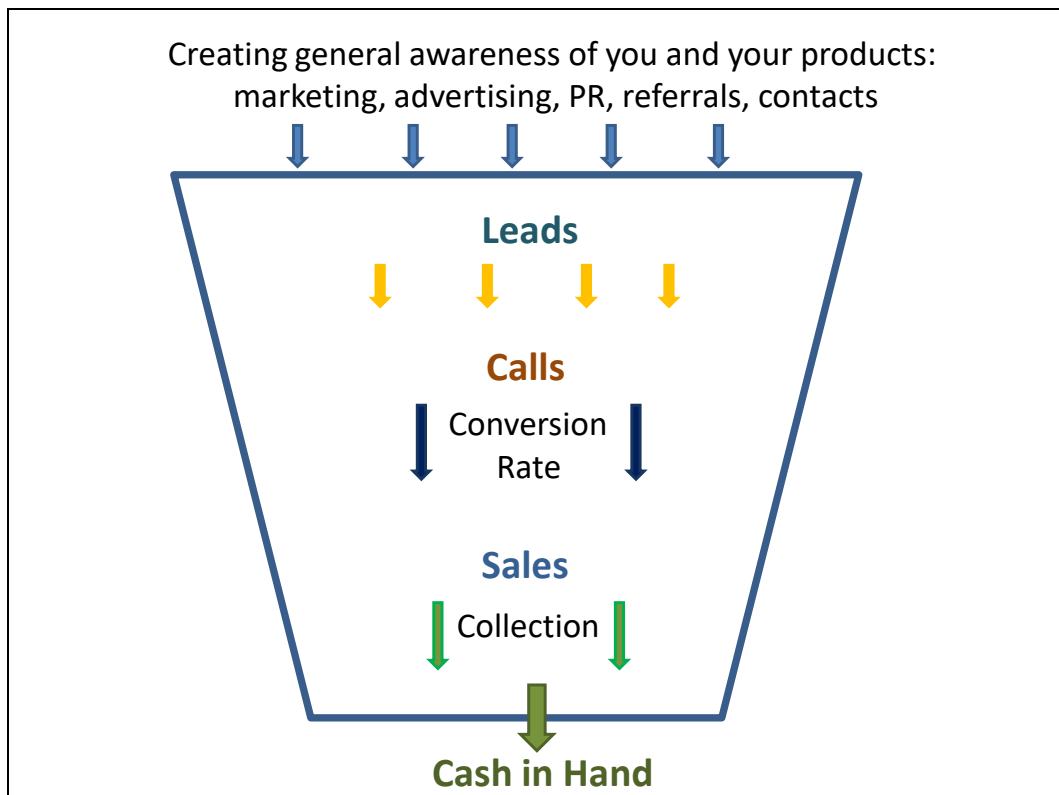
We can look at a number of measures here. These are not only useful in hard times but are measures of efficiency in good times too.

We need to generate awareness, then leads, then sales calls which need to be converted. Then we need to deliver the goods and services and collect the money.



At each stage, we get some shrinkage or leakage so that the final sales collected is only a fraction of the leads generated. Marketing effectiveness and efficiency are about ensuring the leakages are minimised.

The stages and the leakages along the way are shown in the following diagram depicting a funnel of awareness and leads at the top eventually filtering down to sales.



Again, the diagram is a reminder that we do not suddenly get into trouble. In the good times, you need to be working at the top of the funnel with awareness and marketing and referrals.

Often in the good times, we are so busy taking the leads and making the sales and rolling in the cash, that we do not devote enough time to the longer term awareness building. Worse, sometimes we let our reputation slip and brand diminish as we just get the sales “out the door”.

In tough times, we not only find the leads reducing but it becomes tougher to convert the sales into calls. Competitors are targeting your clients and offering special deals. Customers are possibly trying to delay or even do without purchases.

So in tough times, you need to make sure that you and your sales staff are better than ever at converting leads to sales. You must track leads and follow up. You need to be measuring (graphing too) the conversion ratio and conversion time.

What percentage of leads is converted to sales? How long is it taking between the call and the sale? You also need to do this by sales representative or staff member. Some staff may be slacking off or are demotivated. Others may need training and counselling on how to convert leads in tough times.

As the economy continues to deteriorate, you may find customers slowing down payment or, even worse, defaulting on payment. Now, more than ever, you need to be careful about your credit policy and your vetting of clients. Watch aging of debtors or days sales outstanding and do it by customer. Look to cut back credit limits, especially if they do not need to be so large. Make sure your market intelligence data is up-to-date. Are your sales people reporting back on market intelligence about customers?

If a customer is over the limit by either dollars or time, you need to be strict. It is a matter of your survival.

The percentage game for those businesses that rely mainly on passing trade or ad hoc buyers, is to ensure there is enough passing trade and interest. Some of this will relate to positioning and marketing. As much as possible, be active and create the demand.

Years ago, we were talking to the principal of the most successful Mercedes Benz dealership in Sydney. Naturally, the question was asked how they achieved so many sales: was it the marketing; advertising; the deals; the sales staff or whatever. The reply was that they did not wait for customers to figure out they had a need and then to find the dealership. They would actively contact owners of similar marques whose cars were now 2 – 3 years old and they lived within 15 kilometres of his dealership. These customers were targeted with a specific offer to trade in at this dealership. Alas, he would not divulge where he obtained the market information about the owners of 2 – 3 year old cars, similar to a Mercedes in his local area.

Contrast this to Honda in Australia when the author finally replaced his Honda Accord after 9 years. Three weeks later (and several times over the next few months) the letter arrived offering to trade in and exchange. What a waste of marketing effort and lack of knowledge about the customer!

## **4.7 The Interval Measure**

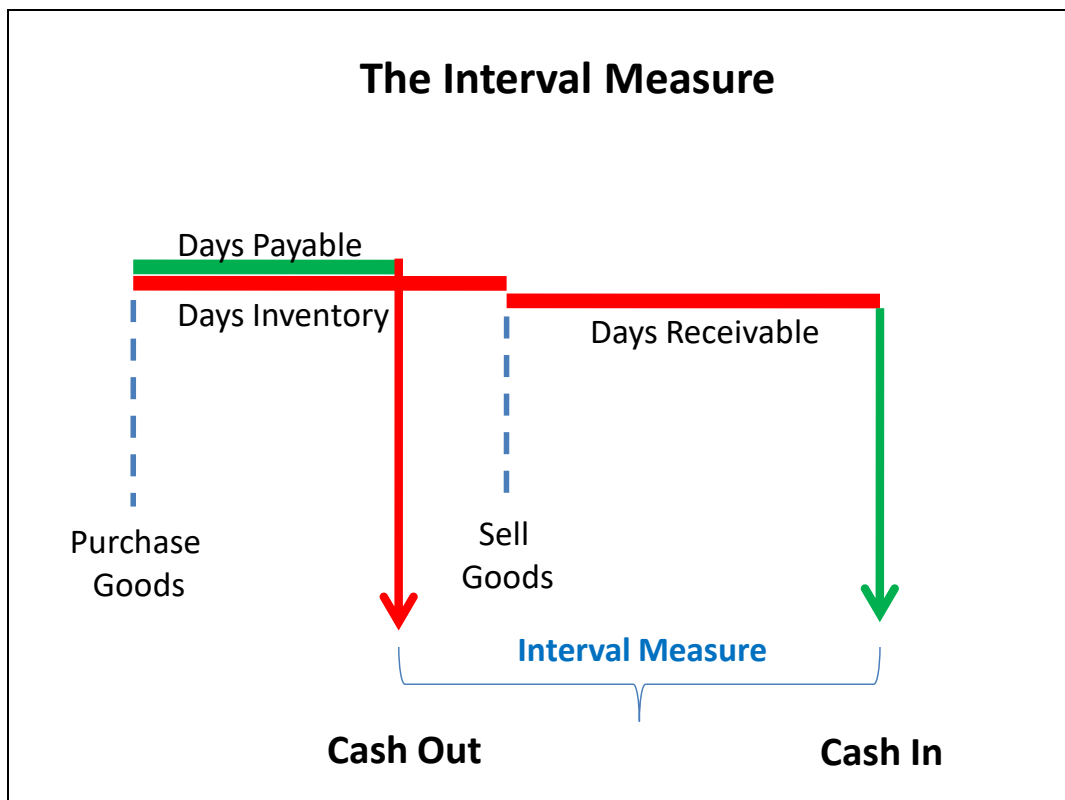
This is a neat little combination of three ratios that shows how your working capital management is tracking and what it costs your business to fund sales. See Chapter 10 for the definition and calculation of these and other ratios.

We look at how long you need to stock your product before selling it. This is the days inventory ratio. If you are in manufacturing, remember that inventory includes not just finished goods but also work in progress and stocks of raw materials. Manufacturing is the most complex of management tasks.

Once the product is made (or bought in if wholesaling or retailing) you then sell it. But unless selling for cash, you still do not receive the money yet. You now need to go through the collection process. This is your days receivable or days sales outstanding ratio.

On the other side though, you do pick up some free credit. You normally do not pay for the raw materials or the inbound goods straight away. You receive some credit terms. This is your days payable ratio.

The time line of when the cash goes out and when it comes in, is shown below.



**Example:**

On average, you take 45 days to pay your suppliers. The stock, on average sits on your shelves or warehouse for 30 days before it is sold on credit. It then takes 50 days on average to collect the money off your customers.

So it takes 30 days of inventory plus 50 days of accounts receivable to make a sale and get paid: a total of 80 days. On the other hand, you receive 45 days of credit from your suppliers so you do not have to pay for the goods until you have them for

45 days. The net figure is 80 days – 45 days which is 35 days. This is the interval of time between when you pay for the goods and when you receive payment from your customers.

It is not perfectly accurate because hopefully there is a change in the value of the goods between when you purchase them and when you sell them (your gross profit margin). However, the measure is accurate enough for our analysis.

In the above example, you need to fund a net 35 days of working capital. This is about 1/10<sup>th</sup> or 10% of a year. So whatever your sales are, you need to fund 10% of them as net working capital.

This is one of the prime ways for “successful” businesses to go bust. If you are selling \$2 million of goods per annum and the next year you grow the sales to \$3 million, you need to fund 10% of the increased sales as net working capital. In our example, this would be 10% of the \$1 million sales increase = \$100,000.

You are unlikely to make \$100,000 net profit after tax from the increased sales. You make more profit, but you are worse off on your cash flow. You run the risk of going broke by increasing sales and making more profit!

And people wonder why marketing and finance people have trouble understanding each other!

### **Case Study:**

In a true story where we have just changed the names to protect the guilty, there was a musical instrument importer in Australia. This importer was buying drums, guitars and the like from major US brands. However, the US companies were very strict on the purchase terms: letters of credit or short payment terms so that the average days payable was 25 days.

However, the stock typically sat on the docks or in the warehouse for 90 days before it was sold. Unfortunately, music stores were notoriously slow payers and so there was normally a wait of another 80 days before payment was received. The importer allowed this because he was keen to grow the sales and the US companies also encouraged the sales growth as a condition of retaining the franchises for their brands.

So the interval measure is 145 days (90 days inventory plus 80 days receivable less 25 days payable). This is about 40% of a year. Well, 40% of a year's sales is net working capital that needs to be funded by the business. If the sales increase by \$1 million each year, then \$400,000 of additional working capital needs to be funded each year. Meanwhile, the business owners were taking out all the profit as dividends so the increased working capital was being funded by overdraft (and then

overdrawing the overdraft). Eventually the bank balked at this funding and called in the overdraft. The business was now in distress.

Now you can see the funding benefits of being in a service industry: no stock. The issues in a service business now hinge around being able to provide the service efficiently and maintaining customer demand. Collection of accounts receivable can still be an issue though.

You should also understand the net working capital needs of a successful business like Woolworths. For the 2008 recession year, inventory or stock was \$3,010 million but payments to suppliers were outstanding at \$3,878 million. Cost of sales was \$35,135 million. This means that the days inventory was 31 days but the days payable were higher at 40 days.

There is virtually no trade accounts receivable because they are all cash sales. So Woolworths had a negative working capital interval of at least 9 days. This was worth about \$870 million in free funding to Woolworths.

With the expansion of its petrol retailing, the negative working capital interval grew further.

Every time Woolworths increases its sales, it makes more cash as well as more profit. No wonder the company is keen on growth, especially in areas where the stock turnover is even higher as in the supermarkets.<sup>12</sup>

## **4.8 Sustainable Growth Rate**

Of course, growing your business may require investment in other assets than working capital. You may need to increase capacity or may need to open new outlets. As well, you may need to hire and train more staff or invest in new systems and so on. These actions also require funding.

Then there is hopefully some extra profit made from the increased sales which will go towards the funding. On the other hand, if you take the profits out of the business as dividends, there will be less profits retained in the business. Then again, if you plough some profits back into the business, you could borrow a bit more without blowing out the gearing levels.

All these extra aspects are beyond the analysis of the interval measure. Fortunately, we have another tool: the sustainable growth rate formula. But we will leave that until Chapter 6.

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<sup>12</sup> Figures sourced from Woolworths Annual Report, 2008 and 2012

## 4.9 Expenses

We have looked at how fast your business is burning through the cash and whether there are any additional sources of cash that could be tapped. We have then considered the impact on net working capital funding as we grow sales.

We will now briefly turn to the expenses side.

In good times, there is a tendency not to focus too closely on the expenses. Rising sales and prices tend to be the focus and they cover up any problems on the expenses side.

When the good times stop, we find that the expenses are out of control and we are in trouble. It then takes precious time and attention to bring the expenses under control. It is so much better to keep an eye on the expenses all the time.

If we are in serious trouble, we may need to take drastic action on major expenses, even though this may hurt us for future long term growth. It could be a matter of short term survival taking precedence.

First we need to analyse what is happening to the expenses. A simple method is called **vertical analysis**.

You take your income statement and then calculate all the items as a percentage of sales. See the short hand example below.

Income Statement Item	\$'000	% of Sales
Sales	5,000	100.0
COGS	<u>2,800</u>	<u>56.0</u>
Gross Profit	2,200	44.0
Administration	500	10.0
Marketing	720	14.4
Utilities	180	3.6
Rent	300	6.0
Other	280	5.6
Interest	<u>140</u>	<u>2.8</u>
Profit before tax	80	1.6
Tax	<u>25</u>	<u>0.5</u>
Profit after tax	<u>55</u>	<u>1.1</u>

For this company, the margins are already thin. It will not take much of a problem before losses are recorded.

The power of the analysis improves greatly if you can **benchmark** against similar businesses. Then you will know where the main problems lie. Perhaps the gross profit margin is too low (are prices too low or cost of goods sold too high?). Perhaps we are spending too much on marketing or administration.

If you cannot benchmark against similar companies then you can at least do trend analysis. Look at your results over at least the last 3 years. What has been happening over time? Which costs seems to be blowing out as a percentage of sales. If sales have been growing, we normally expect fixed costs like rent to fall as a percentage of sales. Have they?

The analysis helps us to see where the big expenses are and where there might be problems. More detail will also help. You may want to look at individual salaries or costs by product line. Good retailers closely watch gross margins by major product lines on a weekly or more frequent basis.

Often with a company in trouble, there are just unproductive or stupid expenses. We have unnecessary costs. Sometimes these are related to life style rather than business necessity. In that case you are putting the business (and ultimately your lifestyle) at unnecessary risk.

We have seen businesses carrying holiday houses or unproductive family members or close “friends” or several cars or the luxury boat.

### **Case Study:**

There could be business expenses that are unnecessary. There was a tyre dealer in the southern suburbs of Sydney who was on thin margins and struggling. A quick analysis showed an unusually high expenditure on advertising in the St George Hospital staff magazine. The advertising as a percentage of sales was more than the net profit. When asked how many customers were brought in by the advertising, there was no idea (we suspect none). When we asked why so much expenditure in this magazine, the answer was eventually elicited that the magazine sales representative was a very attractive lady who would take the manager of the tyre business out to lunch regularly. We doubled the profits and lost no sales by cancelling this advertising. The manager also had less attractive lunches.

## **4.10 Debt and Fraud Warning**

You may have noticed that we have been very cautious about taking on more debt to solve a funding problem.

Even when looking at lines of credit, we were wary about relying on your overdraft or having it always at its maximum limit.

It is an easy temptation if cash is tight to simply increase your borrowings. In times of slack credit, this can be readily done. A credit crisis typically cuts off this avenue.

But even in easy credit times, be wary of more debt. If the problem seems only to be a matter of timing (e.g. waiting for a major trusted customer to pay), then an overdraft or similar would be sensible. If you are in trouble but have a plan where some additional investment will allow quick and dramatic improvements (e.g. equipment to cut production costs or even pay redundancies), then additional borrowings also make sense.

However, if you borrow to cover shortfalls that are ongoing, then you are just digging a deeper hole for the business. The extra interest and loan repayments are just sending the business into a downward spiral. When it finally goes bust, there will be even less left over after the banks and other creditors have picked the carcass for their entitlements.

Even be careful of putting more of your own money into a business that has fundamental flaws that are not being addressed. It could be the classical case of good money after bad.

### **Case Study:**

Another true story: Peter had an IT business that provided web linkages between customers and businesses to display their products. But he had never figured out how to be properly paid for this service. This was the fundamental flaw.

However, Peter was too close to the business, working in it, rather than on it. He continued to spend money making the search engine and web pages looking better.

All the time, much more cash was pouring out than was trickling in. Advisors tried to help Peter and some gains were made in trimming costs and downsizing the business. But Peter would not listen to suggestions that the basic business plan was flawed and should be scrapped. Over time, Peter was liquidating his personal assets such as investment properties to keep propping up the business. By the end, all his money and investments were gone and the business was still a failure.

Finally, be careful of fraud. Not just you being defrauded by others but falling into the trap of defrauding your bank or other investors. It is a trap you can be steadily drawn into without realising it. The most common incidence of fraud is not stealing

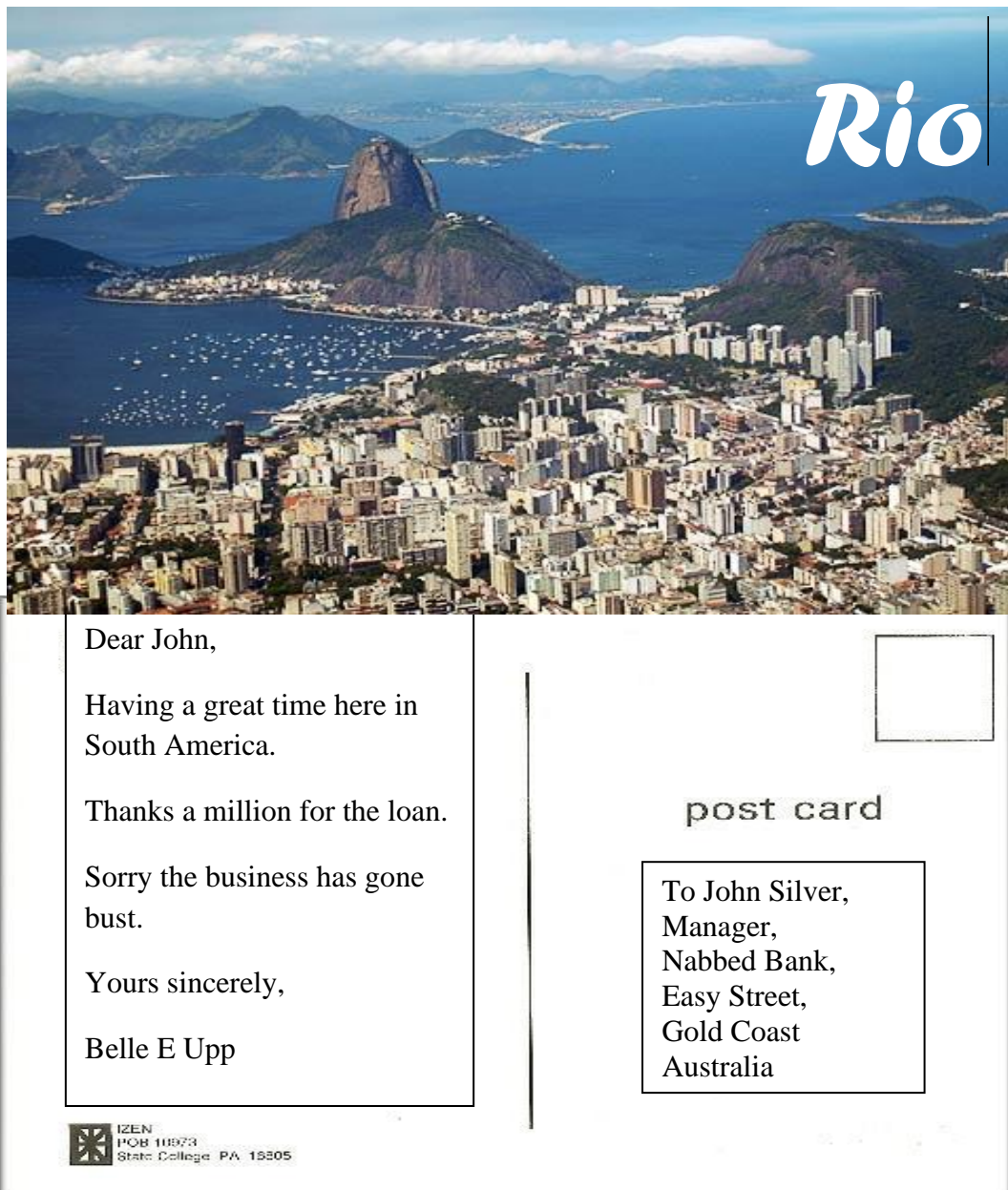


money or taking kick backs or an insurance scam. The most common form of fraud is dressing up the accounts when presenting a proposal to your bank for a loan.

You may get the loan but it is under false pretences. At the end of the day, if you do not fix the business, then it will continue to deteriorate and you will lose the money. If you have given a personal guarantee for the loan, then you also stand to lose your personal assets. You may be prosecuted for fraud which will cost you more.

It is not worth it. Know when to fold your hand and walk away. This is very difficult for business owners who have invested much emotion and time as well as money in their business. One of the benefits of an external advisor is that they are more objective and less emotionally attached.

Banks do not appreciate receiving the postcard from Rio from defaulting borrowers.



## 4.11 Take Aways

In a survival situation, time is of the essence. The longer you delay, the faster your options close out. Act soon and act decisively to retain more degrees of freedom.

The first check is on how much time is left to you. How much cash (and near cash) do you have and how long will it take to burn through it.

Check for hollow logs. Can you rent out excess buildings, equipment or staff?

Is there some bleeding you can quickly stem? There might be non-productive expenses like sports sponsorships, poor advertising or your spouse's nephew. Can we defer some capital expenditure?

Looking past the immediate survival to the medium term, how does the order book look and how long does it take to convert sales into cash. The interval measure considers the time taken between when the cash goes out for purchases until the cash is collected from sales to customers. The interval measure concept reminds us that sales increases can put our cash flow under strain.

Longer term, are you putting enough effort into generating the leads that will eventually flow to sales? Are you minimising the leakages along the way?

## 5. Cash Flow Forecast

### 5.1 Solvency and Risk

The cash flow forecast is the ultimate tool for checking viability. How much cash will come in and go out in the future and at what time?

To be blunt, it is a pain to do a cash flow forecast. It is not a quick ratio calculation of a few seconds and it does not come straight off your company accounts.

It requires hours of work and considerable knowledge of your business operations. All this explains why not every business does a cash flow forecast and why it is not regularly updated.

However, if you want to stay in business, if you want to impress your bank manager and if you want to keep your personal assets, then do your cash flow forecast!

On the last point of losing your personal assets, you may sniff and say that is why you set up a company: to separate your personal assets from your business assets. Or you used some family trust or other device. You also went to great lengths to avoid giving a personal guarantee to either the bank or suppliers. All this was wisely done to protect your personal assets.

But if you are a director of your company (or any other company) you have legal responsibilities. A prime responsibility is to ensure that the company of which you are a director, does not trade while insolvent. If a reasonable person would expect the company was insolvent but you allowed it to trade on, your personal assets may be at risk in order to pay out the creditors, **regardless of any legal structure!**

An insolvent company is one that is unable to pay its debts (including wages and suppliers) as they fall due. Just relying on the annual accounts is not enough. You must be constantly aware of the company's ability to meet its obligations. The onus is on the director to prove the company was solvent.

A prime test of solvency has been the cash flow forecast. But the Australian Securities and Investment Commission (ASIC) has widened this test to look for earlier signs of insolvency. An analysis of the company's financial position will look at:

- Ongoing losses
- Poor cash flow
- Absence of a business plan
- Delaying creditors well past normal terms
- Dishonoured cheques (or post dating them)
- Overdrawn loan facilities
- Special arrangements with some creditors

The first 3 signs are in order from ASIC's information sheet on insolvency for directors!

ASIC has 11 information sheets to help you regarding understanding insolvency.<sup>13</sup>

You can download the information sheets from

<http://www.asic.gov.au/insolvencyinfosheets>

## 5.2 Solvency and the Cash Flow Forecast

It is strongly recommended that your company have a cash flow forecast and that you update and refer to it frequently.

The fastest way to do a cash flow forecast is with pen and paper. This used to be done on a large wide pad by accountants, which was a grid of rows and columns: **the original spreadsheet**. This format was then mimicked by Lotus 123 and Excel to create the electronic spreadsheet software.

However, you do not want to just calculate the cash flow forecast once. You want to use it. You want to play out different scenarios: what if you increase your sales; what if customers delay payments; what if you expand and buy some new equipment; what if costs rise; what if sales or prices fall; and so on. You also want to update the forecast regularly and keep it looking out to the future.

Therefore, the cash flow forecast written on paper has severe limitations. While it may take longer the first time to write a software spreadsheet, the effort will pay off for the ease of playing with it and updating it.

However, be careful!

Just because it is on computer print out, does not make it correct or accurate. Much will depend on how realistic are the assumptions which go into the spreadsheet. You will be amazed at how many assumptions there are: working capital assumptions such as days receivable, days inventory and days payable; time taken to collect receivables; sales forecasts; profit margins; expenses; capital expenditure requirements; tax rates; interest rates; foreign exchange rates and so on.

You need to test these assumptions to ensure they are reasonable and not just wishful thinking. Look out how the business has performed in the recent past to get some of the numbers like the expense ratios and the working capital ratios. Test the sales figures by growth rates, market shares and capacity.

Then you need to make sure you have not made any errors in the spreadsheet calculations. As the spreadsheet becomes more detailed it becomes bigger and more

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<sup>13</sup> <http://www.asic.gov.au/insolvencyinfosheets>

complex and the chances of error grow. You will use a calculator many times to make sure the equations in the spreadsheet work as you intended them.

### Case Study:

A classic case in Australia involves Water Wheel Holdings. One of its directors was John Elliott who had a number of skirmishes with ASIC but had generally managed to get away. This included public companies such as Elders and Fosters.

However, he stumbled with the private company of Water Wheel Holdings when it went bust and ASIC prosecuted on the basis that the company had continued to trade while insolvent.

The directors had relied on the cash flow forecast spreadsheet to determine solvency. The managing director had built and used the spreadsheet. Unfortunately, he did not know what he was doing and he made a mistake.

The report from the Sydney Morning Herald<sup>14</sup> below tells the story. To spare your eyes, the two circled items are expanded further below.

## MD lacked spreadsheet skills, court told

**Leonie Wood**

Figures used to support a solvency statement submitted by the board of Water Wheel Holdings to the Australian Securities and Investments Commission in October 1999 "did not add up", a leading insolvency specialist told the Victorian Supreme Court yesterday.

Mark Mentha of Korda Mentha & Co also told Justice Philip Mandie that during the interviews he and his staff conducted with Water Wheel managing director Bernard Plymin in March 2000, Mr Plymin indicated that he did not have a consummate grasp of how spreadsheets worked.

The court also heard that Chris Photakis and Mark Gross of KPMG's corporate finance unit were commissioned by Water Wheel in August 1999 to locate potential buyers or investors for the ailing business.

In October 1999, they fielded a preliminary offer of \$3.5 million for the flour milling assets.

The offer, ostensibly on behalf of a company called US Farms Pty Ltd, came via Melbourne businessman Rob Roeder. Mr Roeder is a director of investment firm Bentley & Chau, and in the late 1980s was a director of Battery Group, Regal Life Insurance and Pratt & Co.

Mr Photakis told the court the offer was not pursued because Mr Roeder refused to supply independent accounts verifying that US Farms had the financial capacity to support the proposed purchase.

Later, Mr Photakis's colleague, Mark Gross, a son of former Water Wheel director John Gross and who worked as a consultant at Water Wheel in early 1999 before joining KPMG, told the court that he had no discussions with Mr Roeder at the time of the offer.

Justice Philip Mandie is hearing a civil suit launched by ASIC against three Water Wheel directors: Mr Plymin, chairman William Harrison and non-executive director John Elliott.

ASIC alleges the trio allowed the stockfeed and grain milling group to trade when it could not pay its debts. Water Wheel collapsed on February 17, 2000.

In February 2000, Mr Mentha, then a senior partner at accounting firm Arthur Andersen, was commissioned by Water Wheel's administrator to do a "high-level review" of the company's finances and its solvency.

He said an assistant discovered a working paper prepared by Water Wheel management in late October 1999, which included cash flow forecasts for November, December and January, was flawed and errors made in one column compounded throughout.

As a result, although Water Wheel management claimed the group would be cash flow positive to \$105,000 in November, in reality it faced a shortfall that month of \$887,000. By January, the true cumulative shortfall would total \$1.2 million.

"A cursory glance of this document indicated that it didn't add up," Mr Mentha said.

The original calculations were used to support a memo from Mr Plymin to Water Wheel directors, and a subsequent statement by the company to the corporate regulator, verifying that it was solvent.

"When we interviewed Mr Plymin and indicated the numbers didn't add up, Mr Plymin indicated that his spreadsheet skills weren't the greatest and he would send us further information," Mr Mentha said.



**Mr Mentha . . .**  
"A cursory glance of this document indicated that it didn't add up."  
Photo: James Davies

<sup>14</sup> Sydney Morning Herald, 19 September, 2002

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While the fines issued by the Court did not break John Elliott, the legal fees handed out to Elliott and Plymin (their own plus ASIC’s costs) were over \$1 million. The Court also banned Elliott as a director and awarded \$1.4 million against Elliott and Plymin to the creditors to Water Wheel. The administrators of Water Wheel applied for bankruptcy against Elliott to recover the money.

Let this be a lesson to us all.

### 5.3 Basics of the Cash Flow Forecast

The cash flow forecast (also called the cash budget) is one of the major financial tools for management. It is not used for external reporting. However, it is critical for management to use the cash flow forecast internally. Bankers want the cash flow

forecast to determine the firm's ability to service its debts.

Remember that profitable firms can go bankrupt by not having the cash available when needed to pay creditors.

Without an accurate cash flow forecast, management is flying blind as to whether it can meet its creditors when payments are due in the future.

Unlike the balance sheet and income statement, the cash flow forecast is concerned solely with cash. It does not follow accrual accounting.

The **timing** of the cash flows is critical. **When** do we receive the cash from sales and **when** must we pay for raw materials, wages, rent, equipment and so on?

## 5.4 Short Term Versus Long Term Cash Flow Forecast

We are now in the realm of management accounting. The Statement of Financial Position (Balance Sheet), Income Statement and Statement of Cash Flows are statutory accounts, at least as presented in the annual report. In other words, there are laws that state how they should be drawn up and presented.

The cash flow forecast is not a legal requirement. It is used by managers to run their business.

Consequently, there are no legal no rules about how they should be drawn up. The following notes are therefore guides on what should be included and how the forecasts should be interpreted.

One common difference in style is between the short term and long term cash flow forecasts. The major differences commonly are:

- a. The short term cash flow forecast naturally has short time periods: daily, weekly, monthly or perhaps quarterly depending on the level of detail needed and when there are major cash requirements. The long term cash flow forecast, on the other hand, is normally done with annual periods.
- b. Details of expenses are much greater in the short term forecast. The long term cash flow forecast is mainly involved in the “big picture” view.
- c. Timing of revenues is adjusted in a worksheet section (to allow for cash payments, 30 days credit, 60 days credit and so on) in the short term forecast. The long term forecast normally handles this timing by adjusting the working capital needs in the accounts receivable calculation (using average days receivable and credit sales).

- d. Tax expense is calculated independent of profit in the short term cash forecast to pick up the actual tax payments required. The long term forecast normally calculates the tax automatically off the taxable profit.
- e. End of period cash surpluses or deficits are carried forward to the start of the next period (i.e. they are cumulative) in the short term cash flow forecast. They do not usually carry forward year on year in the long term forecast (partly because surplus cash is likely to be paid out on discretionary items like dividends).

It is often the case too, that the long term cash flow forecast is more appropriate for large companies. However, even large companies carry out detailed short term forecasting to determine their cash needs or surpluses. Likewise, even small companies need some planning ahead of the next 12 months.

Finally, there is a trend from lenders to have both: a hybrid. We use a detailed short term forecast for the first 12 months and then have a long term forecast on an annual or quarterly basis for the following years.

## **5.5 Form of the Short Term Cash Flow Forecast**

Basically a short term cash flow forecast shows cash that comes in. It then subtracts cash that goes out. The closing balance for each period is the opening cash balance for the next period.

### **Cash In**

Cash in is normally receipts from sales. Note that the cash receipt is normally different to the actual sale made. A sale is normally recorded when the invoice is sent. But in the cash flow forecast, only the cash as it is collected is recorded. So we need to allow for the time difference between when the sale is made and when the cash is actually collected.

Any other cash receipts are also recorded as received. These might be for interest or dividends received, proceeds from asset sales and so on.

### **Cash Out**

Cash out is for payments for raw materials, other goods, wages, rent and any other bills. Cash out also includes any payments for purchasing equipment, repaying debts, paying tax and so on.

### **Balance**

The balance at the end of the period is taken up as the opening balance for the next



period. If the closing cash balance is negative, obviously something must be done. In reality, firms like to maintain a minimum positive balance even if it is just for petty cash. So if the balance falls below this minimum level, borrowing will be required.

In such cases, it is normal to include some additional lines at the bottom to show financing. This will show how much cash needs to be borrowed at each period to maintain the desired minimum balance.

So the final closing balance will be after the use of borrowing.

### **Time Periods**

The periods for a cash budget or cash flow forecast depend upon the firm's needs. The more periods used, the more complex and time consuming is the forecast. However, the periods should not be further apart than when major cash flows are expected.

For example, a firm that pays its workers each fortnight should make its periods 2 weeks apart. Otherwise, if it uses monthly periods, it may find it does not have the cash to pay wages one pay day in the middle of the month!

A foreign exchange operation may need to keep a cash flow forecast by hourly periods. Other companies manage on monthly forecast periods. The typical format headings are shown below.

Jan   Feb   Mar   Apr   May   Jun

### **Opening Balance**

Cash in

*(Timing is adjusted between invoice sales recorded and cash collected from customers)*

Cash out

### **Cash from operations**

### **Financing:**

Borrowings

Repayments

Interest

### **Closing Balance**

## Example

Spock's Sprockets makes washers and sprockets for engineering industries. It is December and the company accountant is preparing the cash flow forecast (cash budget) for the next year (January to December).

The company has the following standard costs for its products:

Sprockets: Direct Labour of \$1.00 and Raw Material of \$0.20

Washers: Direct Labour of \$0.20 and Raw Material of \$0.05

Raw materials are bought one month prior to use but are paid for on terms of 30 days nett. So the net effect is that raw materials are paid for in the month in which they are used. You therefore do not need to adjust for the timing of materials purchases.

In addition, there is factory overhead per month of:

Factory staff wages:	\$12,000
Rates	1,000
Maintenance	1,500
Electricity	800
Depreciation of plant	2,000
Other	<u>1,200</u>
	18,500

As well, there are monthly payments made for:

Head Office staff	\$ 6,000
Electricity	300
Depreciation of fittings	500
Stationery, etc	200
Sales Staff	2,500
Vehicle running costs	500
Advertising promotion	<u>500</u>
	10,500

Note that the depreciation effects would need to be considered when calculating the

profit and hence the tax. However, the depreciation expenses are not cash out and would not be otherwise included.

On the other hand, if the company buys any equipment and pays cash, the full purchase will be shown as cash out (but not an expense).

Finally, the company pays interest of \$2,000 each quarter and is required to repay a \$20,000 loan at the end of June.

The budgeted selling price for sprockets is \$2.40 and for washers it is \$0.50.

All items are sold on credit to distributors. Terms are nett 30 days. However, experience shows that about 25% of all sales are paid on 60 days rather than 30 days.

The sales forecast is (figures in thousands of units):

	Jan	Feb	Mar	Apr	May	Jun
Sprockets	10	15	20	15	20	20
Washers	20	25	30	25	30	25

	Jul	Aug	Sep	Oct	Nov	Dec
Sprockets	25	25	20	25	20	5
Washers	35	35	30	35	30	10

Sales in November and December just gone are the same as forecast for those months in the coming year. (You need to know the sales for November and December of this year in order to calculate the cash received in January and February next year).

The company currently has \$10,000 in its bank account. It has an overdraft facility but wants it kept to a minimum.

If this was your business, you would then prepare the cash flow forecast for the coming year.

The task would take several hours! So many managers shy away from this long drudgery. But once the spreadsheet is built, it is only a matter of few minutes to update it each month or year. Also, you can try out different scenarios such as some customers delaying payments or the addition of a new product line or changes in prices or costs.

## 5.6 Some Help

The simple example of Spock's Sprockets above would take some hours to figure out. Imagine what it would take to prepare a cash flow forecast for a more complex business like yours.

Do not give up.

Accountancy firms offer this service – for a fee.

There are benefits of doing it yourself or with help from your accountant (internal or external). Apart from saving on the fee, you will understand more about your business and you will gain expertise in using and updating the model.

There are also templates and examples. You can find a simple spreadsheet for the Spock's Sprockets example above at <http://www.pulseconsultants.com.au>

You can download the spreadsheet free and use it as a template if you like. There is also a more detailed spreadsheet for a tyre retailer to show you another example.

## 5.7 Using Your Model

If you have taken all that time to build a model, then use it.

The two page print out of the Spock's Sprockets example is shown on two pages on at the end of this chapter. In electronic form, we could conduct the sensitivity analysis of seeing what happens when we change some of the assumptions or parameters.

We cannot do this so easily with the hard printed copy but we can still use the cash flow forecast.

We note that the worst month is July when we forecast a negative cash balance of nearly \$62,000. Paradoxically, this is typically the month of the best profits for most businesses – it is just that we have all the activity but have to wait a month or two to collect the cash from all the sales.

Using the print out of the cash flow forecast, we can answer four basic questions:

1. What should we do? Well we need some financing. There are many options (degrees of freedom) if we act fast enough. One option would be to arrange a loan.
2. What type of loan? The cash flow forecast shows a classic need for an overdraft. We do not want a term loan because we do not need the money all of the year.

3. How much? About \$100,000. We seek more than the \$68,000 forecast because it is only an estimate. We do not need \$200,000 and the higher line fee. \$100,000 is about right with a little leeway.
4. When do seek the loan? Immediately on preparing and analysing the cash flow forecast. In this case, that would be in the December of the previous year. We go to the bank manager with our cash flow forecast and when we have \$10,000 sitting in our bank account. The bank manager should be stunned and impressed that we are so well managed and prepared.

If there is a credit squeeze or the bank manager is not forthcoming, no matter. We have found that out early enough to have time to go to other banks or look at alternatives to covering our cash shortfall. We are prepared!

This scenario contrasts with the normal procedure. Normally, we do not realise there is a problem until the creditors come knocking or wages need to be paid tomorrow and there is not enough money in the bank.

We then race around to the bank, demanding to see the manager and begin begging for an extension to our overdraft. Alternatively we may overdraw our overdraft but banks are becoming tighter on that. Otherwise, we are left to hide from our creditors and maybe our staff. Or we call in the administrators. Not much fun!

## 5.8 Take Aways

The cash flow forecast is the prime management tool for assessing viability and for testing solvency. Trading while it could be reasonable asserted the company is insolvent, puts the director at risk of prosecution and of having personal assets seized to pay creditors.

The cash flow forecast is not an easy to tool to build and master. Even more complicated is to build a spreadsheet model. But it is worth it.

The spreadsheet will show all the major cash flows coming in and the major cash flows going out and **when** they occur. We also see the cash balance at the end of each period.

Most of us try to get away with a monthly cash flow forecast to cut down on the work. But if you have major outgoings fortnightly or weekly (such as wages to be paid) then you need to shorten the time period appropriately.

Once you have a model, you can use it to test scenarios and to plan your financial needs. Don't leave home without your cash flow forecast.

INDICES :

Cash Flow Forecast

Spock's Sprockets

Sprocket Price	\$2.40
Washer Price	\$0.50
30 Days Collection %	75%
Sprockets Materials Cost	\$0.20
Sprockets Labour Cost	\$1.00
Washers Materials Cost	\$0.05
Washers Labour Cost	\$0.20

	November	December	January	February	March	April	May	June	July	August	September	October	November	December
<b>OPENING CASH BALANCE</b>	-18250	-12250	<b>10000</b>	-5000	-26000	-41125	-32500	-38375	-57750	-61875	-53875	-36375	-35000	-19125
<b>CASH IN</b>														
Unit Sprocket Sales	20000	5000	10000	15000	20000	15000	20000	20000	25000	25000	20000	25000	20000	5000
Unit Washer Sales	30000	10000	20000	25000	30000	25000	30000	25000	35000	35000	30000	35000	30000	10000
Sprocket Price	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Washer Price	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Sprocket Revenue	48000	12000	24000	36000	48000	36000	48000	48000	60000	60000	48000	60000	48000	12000
Washer Revenue	15000	5000	10000	12500	15000	12500	15000	12500	17500	17500	15000	17500	15000	5000
<b>Total Revenue</b>	<b>63000</b>	<b>17000</b>	<b>34000</b>	<b>48500</b>	<b>63000</b>	<b>48500</b>	<b>63000</b>	<b>60500</b>	<b>77500</b>	<b>77500</b>	<b>63000</b>	<b>77500</b>	<b>63000</b>	<b>17000</b>
30 day collection ratio			<u>0.75</u>	<u>0.75</u>	<u>0.75</u>	<u>0.75</u>	<u>0.75</u>	<u>0.75</u>	<u>0.75</u>	<u>0.75</u>	<u>0.75</u>	<u>0.75</u>	<u>0.75</u>	<u>0.75</u>
30 days Accounts	50000	47250	12750	25500	36375	47250	36375	47250	45375	58125	58125	47250	58125	47250
60 days Accounts	14000	12000	15750	4250	8500	12125	15750	12125	15750	15125	19375	19375	15750	19375
<b>Cash Received</b>	<b>64000</b>	<b>59250</b>	<b>28500</b>	<b>29750</b>	<b>44875</b>	<b>59375</b>	<b>52125</b>	<b>59375</b>	<b>61125</b>	<b>73250</b>	<b>77500</b>	<b>66625</b>	<b>73875</b>	<b>66625</b>
<b>Cash Available</b>	<b>45750</b>	<b>47000</b>	<b>38500</b>	<b>24750</b>	<b>18875</b>	<b>18250</b>	<b>19625</b>	<b>21000</b>	<b>3375</b>	<b>11375</b>	<b>23625</b>	<b>30250</b>	<b>38875</b>	<b>47500</b>
<b>CASH OUT</b>														
Sprockets Materials /unit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Sprockets Labour /unit	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Washers Materials /unit	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Washers Labour /unit	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Total Sprockets Costs</b>	<b>24000</b>	<b>6000</b>	<b>12000</b>	<b>18000</b>	<b>24000</b>	<b>18000</b>	<b>24000</b>	<b>24000</b>	<b>30000</b>	<b>30000</b>	<b>24000</b>	<b>30000</b>	<b>24000</b>	<b>6000</b>
<b>Total Washers Costs</b>	<b>7500</b>	<b>2500</b>	<b>5000</b>	<b>6250</b>	<b>7500</b>	<b>6250</b>	<b>7500</b>	<b>6250</b>	<b>8750</b>	<b>8750</b>	<b>7500</b>	<b>8750</b>	<b>7500</b>	<b>2500</b>
<b>Total Direct Costs</b>	<b>31500</b>	<b>8500</b>	<b>17000</b>	<b>24250</b>	<b>31500</b>	<b>24250</b>	<b>31500</b>	<b>30250</b>	<b>38750</b>	<b>38750</b>	<b>31500</b>	<b>38750</b>	<b>31500</b>	<b>8500</b>

<b>Factory Overhead:</b>														
Staff Wages	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000	12000
Rates	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Maintenance	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
Electricity	800	800	800	800	800	800	800	800	800	800	800	800	800	800
Other	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
<b>Total Factory Overhead</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>	<b>16500</b>
<b>Other Costs:</b>														
Head Office Staff	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Electricity	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Stationery, etc	200	200	200	200	200	200	200	200	200	200	200	200	200	200
Sales Staff	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500	2500
Vehicle running costs	500	500	500	500	500	500	500	500	500	500	500	500	500	500
Advertising promotion	500	500	500	500	500	500	500	500	500	500	500	500	500	500
<b>Total Other Costs</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>	<b>10000</b>
<b>TOTAL COSTS</b>	<b><u>58000</u></b>	<b><u>35000</u></b>	<b><u>43500</u></b>	<b><u>50750</u></b>	<b><u>58000</u></b>	<b><u>50750</u></b>	<b><u>58000</u></b>	<b><u>56750</u></b>	<b><u>65250</u></b>	<b><u>65250</u></b>	<b><u>58000</u></b>	<b><u>65250</u></b>	<b><u>58000</u></b>	<b><u>35000</u></b>
<b>FINANCING</b>														
Interest Payments		2000			2000			2000			2000			2000
Loan Repayment								20000						
Cash from Operations	6000	22250	-15000	-21000	-15125	8625	-5875	-19375	-4125	8000	17500	1375	15875	29625
<b>Add opening cash:</b>														
<b>Net Cash Position</b>	<b>-12250</b>	<b>10000</b>	<b>-5000</b>	<b>-26000</b>	<b>-41125</b>	<b>-32500</b>	<b>-38375</b>	<b>-57750</b>	<b>-61875</b>	<b>-53875</b>	<b>-36375</b>	<b>-35000</b>	<b>-19125</b>	<b>10500</b>
<b>Overdraft</b>	<b>12250</b>	<b>0</b>	<b>5000</b>	<b>26000</b>	<b>41125</b>	<b>32500</b>	<b>38375</b>	<b>57750</b>	<b>61875</b>	<b>53875</b>	<b>36375</b>	<b>35000</b>	<b>19125</b>	<b>0</b>
<b>CLOSING CASH BALANCE</b>	<b>-12250</b>	<b>10000</b>	<b>-5000</b>	<b>-26000</b>	<b>-41125</b>	<b>-32500</b>	<b>-38375</b>	<b>-57750</b>	<b>-61875</b>	<b>-53875</b>	<b>-36375</b>	<b>-35000</b>	<b>-19125</b>	<b>10500</b>

## 6. Sustainable Growth Rate

If calculating the cash flow forecast was difficult and time consuming, here is a short hand way to check what will happen to cash flow as you grow your sales. It is not as detailed or accurate as the cash flow forecast but it is quick and informative.

There is a spreadsheet available for you where you just need to input some accounting figures and the model will calculate the answer for you for your own business. The inputs are much the same used to calculate the Du Pont formula, which we will cover later when looking at improving your business. So the model covers both analyses and is called Du Pont and SG. It can be found at:

<http://www.pulseconsultants.com.au>

### 6.1 How Fast Can a Company Grow Its Sales?

A major cause of companies going bankrupt is **overtrading**. This is growing sales faster than the company can support. The company is "profitable" but does not have the cash to fund the required asset growth.

It often surprises business owners that growing sales could be a problem. The issue is that we need to grow the assets in order to service the increased sales: working capital and maybe equipment. Eventually, this is fine as you have the higher level of assets to support the increased sales. But in the short term, the extra profit from the increased sales is likely to be less than the amount that must be invested in the additional assets. So there is a cash shortfall that needs to be funded.

If the company keeps on growing its sales too fast, the extra profits never catch up to the increasing investment in assets. The cash shortfall or funding gap keeps growing until the company collapses.

So it pays to know how fast a company can grow its sales without getting into financial difficulties. This is the **sustainable growth rate**. The sustainable growth rate is a simple but very useful tool to discipline our approach to sales growth.

The concept was devised by Robert C Higgins<sup>15</sup>, in 1977. His original equation was monstrously complex as it tried to allow for inflation that was prevalent in the 1970's plus the effects of depreciation. Today, with lower inflation and less impact of depreciation (lower tax rates) we can provide a much simpler, stripped down version of the equation and still be sufficiently accurate.

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<sup>15</sup> Robert C Higgins, "How Much Growth Can A Firm Afford", Financial Management, Fall, 1977, pp 7 - 16



Interestingly, some Australian banks have the formula attached to the spreadsheets they use to calculate business ratios to determine whether or not to lend to a customer. It is the last output of the print out. But when the lenders are asked about the figure, most do not know what it means and have ignored it. When it is explained to them, they are amazed and find it very interesting!

So now, you can learn more than your banker about a key figure in determining viability: the sustainable growth rate.

## 6.2 Inputs

How fast a company can grow is determined by several factors:

### 1. Profit Margin

The higher the profit margin on sales, the more funding available to a firm from its sales (i.e. retained earnings grow quickly as sales grow). Measured by  $Profit / Sales$  This is profit after tax since tax is taken out of the company.

### 2. Dividends

Profits are "leaked" out of the company by dividends. The higher the dividend payout ratio, the lower is the possible sales growth. Dividend payout ratio is measured by  $Dividends / Profit$  Funds left over after paying out dividends are the retained profits. We measure this by taking 1 minus the dividend payout ratio. For example, if we pay out 30% of the profits as dividends then we retain  $1 - 30\%$  (i.e. 70%).

### 3. Required Assets

If a firm needs a large amount of assets to support a given level of sales, then its ability to grow is restricted. For example, if every dollar of extra sales needs more machinery, accounts receivable, inventory, etc, then funding the extra sales is a major strain on cash.

Service industries usually are the best placed for low asset requirements for extra sales. Manufacturing industries are usually worst placed as they need more assets.

We measure the required assets to service sales as the asset turnover ratio:  
 $Sales / Assets$

#### **4. Gearing**

The equity to assets ratio will show how much extra can be borrowed as retained earnings are increased while maintaining a constant gearing ratio.

Measured by *Equity / Assets*

So, if we are keeping a gearing ratio of \$1 equity for every \$2 of assets, then if we increase the equity via retained profits by \$1, then we can borrow another dollar and so have an extra \$2 of assets. We have kept our borrowings or gearing at the same proportion.

### **6.3 Sustainable Growth Rate**

The sustainable growth rate is a calculation to show how much sales can grow each year without causing strain. It is a short hand approximation to cash flow availability as a company changes its sales levels.

If the company tries to grow faster than the sustainable rate, something must give. Either more equity must be put in by the owners or gearing will increase. If the banks refuse more loans, the extra "borrowings" usually come from trade creditors (the company simply cannot afford to pay creditors on time). We are then on the path to insolvency (see the ASIC indicators for insolvency).

Note that the extra funding is only for the increase in sales in any one year. The following year, if we do not increase the sales again, we do not need any more assets as we already have enough to service that level of sales.

### **6.4 Sustainable Growth Formula**

The percentage increase in sales that a company can fund can be determined by an equation. The components of the sustainable growth (SG) equation are simply the factors listed earlier:

#### **Return on Assets (ROA)**

This ratio measures both the after tax profit margin on sales and the amount of assets required to service sales. It is profit after tax divided by assets. We have multiplied the profit margin (profit / sales) by the required assets (sales / assets) to get the return on assets ratio of profit / assets. The sales figure in each ratio cancel out.

## Amount of Profits Retained

How much profits is retained after paying dividends is found by multiplying the Return on Assets by (1-D) where D is dividend payout ratio.

## Gearing

The amount of extra borrowing that can be supported as retained earnings increase equity is found by the gearing ratio of equity divided by assets (E/A).

The equation is:

$$SG = \frac{ROA \times (1-D)}{E/A - (ROA) \times (1-D)}$$

The answer is the percentage growth in sales by which sales can grow without increasing gearing levels or issuing more equity.

This equation is not perfectly accurate but it is close enough.

If you grow your sales any faster than this figure, something must give. Either put in more equity (issues shares or cut the dividends) or the gearing will blow out.

## Example of Just Jeans in 2000

Just Jeans was a publicly listed company that was bought out by a private equity firm, Catalyst in 2000. Typical of private equity firms, Catalyst wanted to put as little equity into the company as possible and as much debt as possible.

To accommodate so much debt, Catalyst and the banks had very detailed cash flow forecasts for the next 5 years. It was certainly tight. Margins were slim and gearing was high.

Seemingly strangely, Catalyst business plan for Just Jeans was not pursuing large growth. Forecast growth was modest at about 5 – 7% per annum. Catalyst was not planning to take out any dividends. The real payoff would come in about 5 years' time when they would attempt to refloat the company, which they did at a very good premium.

Why was Catalyst not pursuing much sales growth, at least in the first few years of the loan? Well it all has to do with the sustainable growth rate and cash flow. This

was determined by playing with the large and detailed cash flow forecast models (that took weeks to build). But we can test the same conclusion in a few minutes using the sustainable growth rate formula.

In the first year of the loan, assets were \$170m. Sales were \$390m. Equity was \$50m. Profit after tax was \$7.0m. No dividends were paid so all the profits were retained. These are all the inputs we require for our sustainable growth rate calculation.

Asset turnover is sales / assets = 2.3 times

Sales margin is profit / sales = 1.8%

So ROA = 2.3 x 1.8% = 4.14% (or profit / assets = 4.14%)

Equity / Assets = 0.294

(1-D) = 1.0 (no dividends are paid so all profits are retained)

$$\begin{aligned} \text{SG} &= \frac{0.0414 \times 1.0}{0.294 - 0.0414 \times 1.0} \\ &= 16.4\% \end{aligned}$$

So, in the first year of the loan, the company can sustain a sales growth rate of about 16.0%. Just Jeans was trying to grow out only 5% to 7% which is well under the sustainable growth rate. Therefore, the company should be generating more cash than it needed to reinvest in assets. That surplus cash would be available to start paying off the bank loans. That was what the bankers needed to know in order to approve the loan.

Catalyst was very smart at figuring out how to run the business to optimise the cash flow as well as keep the profits coming in and funding some growth.

Any faster sales growth than 16.0% would require some change in the above parameters e.g. profitability, asset turnover, gearing. The dividend payout ratio could not be improved for the sustainable growth rate as it was already at zero.

## Example of CarLovers

CarLovers operates carwashes throughout Australia. After a turbulent history and losses of \$3.5 million in 2001 and \$6 million in 2002, the company was placed into voluntary administration in July 2003 at the request of its creditors. It has continued to have a turbulent history with its administrator with the remaining shareholder, Berjaya Group of Malaysia, taking court action with ASIC in 2008 to remove the administrator claiming excessive fees (\$13 million) and keeping the company in administration longer than necessary. The administrator has since been jailed for fraud!

As we discussed in Chapter 2 though, it is rare for a company to suddenly get into trouble. We were asked by a large oil company to investigate investing in CarLovers way back in 1995. Our advice to the oil company was not to touch it – there were too many problems. We actually expected it to fall over much sooner than it did. It lasted so long because Berjaya kept pumping money into it, only to lose most of it: good money after bad. Berjaya should have done more analysis.

Anyway, if we look at the sustainable growth rate calculation for CarLovers in 1996, you will see some fundamental problems.

In 1996, the profit was \$1.133 million. Assets were \$29.371 million. Equity was \$12.127 million and the dividend payout ratio was a generous 71%. This is all we need to know to calculate the sustainable growth rate.

Using our formula:

$$\text{SG} = \frac{\text{ROA} \times (1-D)}{\text{E/A} - (\text{ROA}) \times (1-D)}$$

So ROA = 3.9%

Equity / Assets = 0.413

(1-D) = 1 - 0.71 = 0.29 (29% of profits are retained)

$$\begin{aligned} \text{SG} &= \frac{0.039 \times 0.29}{0.413 - 0.039 \times 0.29} \\ &= 2.8\% \end{aligned}$$

CarLovers, on its performance figures and dividend payout ratio could afford to grow sales at only 2.8% p.a. In short, it was not very profitable and taking too much out as dividends.

However, the company was trying to grow sales at 50% or more per year. The growth was very capital intensive as it was largely coming from opening new sites.

A sustainable growth rate of less than 3% but trying to grow at 50% means that something has to give. The bank certainly got tired of putting in more funding and started to demand repayment of debts. CarLovers should have gone bust. However, Berjaya started pumping in equity which kept the company alive. By 2001, Berjaya had moved to 80% ownership of CarLovers but it still had fundamental problems. By now, the share price had collapsed from \$1.50 to 5 cents. The problems continued and the losses mounted.

The rest, as they say, is history.

## **6.5 Take Aways**

Business is largely logical and the financing is mathematical.

The sustainable growth rate formula is a useful and quick tool for showing how fast a company can grow its sales without imperilling its survival through every higher gearing.

If you want your company to grow faster than the sustainable growth rate, then there are only a few logical levers to pull:

1. Improve profitability by improving sales margins (prices up or costs down).
2. Improve asset efficiency (need less assets for every dollar of sales).
3. Cut the dividends to leave more of the profit invested back in the business.
4. Put in more equity via share issues.

If you do not take these actions and continue to grow the sales faster than the sustainable growth rate, then there is only one other outcome: gearing must rise. This will either come from more borrowings, or by default, as payment terms to other creditors will blow out because there is simply not the money to pay on time. This is a slippery path to insolvency if it goes on.

## 7. Accounts, Accruals and Accountants

### 7.1 Need to Know

It is not the intention or scope of this book to be a full discourse on accounting. However, every business manager needs to have a basic understanding of accounting and the major accounts to know what is happening in the business and how it is placed.

Otherwise, you are deficient as a manager and will always be at the mercy of accountants. You need to know enough of accounting to be able to read the major accounts and to ask sensible questions.

If you understand accrual accounting and can read a balance sheet, income statement and statement of cash flows, then you can safely skip this chapter.

In this Chapter, we are looking to understand:

1. The principles of accounting such as accrual accounting
2. That profit is the financial measure of performance and is the bottom line of the income statement
3. That cash flow is not the same as profit and is the measure of viability or solvency
4. That the balance sheet shows at a point of time what the company owns (assets) and owes (liabilities and equity)
5. That the liabilities and equity are where the company sources its funds and that assets is where the funds go
6. That assets and expenses are both uses of funds. It is just that the expenses have now been used up and the assets we still have (until they are used up and become expenses such as depreciation)

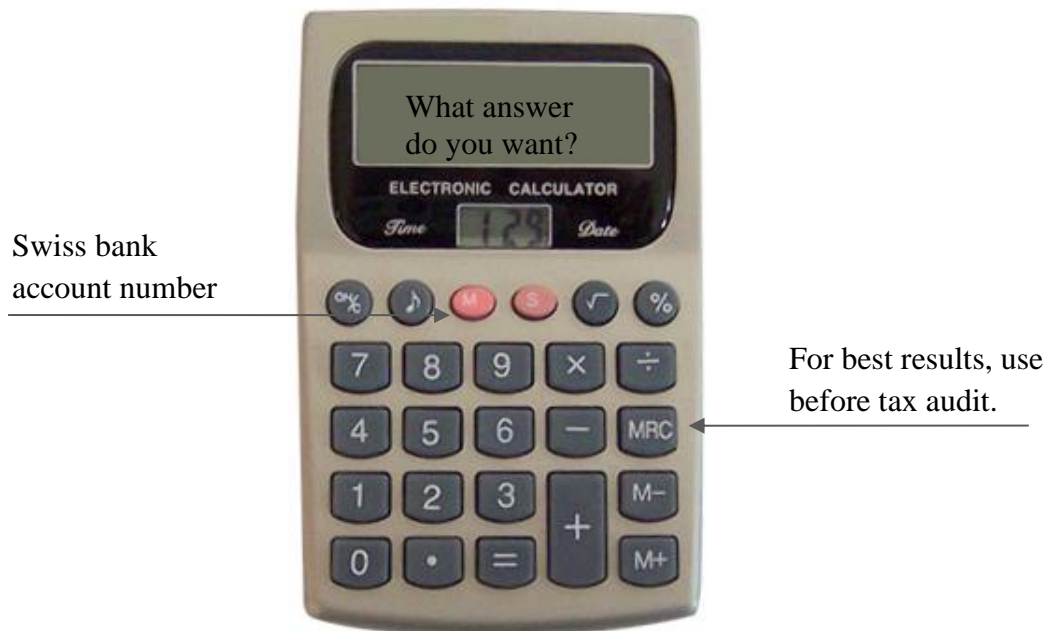
That should be enough to get us going!

Note: we do **not** want to make you a bookkeeper or even an accountant. You are more important than that – you are business owner or manager. But you do need to know enough accounting to read the accounts and know what is going on.

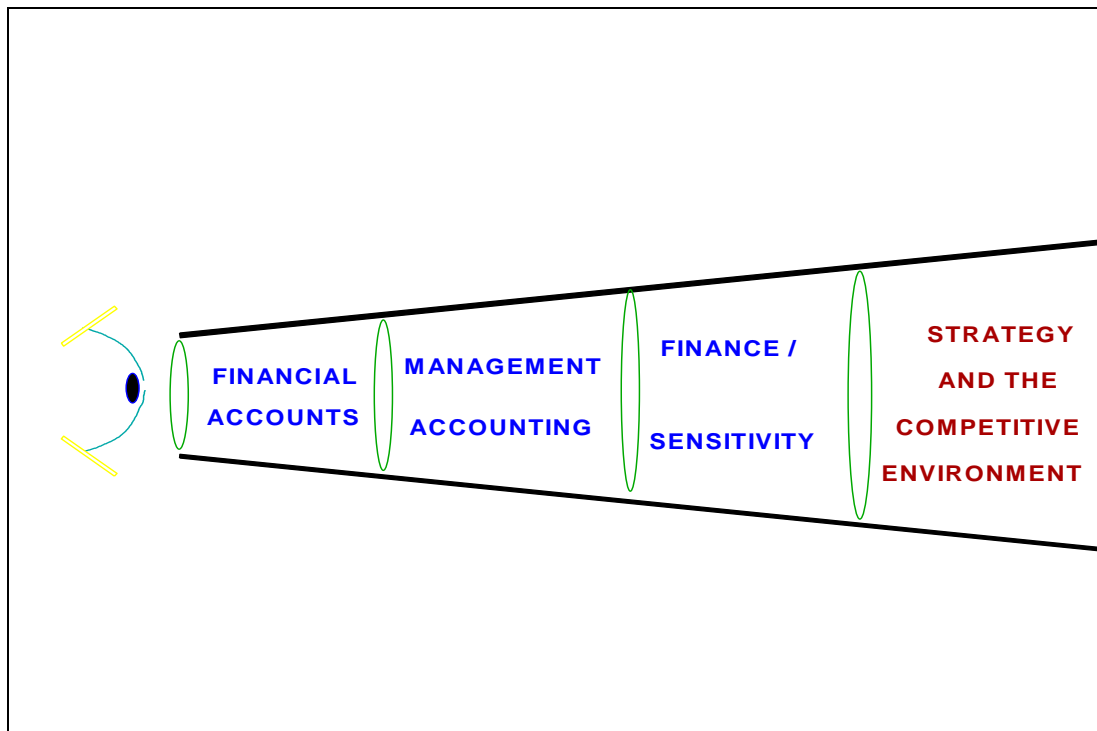
Accounting is the measurement system of business.

**If you cannot measure it, you cannot manage it!**

We will avoid most of the accounting jokes about personality, brown shoes and the like. However, we do have the accountant's calculator.



The eye below is yours and it is looking at a business and trying to understand it.



The first information we see is the **financial accounts** – essentially the income statement; balance sheet; statement of cash flows and the associated notes.



This information is readily available and highly efficient. The accountants and auditors have spent months putting together all the information. They do not tell us what the information means, whether the company is “good” or “bad” – that is the job for the analyst. Share and credit analysts spend most of their time going through these accounts to determine “good” or “bad”.

However, this information is historical. It is usually three to 15 months out of date when we use it. While it is very good at assessing how a business has performed in the past, it is not much use in running the business today.

So internally, we then move to **management accounting**. We now pick up unaudited statements (income statement; balance sheet; statement of cash flows) for the previous month or quarter and analyse these in a more timely manner. We also use forward looking analysis including budgets and forecasts.

A shortcoming of most accounting statements, however, is that they do not directly pick up **risk**. So if we want to look at investing in new equipment or a business or introducing a new product range, etc, we need to consider the risk / return trade-off. We do this in investment analysis through techniques such as payback, or better still, **discounted cash flow analysis and NPV** (net present value). We may also look at some management accounting techniques like break even analysis.

We might also use **Economic Profit** to look at whether a business is generating sufficient return to just its cost of capital. A more subtle enhancement is to use the risk adjusted cost of capital.

In this case, we look at the return on assets (usually calculated as operating profit over the funds invested which is  $EBIT / (Debt + Equity)$ ). We then see if the return we are making is greater or less than the cost of having that capital i.e. the returns we need to pay the providers of debt and equity.

For example, we make 8% operating return (EBIT) on assets. If our cost of funds is 6%, then we are ahead by 2%. We say we have added 2% economic profit. But if our cost of funds is 10%, even though we have made a profit, we would say that we have not made enough to justify the investment and the cost of funds. It can be a bit academic. At the end of the day, we try and make the best return we can for a given level of risk. We do not need to complicate it any more with discussions of economic profit or economic value added (EVA) which is another name for the concept.

# Path to Enlightenment

## 1. Cash Accounting

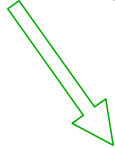
Simple but inadequate. No true measure of performance.  
No measure of liabilities incurred.



+

## 2. Accrual Financial Accounting

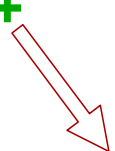
Matches revenues and expenses regardless of when cash flows. Good measure of performance and reasonable measure of liabilities and assets. But poor measure of viability. So historic and forecast cash flows are also needed.



+

## 3. Management Accounting

Accrual accounting is historic. It is good for assessing past performance but poor on making management decisions for the future or for managing costs. So management accounting is added. Looks at costs, budgets, etc.



+ ?

## 4. Investment Evaluation

Accounting systems do NOT pick up risk and required returns. So other methods used like cost-benefit analysis, payback and discounted cash flows used.

## 6. Economic Profit?

Does the return justify the investment by equity investors?

## 5. Activity Based Management

Tries to most accurately measure the cost of some activity. Expensive and difficult.

## 7.2 Accrual Accounting: Profit and Cash Flow

Accrual accounting is about matching revenues and expenses to each other within the same time period. The aim is to provide a "true" measure of how well the business has performed financially in the period (i.e. what was its true profit).

This measure of performance will not be achieved by simple cash accounting. Cash accounting works solely on when cash comes in and out of a business. We know we have a sale when we receive the cash. We have an expense when we pay out cash. Everything is either a sale or an expense. There is no consideration about assets or liabilities and therefore no balance sheet.

Unfortunately, cash accounting is too simple! What if we have done a great deal of work and incurred expenses and have sold some goods. But the customer will not be paying us cash until the next accounting period. Under cash accounting for this period, we will have all the expenses and none of the revenue so we will show a loss. A loss means poor performance but we have actually performed well to make the goods efficiently and make a sale. It is just that the timing of the cash receipt is delayed.

Under accrual accounting, we would recognise the sale when the goods or service have been delivered, regardless of when the cash is received. The outstanding payment would be recorded as an asset of accounts receivable in the balance sheet.

Likewise, if we buy some expensive machinery this year which will help us in the business for the next 10 years: under cash accounting, we would have all the expense of the machinery in the year we bought it (so probably sending us into loss) and no expense for the following 9 years that we use the machinery. With accrual accounting we match the expense of the machinery over its life against the revenue it helps us earn. So we would record the purchase of the machinery as an asset, and each year, as we use up some of the life of the machine, we will record that as an expense against that year's revenue. This is depreciation, a major accrual accounting concept.

We need accrual accounting to calculate a fairer measure of performance each year and to also know what we owe (liabilities).

Common accrual accounting entries include:

- accounts receivable
- trade creditors
- depreciation
- prepaid expenses
- accrued expenses
- provisions (for long service leave, warranty, etc)

However, when we use accrual accounting, the profit result does not match the cash position of the organisation or business unit! Care and adjustments are needed.

The main points about accrual accounting are:

1. Recognises revenue as earned (not when cash is received). This is especially important on major projects taking several years to complete.
2. Recognises expenses as incurred (not when cash is paid).
3. Need to "match" revenues and their associated expenses together in the same accounting period.
4. There are end of accounting period adjustments.

## 7.3 Assets, Expenses and the Matching Concept

Accountants think that business managers will naturally understand the differences between assets and expenses. However, it is one of the greatest confusions. This is not surprising when we have prepaid expenses treated as assets or other expenses capitalised to be treated as assets and so on. Indeed, a company like Qantas has some sales not counted as revenue: prepaid bookings that run to over \$3 billion!

An innocent sounding term: the *Matching Concept* is the basis of accrual accounting and the source of most of managers' confusion about accounting. If you can understand this term, you will understand accountants and accounting.

In simple terms, we seek to measure the performance of a business unit in a period of time (month, year, etc). In accounting, the measure of performance is **profit**.

**Profit is revenues minus expenses**

So far, so good. If revenues are greater than expenses we have a surplus or profit. If expenses are greater than revenues, we have a deficit or loss.

**BUT, WHEN** do we have a revenue or an expense?

(Accountants give this timing issue the term of **revenue recognition**).

For example, if we buy a piece of equipment for \$10,000 that lasts 5 years, when do we have the expense for that equipment? In the first year when we buy it and the cash goes out to pay for it? That would probably mean a loss in the first year but then the equipment is earning revenue in years 2 – 5 but there is no expense shown for it.

Clearly, this will distort our measurement of performance depending on whether we are looking at the first year or the later years.

The **Matching Concept** solves this problem for us. What it says is: we should **match expenses against the revenues they earn**.

Because our piece of equipment will earn revenue over its 5 year life, we should allocate the expense of the equipment over 5 years (i.e. 20% of its cost will be set against the revenue for each of the 5 years). We call this expense "**depreciation**". Depreciation is an accrual accounting concept.

(You might notice now that accounting is not as precise as it seems. Our estimate of the 5 year life of the equipment was just a best guess. We could well be wrong. If we also have to guess the residual value of the equipment at the end of the 5 years,

it becomes even more vague. Still, a best guess is better than being totally wrong by writing off the full expense of the equipment when we buy it).

We will leave aside for the moment, recent accounting regulations of assessing the diminished economic life of assets rather than straight depreciation.

The matching concept applies to many other aspects of the accounts too. In accounting, the best definition of expense is:

**expense means “used up”**

If we have used up some of the equipment, then it is an expense. If it is not used up, we still have it and it is an **asset**.

What if we are making some goods to sell to customers? At the moment, we still have the goods sitting on the shelves. Are they an expense?

Well, no! The goods are not yet used up and so they are not an expense. They are an asset (called stock or inventory). This is despite the fact that we have paid out cash to make or buy the goods.

When we sell the goods, they are used up and then become an expense (called cost of goods sold or cost of sales).

If it is used up, it is an expense. If we still have it, it is an asset.

Not selling all your goods but having many left over as stock or inventory really hurts at tax time. Although the cash has gone out to make or pay for the goods, they are treated as an asset and not an expense until sold. So your business will pay tax on a higher reported profit.

The matching concept also works in reverse. If we have the expense, then we can “recognise) the revenue (i.e. record it in the Income Statement). How do we know we have made a sale: when we have incurred all the costs (made the good or service and delivered it to the customer). It is a sale even though we may not be paid for another month or more. While we are waiting to be paid, we have created another asset called accounts receivable or debtors.

The matching concept works in other ways too. What if the customers pay us in advance? For example, they pay for their airline tickets a month before they fly. Is the money received, revenue?

Well, no! We have not yet incurred the expense of delivering the service (the flight) so we cannot recognise the money received as revenue in the Income Statement. Instead, it is a liability in the Balance Sheet. We owe that money to the customer until we deliver the service (the flight). After that, we no longer owe the customer

and we move the amount out of the liability in the Balance Sheet over to the revenue in the Income Statement.

Insurance premiums or magazine subscriptions paid in advance act similarly.

It can become confusing. Just remember:

**Expense means used up**

**If we still have it, it is an asset**

One last point, because we use accrual accounting, what we see as profit is NOT the same as cash flow. This confuses some people because we put a \$ sign in front of the profit figure. It just means that we measure profit in units of currency (dollars).

**Profit is the measure of performance**

**Cash flow is the measure of viability**

## **7.4 Accrual Adjustments**

One of the main points of accrual accounting is that it tries to match the revenues earned in a period with the expenses incurred in earning that revenue.

For example, a firm had sales of \$100,000 in a year. Apart from the raw materials and labour involved in making the goods that were sold, there were a number of other expenses. Not all of these expenses would have been paid during the year. Accrual accounting works out what these expenses should be and includes them as deductions from the revenue earned. Conversely, some expenses paid during the year might relate to last year's income (or next year's) and so they would be excluded from the expenses for this year.

A major item is depreciation. Machinery used to produce the goods may have been purchased say 3 years ago for \$50,000 and should last for another 2 years. It does not present a true picture of the firm's position if we treated the cost of using this machinery as a "once-off" expense of \$50,000 in the year it was bought and then no machinery expense for the remainder of its life.

The machine is being used up (expensed) throughout its working life. Therefore, accrual accounting wants to apportion some of the cost of this using up (depreciation) to each year's production and against each year's revenue.

Other adjustments also occur. A major item in construction projects is to impute how much revenue has been earned on a major project. This occurs even if the project is still years away from completion and is regardless of how much money has been received in progress payments.

Also, some expenses are paid in periods that are different to the accounting period being used for recognising revenue. For example, rent or insurance may be paid in advance or some raw materials or wages may not have been paid yet, even though the firm has used these inputs. These expenses are adjusted so that only the proportion relating to this period's revenue is included in the expenses for this period.

The expenses paid but not relating to this period are accounted in the balance sheet as prepaid expenses (an asset). When the item is used up during the next year, it is treated as an expense of that year and the asset is removed (expensed).

Items used but not paid for yet are treated as an expense in the Income (or Operating Statement) and as a liability (accrued expenses or accounts payable) in the Balance Sheet.

Some of the major end of period adjustments are:

- Depreciation (now being replaced by “impairment of earning capacity”)
- amortisation
- prepaid expenses
- accrued expenses
- revenue recognition on long term contracts
- doubtful debt provisions
- bad debt write-offs
- long service provisions
- warranty provisions

## **7.5 The Accounting Statements**

Financial Accounting statements are a tool to gaining an insight to the performance and value of a business entity.

They are not the be all and end all of investigating a business. However, as a quick way of learning about the business, they are very useful and efficient.

The major accounting statements are:

**The Balance Sheet**, which shows the financial position of the business. What we own and what we owe. The formal name is now Statement of Financial Position.

**The Income Statement**, which shows the profit performance. What we sold and what did it cost us. Also known as Profit & Loss Statement or just P&L. Formal name is Statement of Financial Performance.

**The Statement of Cash Flows**, which shows the sources and uses of cash.

The Balance Sheet and Income Statement are prepared under accrual accounting. The Statement of Cash Flows is the only part of the report that is done under cash accounting.

These three statements indicate the status of the business up to the latest balance date.

The only problems in using these statements are:

You need to know something of the language of accounting to interpret the statements, and

"Creativity" and vagueness can make the statements unreliable.

The information is historical. It does not directly tell you of the future.

With practice, analysts gain a "feel" for how a business is going by scanning the financial accounting statements. This is useful not only in reviewing potential acquisitions and investments. It is also useful in checking on competitors and customers and in evaluating how well your own business is performing.

## 7.6 The Balance Sheet

Formal name is Statement of Financial Position. The key features are:

1. It is a **snapshot** of the business at a point in time (the balance date).
2. **It balances!**

One side has assets which the company owns.

Other side has liabilities and owners' equity, which the company owes.

A practical way of thinking about the balance sheet is that we get the money from liabilities and equity and we use it to buy assets.



3. **Assets = Liabilities + Owners' Equity**

This is the famous accounting equation. It shows the balance sheet.

In recent times, we have restated this equation slightly to have it read:

$$\text{Assets} - \text{Liabilities} = \text{Net Assets} = \text{Owners' Equity}$$

4. The company is legally bound or **liable** to pay the liabilities.

This is why we split the funding side into its two major components of liabilities and equity.

5. Shareholders (the owners) only own the residual of assets after all the liabilities are paid (i.e. the **net assets**). Likewise, they only are entitled to the revenue after all the expenses are paid (which is **profit**).

$$\text{Owners' Equity} = \text{Assets} - \text{Liabilities}$$

6. Double entry accounting makes it balance.

7. Assets used to be valued **at cost** (on the going concern basis). Recent accounting changes look at the value of each asset at balance date in terms of what it can **earn** the company in the future. This is basically what is referred to as “**marked to market**”. It also applies to liabilities.

8. As a consequence of assets now generally valued by their future earning capacity (rather than historical purchase price) the concept of depreciation is fading. Rather, we now look to see if the future earning capacity has been impaired. **Impairment** is replacing **depreciation**, not just for large listed companies but now even for SME's.

“Current” on a balance sheet means it will change or turn over within the next 12 months. So if stock is in current assets, we expect it to sell in the next 12 months. Likewise, we would expect current debtors to be collected in the next 12 months. If you have some spare parts but expect them to still be there more than 12 months later, then they should be under non current assets.

Similarly, liabilities are treated as current or non current depending on whether they will be paid within the next 12 months or later.

If you ask a finance person to draw a diagram of a company, they are likely to draw the balance sheet diagram shown below. They are interested in showing where the funds have come from and where they have gone.

Note that it is difficult to show customer loyalty or market position or valued workers (at least since slavery was fortunately abolished).

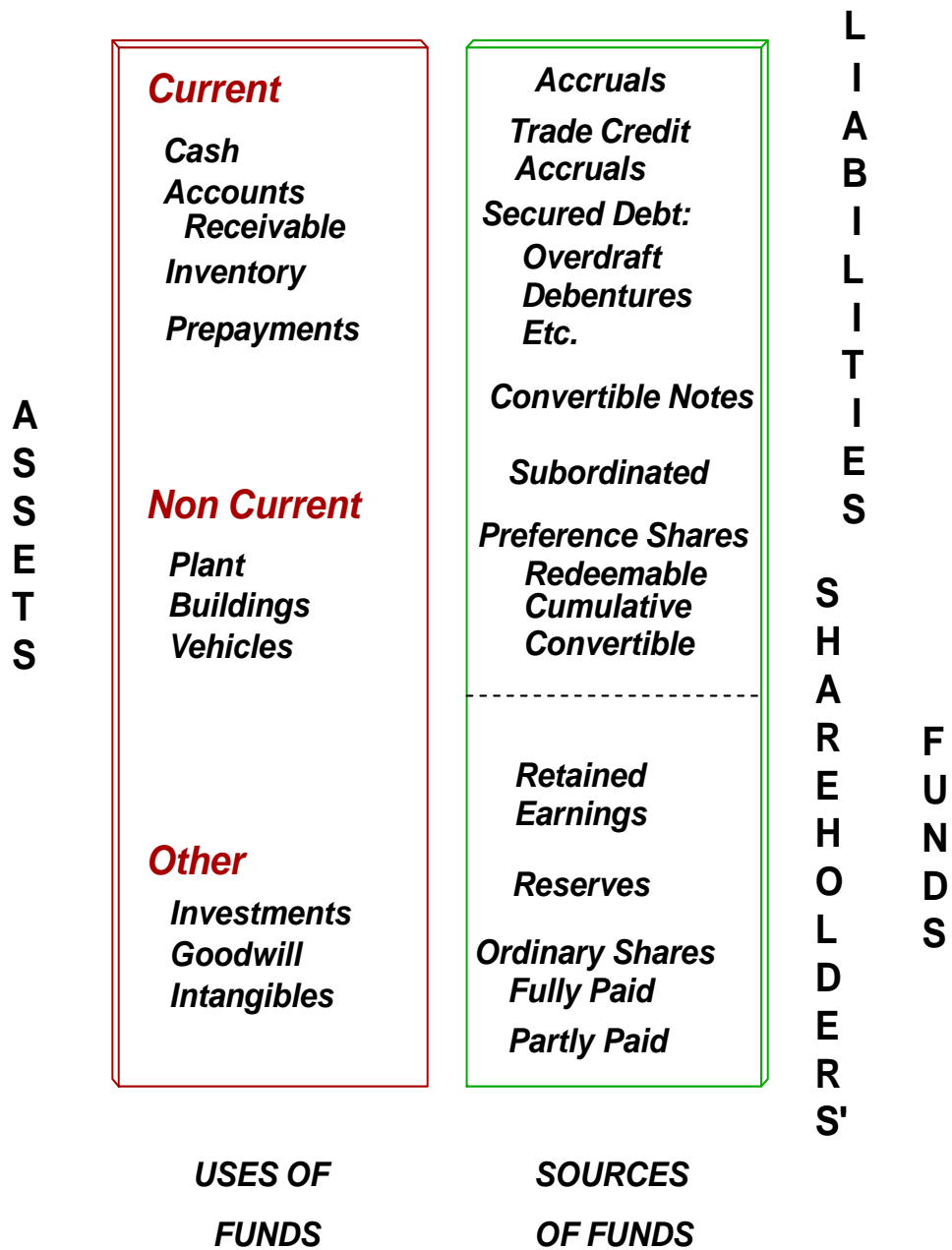
If the company is sold for a premium above its accounting value (i.e. the net asset value) then this premium will be recognised in the acquiring company's balance sheet as the **goodwill** it purchased in recognition of the superior future earnings potential of the acquired business.

Brand name is another thing and is basically some inferred value placed on the ability of the brand to earn superior sales and or price premiums because of the branding. Note that America does not allow brand values to be placed on companies' balance sheets.

Note that the Australian Taxation Office does not allow a deduction for the impairment of goodwill.

# CAPITAL STRUCTURE

## The Balance Sheet



## BRUCE'S JUICES PTY LTD

### Balance Sheet as at 30 June, 202x

	This Year	Previous Year
	\$	\$
<b>ASSETS</b>		
<b>Current Assets</b>		
Cash	7,000	10,000
Accounts Receivable	90,000	70,000
Inventory	65,000	54,000
Prepayments	<u>4,000</u>	<u>4,000</u>
<b>Total Current Assets</b>	<b>166,000</b>	<b>138,000</b>
<b>Non Current Assets</b>		
Equipment, Furniture, Fittings	72,000	63,000
less accumulated depreciation	<u>17,000</u>	<u>11,000</u>
Land & Buildings	228,000	162,000
less accumulated depreciation	<u>32,000</u>	<u>25,000</u>
Goodwill	<u>28,000</u>	<u>8,000</u>
<b>Total Fixed Assets</b>	<b>279,000</b>	<b>197,000</b>
<b>TOTAL ASSETS</b>	<b><u>445,000</u></b>	<b><u>335,000</u></b>
 <b>LIABILITIES AND OWNERS' EQUITY</b>		
<b>Current Liabilities</b>		
Bank Overdraft	10,000	10,000
Accounts Payable	45,000	30,000
Tax Payable	4,000	14,000
Dividend Payable	6,000	6,000
Accrued Expenses	<u>6,000</u>	<u>5,000</u>
<i>Total Current Liabilities</i>	<i>71,000</i>	<i>65,000</i>
<b>Non-Current Liabilities</b>		
Capitalised Lease Payments	25,000	27,000
Mortgage	133,000	98,000
Provisions for Employee Entitlements	<u>12,000</u>	<u>10,000</u>
<b>Total Non-Current Liabilities</b>	<b>170,000</b>	<b>135,000</b>
<b>TOTAL LIABILITIES</b>	<b>241,000</b>	<b>200,000</b>
 <b>NET ASSETS</b>	 <b>204,000</b>	 <b>135,000</b>
 <b>OWNERS' EQUITY</b>		
Issued Capital (100,000 shares)	120,000	120,000
Asset Revaluation Reserve	68,000	8,000
Retained Profits	<u>16,000</u>	<u>7,000</u>
<b>TOTAL OWNERS' EQUITY</b>	<b>204,000</b>	<b>135,000</b>
<b>TOTAL LIABILITIES &amp; OWNERS' EQUITY</b>	<b><u>445,000</u></b>	<b><u>335,000</u></b>

## 7.7 Income Statement

The key features are:

1. Summarises transactions that lead to a profit or loss for the business (i.e. revenue and expense transactions). The transactions are summarised over a period - usually 12 months.

2. Revenues are goods sold or services rendered.

Revenues include:

- Sales
- Fees Earned
- Rent Earned
- Interest Earned

3. Expenses are the costs of goods and services consumed in generating revenues.

Expenses include:

- Wages
- Interest
- Cost of Goods Sold
- Advertising
- Interest

4. Revenues increase Owners' Equity

Expenses decrease Owners' Equity

Revenues - Expenses = Profit

5. Profit is the financial measure of **performance**.

6. With Accrual Accounting, recognition of revenues and expenses does **NOT** necessarily match up in time with cash flows.

## BRUCE'S JUICES PTY LTD

### Income Statement for Year Ending 30 June, 202x

	This Year	Previous Year
	\$	\$
Sales (Revenue)	380,000	400,000
less Cost of Goods Sold	<u>220,000</u>	<u>200,000</u>
 Gross Profit	 160,000	 200,000
Less Expenses:		
Office Expenses:		
Office Salaries	28,000	25,000
Depreciation	6,000	7,000
Materials	<u>4,000</u>	<u>4,000</u>
	38,000	36,000
Administration Expenses:		
Salaries	42,000	38,000
Depreciation of Building	7,000	7,000
Depreciation of Car	2,000	2,500
Rates, Utilities	<u>9,000</u>	<u>8,500</u>
	60,000	55,000
Selling Expenses:		
Advertising, Brochures	7,000	8,000
Finance Expenses:		
Interest	30,000	24,000
Other Expenses:		
Amortisation of Goodwill	<u>7,000</u>	<u>2,000</u>
 Operating Profit before tax	 18,000	 75,000
Less Income Tax	<u>6,000</u>	<u>30,000</u>
 <b>Operating Profit after tax</b>	 <b><u>12,000</u></b>	 <b><u>45,000</u></b>

Note: The terms “Abnormals” and “Extraordinaries” no longer exist.

## 7.8 EBIT and EBITDA

The “bottom line” of the Income Statement is the net profit after tax figure (also abbreviated to NPAT or just PAT).

However, such a result can only be obtained for the entire company. It cannot be obtained for individual business units within the company. This is because normally, only at the company level do we determine the level of borrowings, which in turn determines the amount of interest and hence the amount of tax.

So normally, for business unit reporting, we can only go down as far as Earnings before Interest and Tax (EBIT). **EBIT** is also sometimes referred to as the operating profit or income for a business unit.

If the business unit managers do not have much control over the assets used in their business, it may be unfair to saddle them with the costs of those assets: i.e. depreciation (or impairment nowadays) and amortisation. In this case, we may go further up the Income Statement to **EBITDA**. EBITDA is earnings before interest, tax, depreciation and amortisation. Some analysts talk of EBITDA as the cash flow of the business but this is wrong. It does not pick up the cash used to fund working capital nor other capital expenditure. Also, at the end of the day, interest and tax need to be paid and loans repaid. None of these items are counted in the EBITDA figure.

Typically, we depreciate or impair physical assets like plant and buildings. We amortise intangible assets like goodwill, patents, licenses, brand names, etc. The tax treatment of depreciation usually differs considerably from the tax treatment of amortisation so care needs to be taken to understand the treatment in each jurisdiction.

Also, under the International Financial Reporting Standards (IFRS) there are major changes happening in accounting on fundamental issues such as defining and valuing assets, recognition of revenue and depreciation. For most large companies, they would now look at the impairment of the future earning capacity of an asset rather than using some set depreciation rate.

## 7.9 Statement of Cash Flows

The Statement of Cash Flows is the last of the major financial accounting statements. It is the only Statement not constructed under accrual accounting. It is purely about when cash comes in and goes out.

The Statement of Cash Flows is the most recent addition to the main accounting reports. It was introduced after the great global recession in 1991 because of difficulties by analysts and banks in determining just how much cash a company

was generating. They saw companies with large profits going bust – because they did not have the cash available to pay their liabilities when due.

The importance of cash is paramount. While profits may indicate how well a company has performed, profits are not the same thing as cash because of all the adjustments required under accrual accounting.

It is cash flow that largely determines whether a company is viable. The company pays its bills with cash, not profits. Many profitable companies have gone bankrupt.

Typically, the Statement of Cash Flows splits up the sources and uses of cash according to 3 main areas:

1. from **operating activities** (like the income statement on a cash basis)
2. from **investing activities** (like the asset side of the balance sheet on a cash basis)
3. from **financing** activities (like the liabilities and equity side of the balance sheet on a cash basis)

Consequently, we can tell how much the company generates from normal operations and how much is derived from extraneous activities such as buying and selling assets, raising or paying loans and equity movements. All accrual adjustments are removed to see the “true cash flow”.

It is extremely difficult and time consuming to derive the Statement of Cash Flows. For public companies it is done as part of the reporting process. For private companies you are unlikely to see a statement of cash flows.

The cash flow picture changes even more when the effects on cash flow from investing in assets (current and non-current) and financing activities are added. Thus the Statement of Cash Flows is an important addition to the published information about a company.

There is still the weakness that the information is historical. What we are most interested in are the future cash flows. Still, it is a start.

## **7.10 Funds Statement**

The Funds Statement has been superseded by the Statement of Cash Flows. It is more formally known as: Statement of Sources and Application of Funds. The name says it all.



The Funds Statement shows where the business derived its funds during the last period (normally a year) and where it used these funds.

Strictly defined, funds flow is:

the flow of resources into or out of the firm due to transactions with external parties.

It is possible to derive the Funds Statement from the last two Balance Sheets for the business (and more detail can be added using the Income Statement and Profit Appropriation Statement).

It is still useful to think where funds can come from in business and where they can go.

### **Principal Sources of Funds**

1. Increase in paid-up capital (including share premium).
2. Profits from operations (after adjustments for non cash items).
3. Increase in borrowings (both short and long term debt plus from creditors)
4. Reduction in assets

### **Principal Applications of Funds**

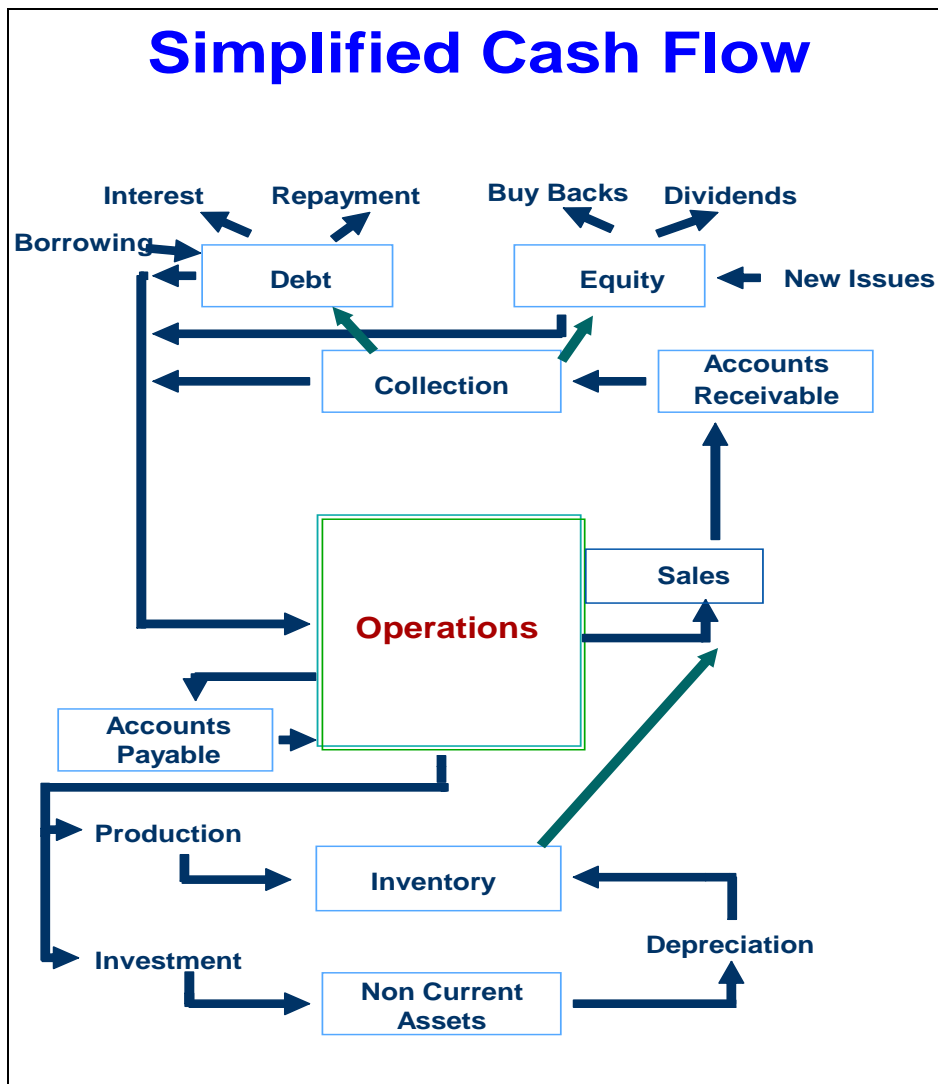
1. Repayment of capital (e.g. share buy back).
2. Losses from operations.
3. Reductions in borrowings.
4. Increase (investment) in assets.
5. Dividends

Sources should balance applications.

## 7.11 Cash Flow Diagram

A simplified diagram of cash flow in a business is shown below. Note that the Income Statement is represented by just one box: Operations (including the sales box). The other boxes belong to the Balance Sheet. There is more in the Balance Sheet that affects cash flow than in the Income Statement.

To understand a business and its performance and its viability, you must understand the three major accounting statements: balance sheet, income statement and statement of cash flows.



Sales are such a major part of Operations they are show separately next to the Operations box. The Operations box (including Sales) is represented by the Income Statement. But note that there are another 6 boxes on the diagram. These are Balance Sheet items. The main point to learn from the diagram is that there is usually more in the Balance Sheet that affects cash flow than there is in the Income Statement. To understand a company, we need to look at both Income Statement and Balance Sheet items together.

## 7.12 Analysis of the Cash Flow and Funds Statements

The main lesson is about the prime source of cash or funds. We expect that operations should normally be the largest source of funds. There may be some “one-off” years where we have a major sale of assets (buildings, etc) or a big equity issue but these should be rare and truly “one-off”.

A start up company can expect to have negative cash flow from operations for the first year or two until it establishes its customer base. But after that, we expect to see positive cash flows from operations. If not, there are serious problems. It means costs exceed collections from sales and if it continues, the business is on the way out. Negative cash flows from operations need to be analysed and staunched quickly.

## 7.13 Take Aways

To be an effective manager, you must understand the measurement system of business: the accounts.

In order to “read the accounts”, you must understand how accountants think which is based on the matching principle. Revenues are matched against their expenses, regardless of cash flows, in order to derive a measure of performance in the time period.

An asset is something bought that we still have. An expense is used up. Assets go in the balance sheet. Expenses go in the income statement.

The three major accounts are:

1. Balance Sheet which shows the financial position of what is owned and owed.
2. Income Statement which shows revenues less expenses to derive the profit. Profit is the financial measure of performance.
3. Statement of Cash Flows which is drawn up under cash accounting not accrual accounting. It shows how much cash has come in and gone out from: a. operations; b. investing; and c. financing.

There are limitations. Some numbers are estimates such as life of the equipment and provisions. As well, the numbers are historical – they tell us what has happened.

Normally, most funds should come from operations and we expect positive net cash flows from operations. Otherwise, there are likely to be serious problems that must be fixed and soon.

To look into the future, we will need to add other tools. We have already seen that the cash flow forecast gives us an indication of future viability or solvency.

We could do forecast financial statements and we could do trend analysis on performance ratios. Now that we can read and understand the accounts, we are ready to tackle these other analytic tools.

You will not be an expert accountant after this chapter but you should know enough to understand the major accounting statements and some of the key terms. At least you will have enough knowledge to know when to ask questions about the accounts and what questions to ask.

## 8. Understanding Costs

So far, apart from the cash flow forecast, we have been looking at financial accounting. This is the formal accounting which leads to the major financial accounting statements:

- Balance Sheet (Statement of Financial Position)
- Income Statement (Statement of Financial Performance)
- Statement of Cash Flows

With Financial Accounting, the costs in the past period are identified and added up to give the total costs. These costs are subtracted from revenue to yield profit.

In this method, all the costs of the period are summed: wages, rent, electricity, depreciation, interest charges, cost of goods sold, stationery, advertising and so on. This means all sorts of costs are just lumped together, regardless of whether they are fixed, variable or whatever. This is known as **absorption costing**. The fixed costs in making or delivering a service are absorbed into the product costs.

This method is suitable when you are doing historic accounting: looking at the costs over the last period, allocating them to various categories and summing them. We can then see how the business has been gone in the past and its state (assets and liabilities) at the last balance date. It is a historical cost reporting system.

However, this method has major shortcomings when we try to **manage** a business. For example, while we will have an average production cost over the past year, this does not tell us what it will cost us to tender for a new order coming up. Nor can we determine the effect if say we drop a product line.

To actually manage a business and make logical decisions, we need to use **Management Accounting**.

The main difference between management accounting and financial accounting is how costs are treated. Consequently, management accounting is often referred to as **cost accounting**. As well, management accounting is not concerned with accurate measurement of the past. Management accounting is about the present and the future. Precision is not essential - just be accurate enough to make correct decisions.

With Management Accounting, costs are split up according to how they **behave** if output (or production volume) is changed. In this way, we can tell how much costs change as volume changes in the future.

This is very useful in determining the effects on profit from actions aimed at changing output levels.

## 8.1 Fixed and Variable Costs

The first step in Management Accounting is to split the costs between fixed and variable costs.

**Fixed costs** are defined as those costs that do not change as production or sales volume changes. The firm must pay the same dollar cost whether it produces 1 item or many items. Examples of fixed costs include the interest charge on the funds borrowed, management salaries, product design, machine tooling, the rent, etc.

**Variable costs** conversely vary directly as output or sales volume changes. Such costs include raw materials, production labour, electricity used to operate the machines, packaging materials, transport and so on.

**Total costs** are simply the sum of fixed and variable costs.

It sounds simple in theory. In practice it is complex and time consuming to reasonably accurately split costs into fixed and variable categories. This perhaps explains why many companies do not do variable costing. Then those companies make poor decisions.

Indeed, some costs cannot be uniquely categorised into either fixed or variable components. They have both fixed and variable components. They are called semi-variable or semi-fixed costs. As much as possible, they are split into their fixed and variable components. After that, they are shown as their semi- whatever proportion.

Fixed costs are sometimes referred to as **period costs**. This is because fixed costs are not directly related to output and are expressed as so many dollars per month, or year, or other period of time.

You may hear the terms “**direct costs**” and its complement of “**indirect costs**”. Direct costs are directly attributable to the production of a good or service. This typically means raw materials and direct production labour. Perhaps some overheads might be able to be directly allocated. This is easier with manufacturing goods than supplying services.

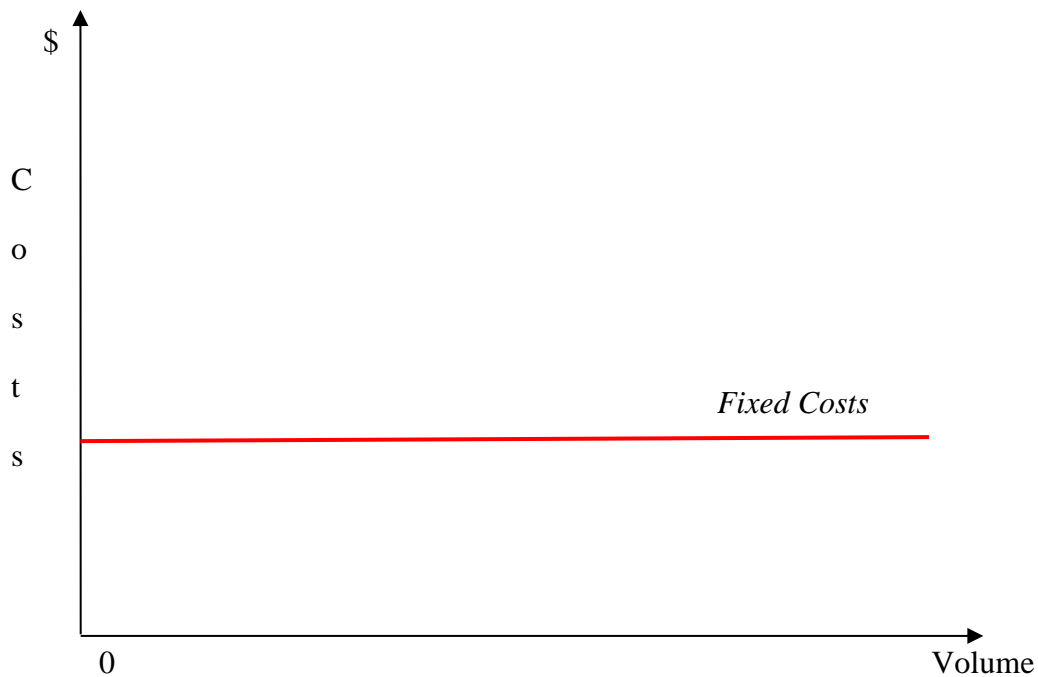
Indirect costs are not readily apportioned to a product or service. They are often referred to as **overhead costs**.

“**Product costs**” tries to capture all the direct costs of supplying the good or service to the customer and may include transport and marketing. Product costs try to show the full costs of satisfying a customer.

For now, we will just categorize costs into either fixed or variable to understand **cost behaviour**. This is how the costs behave as we change sales or output levels.

The next few pages look at how total fixed and total variable costs would change as sales or output go from zero to higher levels.

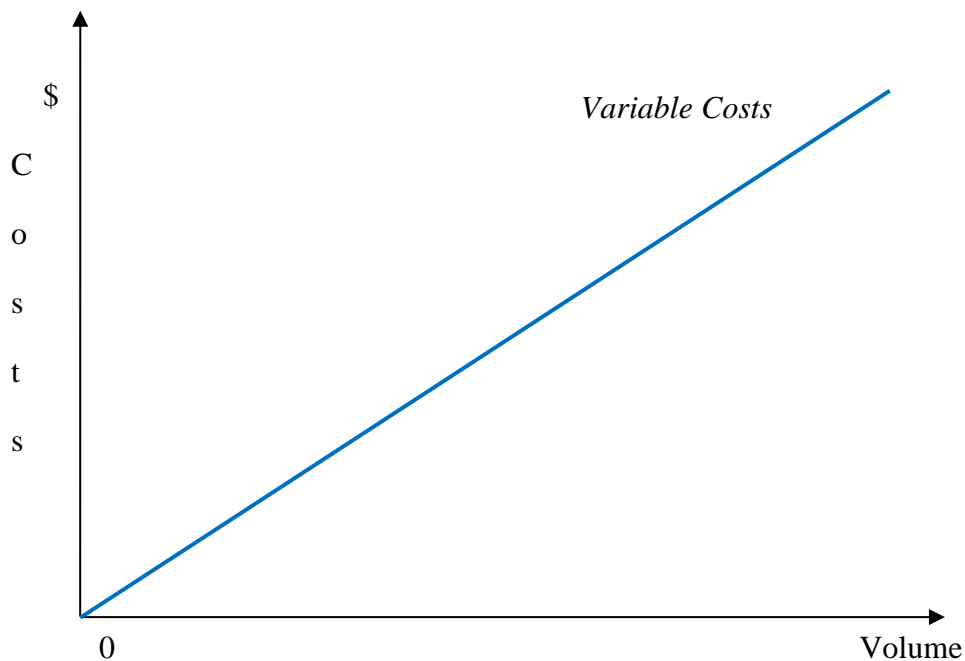
Diagrammatically, **fixed costs** are shown below:



The fixed costs do not change as we increase volume (output or sales). These costs remain the same whether we produce and sell nothing or whether we increase volume. Examples are the rent on the premises, salaries, license fees and such.

**Variable costs** conversely do vary as output changes. Such costs include raw materials, production labour, electricity used to operate the machines, packaging materials, transport and so on.

Diagrammatically, **variable costs** are shown below:



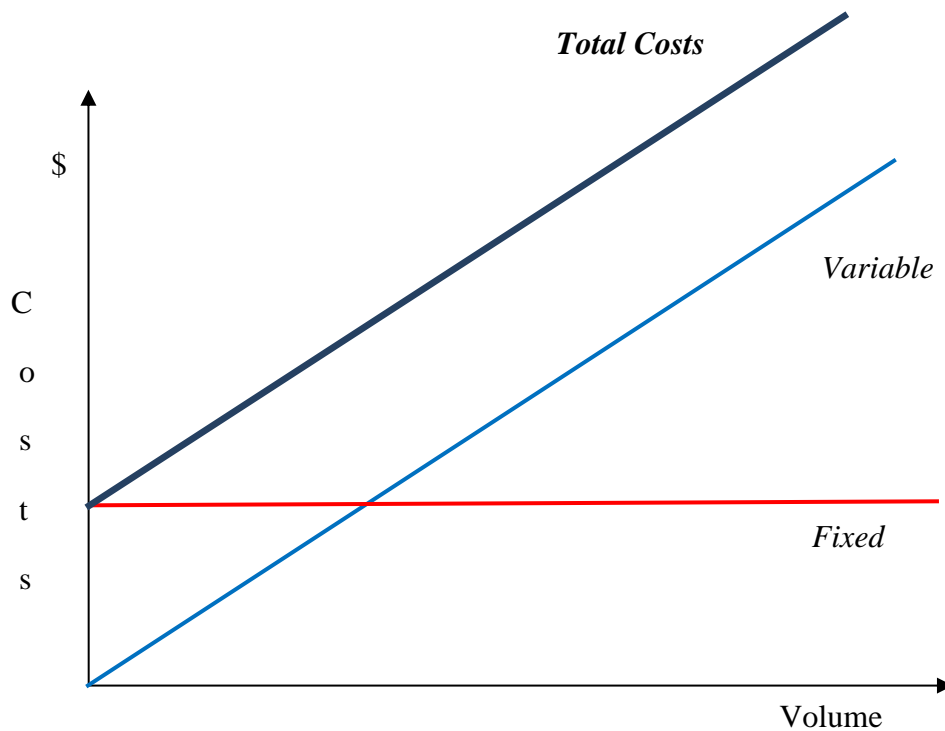
If they are truly variable costs, then at zero volume, there should not be any variable costs.

Any costs at zero volume would be fixed costs.

The slope of the line (how fast variable costs rise as volume increases) is determined by the amount of variable costs per unit.

**Total costs** are simply the sum of fixed and variable costs.

This is shown in the diagram below:



It sounds very simple in theory. In practice it is complex and time consuming to accurately split costs into fixed and variable categories.

## 8.2 Relevant Range

When determining whether a cost is fixed or variable, we must define its relevant range. This is the range of volume or output over which the cost is fixed or variable.

Cost behaviour can change as the output level changes. For example, at a factory producing up to 100 units per week, the salaries of the 3 workers (who are paid their salary regardless of output) are a fixed cost. From 101 units to 120 units per week,



there may be overtime paid (variable cost). From 121 units to 135 units per week, a 4th worker must be employed making all wages fixed again but at a higher level.

Such changes in capacity affecting whether costs are fixed or variable are linked to the economists' definition of the short term and long term. In the long run, businesses have time to change capacity and all costs become variable. But in our practical world, many costs are fixed for a considerable period of time.

Even more confusing, different costs have different relevant ranges. In any range of the firm's output, say 100 units to 150 units per week, there may be some costs that do not change their behaviour while others move from fixed to variable behaviour and still others move from variable to fixed behaviour!

Fortunately in practice, once a business is at a reasonable size of output, it usually has a fairly broad relevant range where most of its costs have steady cost behaviour. The firm would need to change its output by 30% or more before there are any major changes in cost behaviours.

As an exercise, decide whether the following costs are most likely fixed, variable, semi-fixed or semi-variable:

- a. salary of accounts clerk
- b. sand paper purchases by a furniture manufacturer
- c. write off of obsolete equipment
- d. rent on a petrol service station
- e. raw material inputs
- f. salaries of sales representatives
- g. commissions of sales representatives
- h. insurance on the office buildings
- i. overtime payments
- j. electricity in a factory
- k. boxes for packaging finished products
- l. salaries of the accounting department
- m. accounting training programme
- n. safety training programme
- o. advertising expenses

How did you go?

Some costs should have been straightforward to categorise. Costs a, d, f, h, l, and m are clearly fixed costs in most cases. Costs b, e, g, and k are clearly variable costs.

Other costs are more debatable. Write off of obsolete equipment is probably fixed, especially if it is one-off type event. But if we have to write off obsolete equipment every 10,000 items or so, it starts to look variable.

Overtime payments are probably variable but then we may have to pay a minimum number of hours every time there is overtime used. This has aspects of a fixed cost.

Electricity is a case of “it depends”. If the electricity is for items such as lighting or air conditioning, then it is mostly fixed. If it is for running machines and the more machines used or harder run, then the more electricity used, it is mostly variable. So electricity is likely to be semi fixed (if mostly fixed) or semi variable (if mostly variable). If the electricity is a major cost, then the accountants should split the cost into its separate fixed and variable components.

The safety training program is really an independent cost. It is not related to output so it is not variable. It may be partly discretionary. When we are not clear which way to categorise a cost, we typically put it in the fixed box.

The advertising expenses are an interesting example. They could be either fixed or variable, depending on how they are determined by management. It is important to understand our logic in this instance as we will use it in the next step which is to look at costs per unit.

We might make a management decision to spend say 10 cents in every dollar of sales on advertising.

This would make the advertising expenses a variable cost. As sales increase, we spend more and more on advertising. Strange but true: if a cost is a fixed amount per unit, then it is a variable cost! Think about it. The same applies to all variable costs. If our packaging costs \$1 for every item sold (fixed cost per unit) then it is a variable cost. The more items we package, the more our packaging costs are. If we package zero items, then our total packaging costs are zero. This is exactly like our variable cost line in the diagrams above.

Alternatively, we could have decided to make our advertising expenses a fixed cost. Our business plan may have called for us to spend \$300,000 this year on advertising. We spend the \$300,000 regardless of whether we sell no products or many products. This then is a fixed cost (\$300,000 in the period of one year).

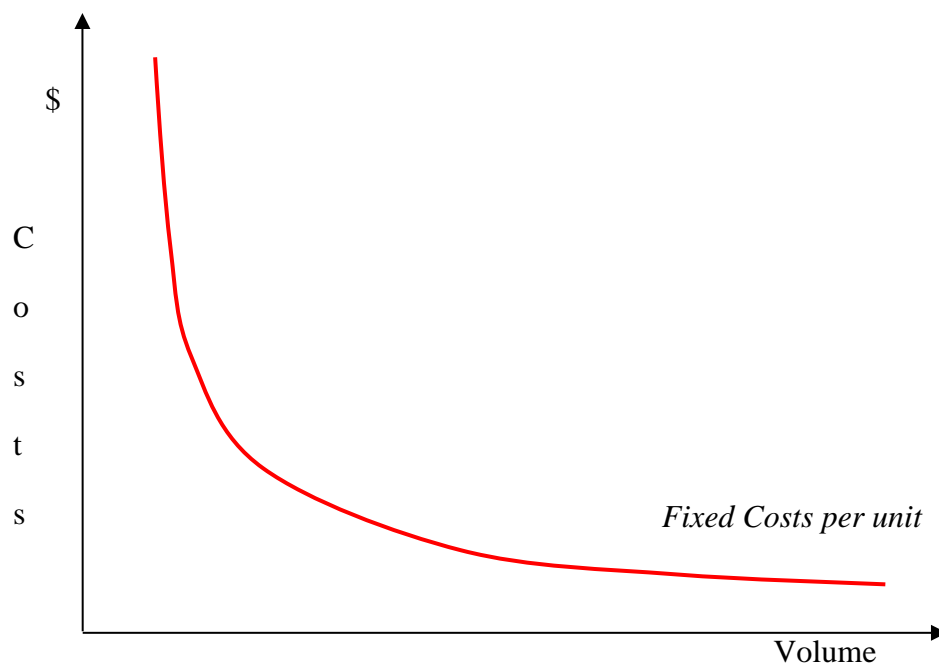
### 8.3 Costs per Unit

We have so far looked at total costs (fixed and/or variable) as output changes. This is useful for looking at the overall position of the firm and the break-even position (treated later).

It is also useful to look at the unit cost position. For a start, unit costs can then be related to the unit price to see how much profit (or loss) the firm is making at its current price and cost position.

How fixed costs per unit change as output changes is shown diagrammatically below.

#### Fixed Costs per Unit



It is no longer a straight line. The fixed cost per unit falls very rapidly as output starts to increase but the rate of fall tapers off as output becomes larger.

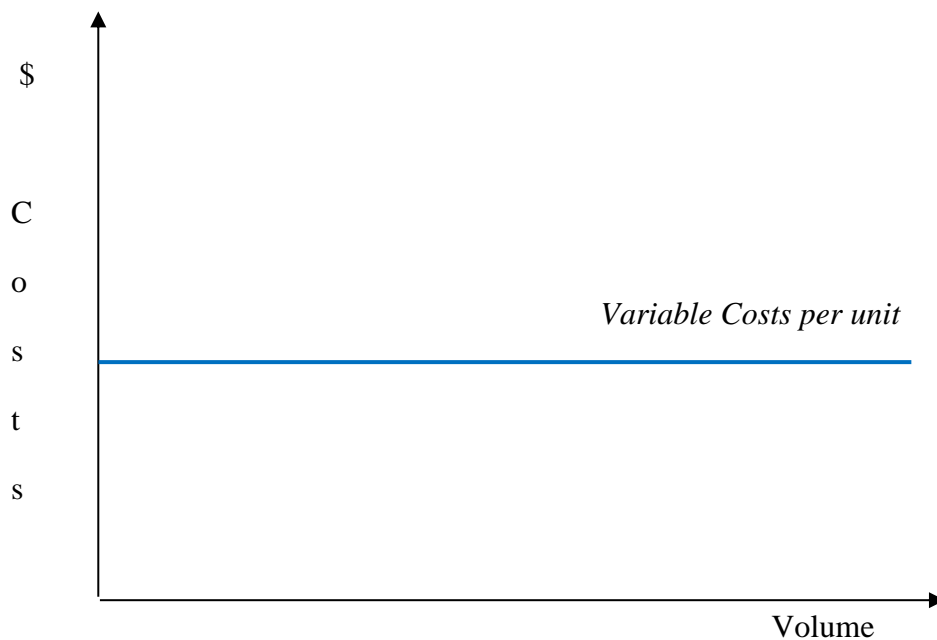
For example, say our fixed costs to operate are \$12,000 per week. This will cover the rent and salaries and other fixed costs. If we produce just one unit of sales in that week, then our fixed cost per unit is \$12,000.

But if we produce 2 units in that week, then the fixed cost per unit halves to \$6,000 each. At 3 units in the week, the fixed costs per unit fall to \$4,000. At 4 units, they fall to \$3,000 per unit. At 12 units, the fixed costs are \$1,000 per unit. If we reach sales of 1,000 units in the week, the fixed costs per unit have fallen to just \$12 per unit.

Spreading fixed costs over more and more units of output is the major source of economies of scale. A firm with high fixed costs has very high per unit costs at low levels of output but these per unit costs fall rapidly as output increases.

Similarly, how **variable costs** change per unit can be seen in the diagram below:

### Variable Costs per Unit



This may not seem intuitively right but it is correct. Think of the example of packaging and postage. If every time we sell an item, we have to pay \$5 for packaging and postage to the customer. If we sell 1 unit, the cost is \$5.

If we sell 2 units, the total variable cost is \$10 (like our diagram before with total variable costs). But the cost per unit is the \$10 divided by the 2 units sold = \$5 each. If we sell 10 units, the total variable cost is \$50, but it is still \$5 per unit.

## 8.4 Cost Behaviour and Strategy

The rapid fall in total unit costs for firms with high fixed costs as output increases explains the pricing and competitive strategies of many firms. If you have large fixed costs, it is virtually essential to ensure maximum output.

A major exception to this is where firms with high R&D expenditure can maintain high prices through patent or other protection. Even so, drug companies are very volume sensitive which is why they spend more on marketing than they do on R&D.

Consequently, firms with high fixed costs and open competition strive to operate close to maximum output. Market share becomes paramount.

This explains the pricing policies and discount wars in industries like chemicals and petrol refining. The firm must pay for the high fixed costs of the plant whether it produces 10 units or a million units. The low pricing may even extend to where the firm makes an overall loss. Yet it is still necessary to maintain output or else the losses will be even larger.

## 8.5 Break-Even Analysis

Firms that need to recover their fixed costs have some level of output where they produce enough goods or services to pay for the variable costs plus have enough left over to pay for all the fixed costs. It is the point where the firm moves from making an overall loss to start making profits. It is the **break-even point**.

If the firm sells less than this volume it makes an overall loss. If it sells more than the break-even volume it makes profits. To make profits the firm needs to sell more than the break-even volume or else reduce its costs and/or raise prices.

The question then becomes whether the firm can sell more than the break-even volume. If many new enterprises or product launches undertook this analysis they would see that they have no hope of ever achieving the required volumes to break-even. They would then abandon their plans to enter the market.

Break even is one of the simplest yet most powerful equations in business!

The break-even point can be seen graphically. Partners Pacified Limited is a company that sells tranquilisers and pick-me-ups to business managers. It has been a boom business of late.

Partners Pacified Limited has the following costs per month:

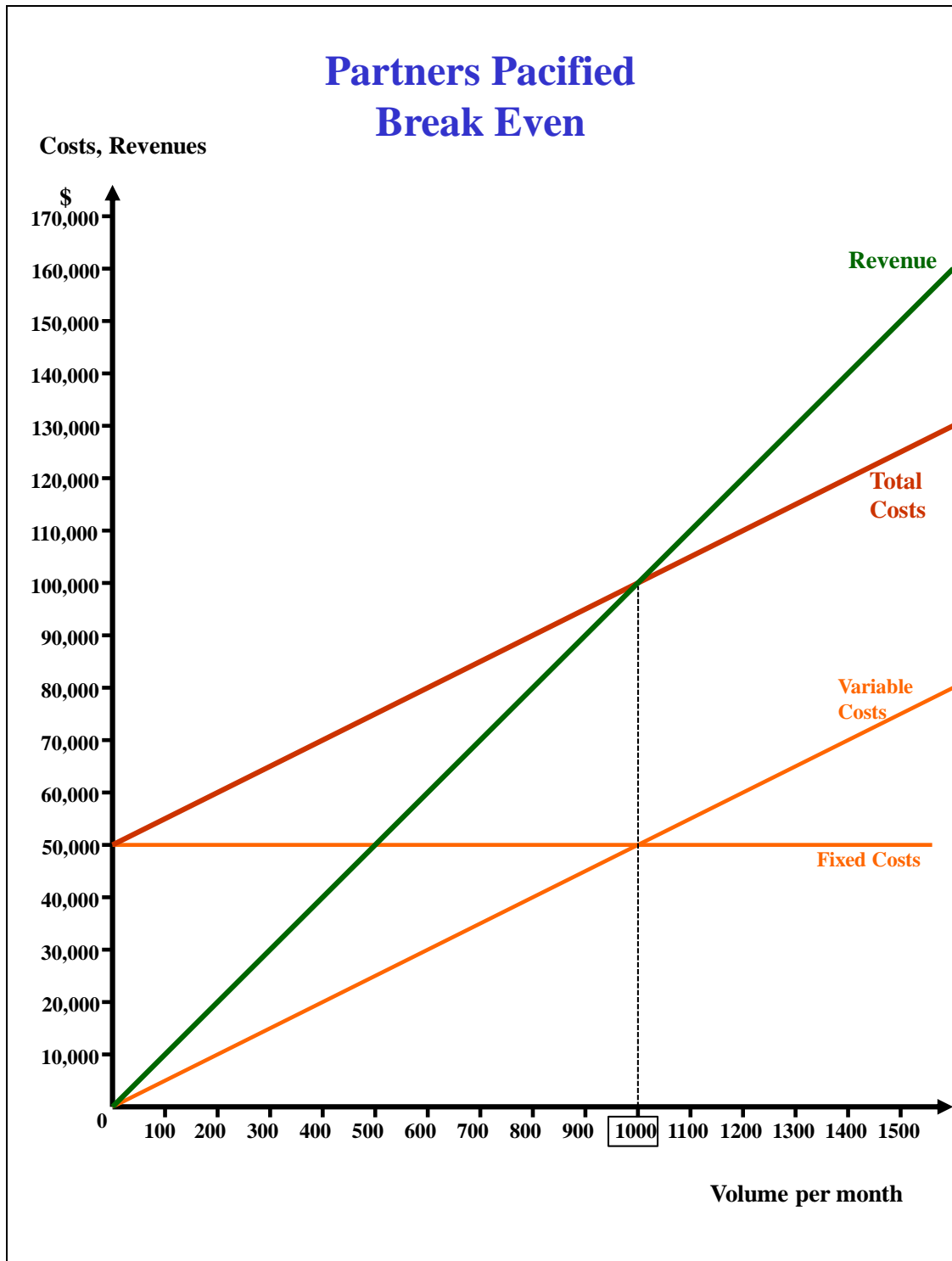
Rent	\$20,000
Office salaries	\$15,000
Sales commissions	\$25 per unit
Packaging	\$10 per unit
Raw materials	\$15 per unit
Depreciation	\$5,000
Interest expense	\$10,000

These cost behaviours are expected to hold within the range of 0 units to 2,000 units per month.

Selling price per unit is \$100.

On the diagram below the total **fixed costs**, total **variable costs** and total total costs per month are graphed. Also graphed is the revenue line which rises at \$100 for every unit sold.

At what level of volume does Partners Pacified Limited break-even?



Break even is at 1,000 units per month. At 1,000 units, revenue is \$100,000.

At 1,000 units, variable costs are \$50,000 and the fixed costs are steady at \$50,000 per month so that total costs are \$100,000.

The revenue of \$100,000 is matched by the total costs of \$100,000. The business is neither making a profit nor a loss. It is breaking even.

Sell less than 1,000 units per month and the total costs line is above the revenue line and the business is making a loss. Sell more than 1,000 units per month and the revenue line is above the total costs line and profit is made.

Note that this break-even point of 1,000 units per month is contingent on the parameters: fixed costs of \$50,000 per month, variable costs of \$50 per unit and revenue of \$100 per unit. Change any of these parameters and the break-even point changes.

If your business cannot reach your calculated break-even level, can you change the parameters to achieve a lower break-even point? Your options are to reduce fixed or variable costs. Or, if you cannot reduce costs can you lower some fixed costs by making them variable? For example, instead of producing the product or service yourself with all the costs of machinery and labour, can you have it produced by another business and buy it in as a variable cost. By reducing the fixed costs, you are likely to reduce the break-even point. The trade-off is higher variable costs so that once you are past the break-even point, profitability will not be as high as previously.

Alternatively, can you raise prices? You may not sell as many items but then you will not need to!

Break-even is a quick and logical tool for deciding on product launches or entering new markets or even seeing if an existing business or product can be viable.

The question becomes whether the firm can sell more than the break-even volume. If many new enterprises or product launches undertook this analysis they would see that they have no hope of ever achieving the required volumes to break-even. They would then abandon their plans to enter the market.

More than one product has been launched which required over 100% of the available market before it reached its break-even point.

## **8.6 Break-Even Formula**

Graphs are slow, cumbersome and subject to drawing error. What we need is a simple and effective formula.

We now gain the benefit in thinking of variable costs per unit.

Every time we sell one unit of our good or service, we receive the price charged. In the case of Partners Pacified, this was \$100 per item.

However, every time we sell an item, we have to pay for the variable costs to make and supply the good or service. In the case of Partners Pacified, this was \$50 per item.

We sell an item and receive \$100 but we must pay \$50 for the variable costs involved. What we have left over from each sale after the variable costs is \$50.

This remainder is typically called the contribution or **contribution margin**.

Note that we do NOT call it profit. That is because we have not paid for all the costs yet. We still have to pay for the fixed costs. In the case of Partners Pacified, the fixed costs were \$50,000 per month (period of time, not per unit).

What we need to know, is how many units must we sell to pay for the fixed costs.

Mathematically, the break-even point is found by how many units of the contribution margin are needed to pay for the fixed costs.

This is expressed mathematically as:

### **Fixed Costs / Contribution Margin**

The symbol for contribution margin per unit is "m". In short hand, the above expression could be written as:

$$\boxed{FC / m}$$

For Partners Pacified Limited, the figures are:

$$\$50,000 / 50 = 1,000 \text{ units}$$

We can quickly recalculate any changes to the parameters. For example, if we raised the price to \$110 per unit then the contribution margin is  $\$110 - \$50 = \$60$ .

The break-even point drops from 1,000 units per month to about 834 units per month.

If fixed costs rise to \$60,000 per month and the price remains at \$100 per unit, then the break-even is  $\$60,000 / \$50 = 1,200$  units per month.

We will extend this analysis in Chapter 15 when looking at turnaround ideas.



## 8.7 Take Aways

Financial accounting is the system used to draw up the historical accounts: balance sheet; income statement; and statement of cash flows.

Financial accounting gathers all the costs and revenues for the past period, allocates them to categories and presents them in the accounts. In this system, costs are just “posted” to various accounts like wages or fuel or rent or interest or transport and so on.

Whether the costs are fixed or variable does not matter in financial accounting. The fixed costs are just absorbed into whatever category to which they are posted.

This is suitable for recording the past. However, it is **NOT** suitable when we need to make management decisions about the present or the future.

Our management decisions will affect how costs will behave in the future. In particular, if we change our level of activity (produce or sell more or less) than some costs will directly change (variable costs) but others will not change (fixed costs).

In management accounting, we split costs into how they behave when we change the level of activity: into fixed or variable costs.

The greater the proportion of costs that are fixed, the more sensitive the business is to small changes in activity levels. A change in activity by 10% could have an impact on profit of 80% or more.

On a per unit basis, when we take the revenue from a sale and subtract the variable costs in providing the good or service sold, the remainder is the contribution margin. This is the margin made on each sale which is needed to pay towards the fixed costs of the period of time.

When we have sold enough units to cover the fixed costs for the period, the business is at the break-even level. This is a critical piece of information about the business or a product or customer, etc. How many units must be sold each period to break-even? Sell less than this amount and the business makes a loss. Sell more and a profit is made.

The three components of the break-even calculation are price, variable costs per unit and fixed costs per period of time. Change any of these components and the break-even level changes.

## 9. Analysing Companies

Merchant bankers, equity analysts, consultants and credit officers all make a living from analysing companies.

What are the tools they use do this job?

There are many and varied tools available – some authors claim 80 or more techniques. In reality, many are just variants of a basic technique. Even so, there are some 30 basic tools or techniques. Relax, a few will provide most of the picture.

We can do a first split of the techniques into:

### A. Technical Analysis

### B. Fundamental Analysis

Most academics and practitioners quickly dismiss technical analysis. Despite its lofty title, it is only really “charting”. We look at how share prices or exchange rates or housing prices or whatever have moved over time. The “technical analyst” then tries to discern patterns in the graphs that may repeat in the future to allow some prediction. It is akin to voodoo and reading the entrails of chickens or tea leaves.

Fundamental Analysis on the other hand, requires some serious study and analysis of many of the basics of a business such as:

- Financial strength
- Competitive position
- Industry attractiveness
- Structure
- Management strength

We will look at fundamental analysis tools here.

### 9.1 Categories of Techniques

We can categorise the analytic techniques or tools into 3 broad levels:

1. **Macroeconomic:** what is happening in the economy e.g. recession, boom, interest rates, exchange rates employment levels)

2. **Industry:** industry characteristics e.g. intensity of competition, industry attractiveness, product life cycle, technological change, risk factors
3. **Firm:** Company safety and profitability e.g. SWOT analysis, competitive positioning, gearing, profit margins, capital asset intensity, asset turnover, management ability and depth.

We can add a fourth dimension by also considering cash flows (as a viability measure) in addition to profitability (which is a performance measure).

4. **Cash Flow:** Cash cycle e.g. working capital needs, capital expenditure plans, funding, forecasts

Interestingly, the firm level analysis usually dominates over the macroeconomic and industry analysis. Bad companies can still fail even in a booming economy and attractive industry (see ABC Learning Centres for failure in a booming industry).

## 9.2 Analytic Tools

In short, there are many analytic tools available. None is sufficient by itself. None delivers an “answer” without applying thought, knowledge and experience.

Some of the tools available include:

1. Economic forecasting
2. Trend analysis
3. Industry Analysis e.g. “Porter Analysis”, microeconomics, product life cycle, legal and environmental issues, technology
4. SWOT analysis (Strengths, Weaknesses, Opportunities & Threats)
5. Competitive mapping
6. Value chain analysis
7. Market position
8. Appropriateness and fit of strategy
9. Market growth and development forecasts
10. Ratio analysis
11. Pro forma (forecast) financial statements
12. Capital expenditure plans
13. Key staff
14. Sustainable growth rate
15. Break even analysis
16. Historical cash flows
17. Forecast cash flows (modelling)
18. Due diligence, including risk assessments such as legal and environmental
19. Security available: valuation and checking title, encumbrances, documentation, risks, liquidity

20. Funding issues including share prices and ability to make issues or otherwise refinance
21. Management – quality, breadth of skills, depth, succession

There is always more that can be done. Probably the most common form of analysis and the one that is usually conducted first is ratio analysis. You will find the next Chapter is devoted to ratio analysis.

Remember though, that ratio analysis is often at the end of the story. As the study by John Argenti showed, most companies go through several stages before the distress is obvious in the financial accounts and financial ratios. The problems usually start several years earlier and nearly always can be traced to poor management decisions that weaken the company in a competitive environment. Unless management recognizes and rectifies the problems, the conditions worsen and deteriorate.

So if we want early signs of disaster or good performance, we need to employ our industry and firm analysis.

### **9.3 Cost / Benefit**

From the above section, it can be seen there are numerous analytic techniques available. Which one(s) to use?

The experienced analyst will choose the techniques that are most appropriate for each particular case. This will be decided by what is relevant, what seem to be the key issues, what data is available and its quality, the cost of doing the analysis, the value and risk of the investment.

Extensive, individual fundamental analysis is appropriate for large exposures and for those where the company does not fit some standardised profile.

If we are looking at our own business, then we should certainly do extensive analysis. Our livelihood, time and personal wealth are tied to the success of the business. We should also do considerable analysis on our competitors and key customers!

If we are looking at a company in trouble, we are going to use techniques that focus on short term performance and cash flow. The need is to survive first and then worry about longer term performance.

Pilots have a simple liturgy whenever there is a crisis: “aviate; navigate; communicate”. First, make sure you can stay in the air (aviate), then try to point in the right direction (navigate) before starting to get back to business and thinking slightly longer term (communicate).

We do much the same for businesses. First make sure the business can stay aloft (is there enough cash to continue operating short term), then try to turn the business around (navigate) before we can take a breath and consider the next phase (communicate).

## **9.4 Take Aways**

There are many tools to help analyse a business (we have seen lists of over 80 tools). The good manager will know many, the good analyst will know more. Each business situation is slightly different so that each analysis should be a little unique.

The professional analyst is a bit like a professional golfer. The occasional hacker may have about 5 clubs in the golf bag and hopes they will do. The professional golfer will carry 20 or more and will carefully select the right club for each situation. Likewise, the professional analyst carries many tools, and selects the appropriate ones for the situation.

The situation will depend on what is the issue and what is the time frame and what information is available.

## 10. Ratio Analysis

While we may gain experience at "*reading*" accounting statements (balance sheet, income statement, etc), this is not the same as "*analysing*" the accounts in order to understand the organisation.

For example, we may know that the profits made by a business unit are \$5 million. At least we know the business has made a profit. But just how good is this result i.e. how *profitable* is the business unit?

The answer is: **It depends!**

It depends on how much needs to be invested in the business in order to make this profit. It depends on what sales turnover was required to achieve this profit. As well, it depends on several other factors. If it was BHP that made \$5 million profit, we would be very disappointed. If it was Joe's milk bar that made \$5 million profit, Joe would be ecstatic.

Furthermore, it is useful to compare one business to another business in order to assess the performance of each business. This is sometimes known as **benchmarking**. But how can we make a fair comparison?

Size differences are a major difficulty in comparisons. One business may have 5 times or more the sales or assets than the comparative businesses.

A partial solution to this problem is to use **ratios**.

This largely overcomes the problem of not having the companies at the same size. We simply compare the profits in *relation* to the assets employed or sales achieved. That is, we divide the profit by the assets or sales figures. When we talk of profit in relation to assets or sales, we now use the term **profitability**.

Understanding and performing ratio analysis can several days of training in itself and it still needs considerable practice and experience. Even practitioners like equity and credit analysts are typically poor at it. "Crunching numbers" is not the same as analysis. Once we have crunched or calculated the number, we need to interpret what it means! This is where experience and benchmarking help.

In this Chapter, after each ratio, you will find commentary about interpreting the meaning of the ratio result. This is the key value add of ratio analysis.

Also, one ratio by itself is rarely sufficient for understanding the business. The more ratios you calculate and analyse about a business, the more complete the picture you build about that business.

## 10.1 Summary Points

- We use ratios to remove the problem of different size companies.
- We use ratios to move from a raw profit figure to a profitability measure e.g. return on assets or return on equity or return on sales.
- Crunching the number is not ratio analysis. We need to understand whether the resulting number is “good” or “bad”.
- One ratio by itself does not normally tell us a great deal – we need to build up an overall assessment from several ratios.
- Ratios gain much more power about whether they are “good” or “bad” figures if we have benchmarks against similar companies or industry averages.
- If we cannot obtain benchmarks, we can at least do **trend analysis**: seeing if the ratios are improving or deteriorating.
- Although there are hundreds of ratios, there are only 5 or 6 that are core and applicable to all companies. We would then add 2 or 3 more ratios depending on the specialised nature of the business or industry.
- There are no standardised definitions for ratios except for earnings per share [EPS] which has an international accounting standard. Therefore, do not trust ratios given to you by a company unless you know and understand the definition used. You are wise to do your own calculations and use consistent definitions when benchmarking across companies or over time when doing trend analysis.

## 10.2 Typical Ratios

Most companies have some basic ratios that compare them to every other company. These are only a handful.

Typically they are:

gearing (liabilities to equity)

debt ratio (debt to equity)

sales margin (profit to sales)

return on investment (profit to assets)

return on equity (profit to equity)

If we are analysing a complete company, we would preferably use profit after tax. When looking at a business unit, we normally use EBIT or EBITDA. This is because divisions or operating units in a company do not have the right to borrow money (only the company does that) and therefore we cannot calculate their interest bill (which also affects tax). We would also use EBIT rather than profit after tax when comparing companies of very different gearing levels since the high geared company will have a high interest expense that will reduce the profit result.

If we find working capital is important, we may include working capital ratios like days receivable, days payable and days inventory or inventory turnover.

Then, most businesses have specific ratios tailored to their type of business. Examples include turnover or sales per employee, profit per employee, turnover per square metre of retail space, gross margin, staff turnover, calls per hour, call conversion rates, room or seat yields and so on.

Determining appropriate ratios for a specific industry requires some analysis and thought and experience.

Key measures (say the top 3 or 4) are often called key performance indicators (KPI's). They should pick up most of what is important in the business unit.

Some of the ratios used in business are shown below.

### 10.3 Common Ratios

#### LIQUIDITY

$$1. \quad \text{Current Ratio} \quad = \quad \frac{\text{Current Assets}}{\text{Current Liabilities}} \quad =$$

**Comment:**

Current assets are those assets that are supposed to be turned over within the next 12 months. Inventory should be sold, accounts receivable should be collected. We divide the current assets by the current liabilities (those liabilities that must be paid in the next 12 months).

Historically, we used to like the current assets to exceed the liabilities by about a factor of 2 or more.

Modern business though, is against having excessive assets, even current assets. Besides, this ratio is only a very rough approximation of liquidity. It is very



historical (based on the last balance sheet) and only measures a point of time (the balance date).

We really only use the current ratio because we cannot obtain a more pertinent measure: the cash flow forecast. The cash flow forecast is an internal management document.

## **WORKING CAPITAL**

These ratios show us how efficient we are in managing our working capital (current assets and current liabilities).

Note that these ratios combine a balance sheet figure with an income statement figure. This is very useful and recombines these business statements that accountants artificially rent asunder. However, you need to take care. The balance sheet only shows the position on the last day of the financial year. The income statement shows sales and costs for the full year before the balance sheet date. In most cases, analysts are lazy and just the last balance sheet figure.

However, if the company has significantly grown or shrunk its assets over the year, it is more precise to use the average asset value. Just take the balance sheet figure from the previous year and add it to the balance sheet figure for the end of this year and divide by 2 to get the average figure.

$$2. \quad \text{Days Receivable} \quad \text{Accounts Receivable} \\ = \frac{\quad}{\text{Credit Sales / Day}} =$$

### **Comment:**

Your answer will be in the number of days it takes to collect your money. Remember, it is an average. So if the answer comes out to be 50 days, that is the average days. Some customers may be paying in 30 days and some paying in 60 days or more.

Credit sales per day is the total credit sales for the year divided by 365.

Whether the number is good or bad will partly depend on the terms of trade and the profit margin being made. If credit terms are 30 days and the average is 70 days, then performance is poor. If profit margins are thin, you cannot afford to be offering extended credit terms.

$$3. \quad \text{Days Payable} \quad \text{Accounts Payable} \\ = \frac{\quad}{\text{Cost of Sales / Day}} =$$

**Comment:**

Cost of Sales is the same as cost of goods sold. This ratio shows how long it takes to pay your suppliers. This ratio works best for retailers and wholesalers. With manufacturers, the cost of sales includes payments to factory workers and we are not able to pay them on 30 or 40 day terms.

$$4. \quad \text{Inventory Turnover} \quad \text{Cost of Sales} \\ = \frac{\quad}{\text{Average Inventory}} =$$

This ratio measures how many times a year the stock turns over (is sold).

$$\text{or Days Inventory} \quad \text{Inventory} \\ = \frac{\quad}{\text{Cost of Sales / Day}} =$$

**Comment:**

This ratio shows how many days we hold the stock until it is sold.

What is a “good” number depends on several factors but generally the shorter the better. A stock or inventory turnover of 50 days is not good for fresh milk.

The major correlation is actually to gross profit margin or net sales margin. If we only make a low gross profit margin, then we need to turn the stock over quickly. A supermarket typically makes about 22% gross profit margin which drops to about 3% net profit margin. This is acceptable as long as we turn the stock over quickly (about 18 times a year or 20 days inventory for a supermarket). So we make our 22% gross margin or 3% net margin 18 times a year.

On the other hand, a specialised equipment manufacturer may only turn over the stock twice a year. Such a manufacturer would need to make a large margin on the goods (say 70% gross margin or 20% net margin) to compensate for the lower turnover.

So we see that either ratio – inventory turnover or gross profit margin – are insufficient by themselves to understand a company. We need to see the combination of the ratios to understand the business model and whether it is appropriate.

Some wholesalers and retailers combine the gross margin and stock turnover into one ratio they call “turn and earn”. So a stock turnover of 5 times a year with a gross margin of 30% would be stated as a turn and earn of 150. This gives the same result as a stock turn of 3 times a year but compensated with a higher gross margin of 50%. Alternatively, it is equivalent to say a 6 times stock turn with a 25% gross margin.

## **DEBT AND CAPITAL STRUCTURE**

These ratios show how the company is funded, also known as balance sheet structure. Have the funds come mostly from equity (safer for the company) or from liabilities (which must be paid on time). We can even split the liabilities into “free money” (payments due to suppliers, staff, etc) and debt or “interest bearing liabilities”.

There are many definitions of gearing or leverage (the terms mean the same).

Companies do all sort of back flips to try to get to a “good” number. The lower the number, the “safer” the company. Low liabilities and high equity is usually described as a “**strong balance sheet**”.

Low equity and high liabilities, represents a highly geared or highly leveraged balance sheet.

So highly geared companies are financially riskier than low geared companies.

The offset is that by gearing up (using little equity and plenty of liabilities to fund the assets) we can take a company that is earning low returns on its assets and yield high returns on the equity.

$$\begin{array}{rcc} \mathbf{5. \quad Leverage or Gearing} & & \mathbf{Total Liabilities} \\ & = & \underline{\hspace{2cm}} & = \\ & & \mathbf{Shareholders' Funds} \end{array}$$

### **Comment:**

On this definition, a ratio of 1.0 or 100% means that half of the funding of the business has come from equity and half has come from liabilities. This is the typical

ratio for large corporations. Private companies are usually more highly geared because they have trouble accessing more equity.

The appropriate gearing ratio is complex to determine. How much gearing a company should have needs to be complemented by the stability of future of cash flows. If we are fairly sure of the future cash flows, we can afford to gear the company up a bit. But if future cash flows are volatile, we cannot afford the commitments of large liabilities – we should use mostly equity to fund the business.

See Chapter 11 for a more expansive analysis of the appropriate level of gearing.

$$\begin{array}{rcc}
 \mathbf{6. Debt Ratio} & & \mathbf{Borrowed Funds} \\
 & = & \underline{\hspace{2cm}} \\
 & & \mathbf{Shareholders' Funds}
 \end{array}$$

**Comment:**

This ratio is a refinement of the above gearing ratio. You will need to add the current debt and non current debt together to obtain the total debt figure. Debt is the toughest or most unforgiving of liabilities – it is also the most expensive. For large corporations, a general rule of thumb is that debt should be about half that of equity. So a ratio of 50% would be normal. However, how much debt a company can handle, again relates to the certainty or volatility of future cash flows.

Most of the property and other companies in trouble at the time of the “global financial crisis” were highly geared. We should expect that every several years or so, there will be a downturn in the property market. We should not gear up too highly. But that common sense is usually forgotten in the boom years.

$$\begin{array}{rcc}
 \mathbf{7. Interest Cover} & & \mathbf{EBIT} \\
 & = & \underline{\hspace{2cm}} \\
 & & \mathbf{Interest Expense}
 \end{array}$$

**Comment:**

This is a very common ratio for looking at the ability to service debt (pay interest). We use EBIT rather than profit after tax. This is because, if EBIT is \$100 and our interest bill is \$100, then our profit before tax is zero, tax is zero and profit after tax is zero. But we have paid our interest bill once. EBIT divided by interest would be 100 / 100 = 1. The ratio shows we have covered our interest once.

To give some leeway, we normally like to see the ratio at about 2 or 3 times the interest expense.

Please note: that this ratio is only a very rough proxy of our ability to meet interest payments. We actually pay our interest bill (and all other bills) with **cash**, not profits or EBIT. EBIT ignores the need for cash to fund working capital and stay in business capital expenditure.

The best measure for determining interest cover is the cash flow forecast. However, it is complex and can take hours to calculate. The interest cover ratio above only takes a few seconds. It is wrong, but quick and simple.

## **PROFITABILITY RATIOS**

Profit is the financial measure of performance. So our profitability ratios tell us about our performance in regard to sales or our investment in assets or our returns to the shareholders.

Apart from the asset turnover ratio at the end, these ratios are calculated as percentages, generally to one decimal place, they are so important yet fine.

$$\mathbf{8. \text{Gross Margin}} = \frac{\mathbf{\text{Gross Profit}}}{\mathbf{\text{Sales}}} =$$

### **Comment:**

Gross profit is sales minus cost of goods sold. It is most applicable to miners and manufacturers who make goods or retailers who buy in goods to resell. It is not readily applicable to service companies (which now make up most of the economy).

Gross profit is very gross. We still need to deduct all the other costs such as administration, office costs, marketing, R&D, distribution and so on to get to net profit.

Still, gross profit is the net figure of sales and usually the largest cost for manufacturers and retailers. If our business does not make a sufficient gross margin, we will never have enough left over to pay for all the other costs.

The appropriate gross margin is very dependent on the type of industry, which will affect how much other costs need to be paid before we get to net profit.

Drug companies like to make a gross margin of 70% or more. This allows enough gross profit to cover very high marketing, distribution and R&D costs.

Supermarkets typically work on a gross margin of about 23%. They then need to tightly control their wages, rents and so on. (Aldi works on about 18%).

Department stores tend to work on gross margins of 35% which is needed because of their higher costs and slower stock turnover.

Trucking companies and outsourcing companies can be on very low gross margins (below 10%) and so must be ruthless on their other costs.

$$\text{9a. Sales Margin} = \frac{\text{Net Profit before Tax}}{\text{Sales}} =$$

**Comment:**

We do the before tax calculation for two main reasons. First, if we are doing trend analysis, and there has been a change in company tax rates over the period, the after tax profit margin trend will be distorted by the changing tax rate.

Second, the before tax sales or profit margin shows us what is our pricing “safety margin”. If we are making 10% sales margin before tax, then we can lower our prices by 10% before we start making a loss. This is because as we cut our prices and profits, one cost also comes down: tax.

$$\text{9b. Sales Margin} = \frac{\text{Net Profit after Tax}}{\text{Sales}} =$$

**Comment:**

This is the bottom line figure and most important of the sales margin ratios. Do not be surprised if it seems a low number. Most industries today have net sales margins of less than 10% and often less than 5%.

It is a tough competitive world these days with cynical customers.

Internet sellers can work on very low margins as they do not have “bricks and mortar” expenses. Thus internet electronic goods supplier Kogan upsets Gerry Harvey with his extensive store footprint.

$$\begin{array}{l} \mathbf{10. Return on Assets} \qquad \qquad \qquad \mathbf{Net Profit after Tax} \\ \\ = \qquad \qquad \qquad \underline{\hspace{2cm}} \qquad \qquad \qquad = \\ \\ \text{(Also known as ROI)} \qquad \qquad \qquad \mathbf{Total Assets} \end{array}$$

**Comment:**

This is the number one ratio used in business. It shows how much profit we made on how much we had to invest in the company to make that profit.

It is a summary ratio: we use the bottom line of the income statement (profit after tax) and divide it by the bottom line of the asset side of the balance sheet (total assets).

Do not be surprised to find it is a low number, say less than 5%. Even though that return may be less than the interest rate we could obtain from putting the money in the bank, this is not a fair comparison. This is because the profit after tax figure is after we have paid the interest on what we borrowed to help buy those assets.

$$\begin{array}{l} \mathbf{11. Return on Equity} \qquad \qquad \qquad \mathbf{Net Profit after Tax} \\ \\ = \qquad \qquad \qquad \underline{\hspace{2cm}} \qquad \qquad \qquad = \\ \\ \qquad \qquad \qquad \mathbf{Shareholders' Funds} \end{array}$$

**Comment:**

This ratio is also known as return on shareholders’ funds. Shareholders’ Funds or Equity is the total equity shown in the Balance Sheet, not just the issued capital. This ratio shows the return to the shareholders on their investment in the company.

This is the ratio we can benchmark against putting your money in the bank. The shareholders should expect a much better return than putting their money in the bank because they are taking more risk by investing in the company.

The difference between return on assets and return on equity is due to gearing. If you multiple the return on assets by the ratio of assets divided by equity, you will obtain the same answer of return on equity.

## 12. Operating Return

**EBIT**

= \_\_\_\_\_ =

**Funds Employed**

Also known as Return on Funds Employed (ROFE) or Return on Capital Employed (ROCE)

### **Comment:**

“Funds employed” is defined as debt plus equity. These are the funds employed in the business on which we need to yield a return or else go backwards. Banks and other lenders want their interest on the debt and shareholders want a return on their investment in the company.

This ratio should be more than what it costs the company to raise and service the debt and equity. Otherwise, we have not earned enough to add economic value above our cost of funds.

## 13. Asset Turnover

**Sales**

= \_\_\_\_\_ =

**Total Assets**

### **Comment:**

This ratio is gaining more attention as we try to make sure our assets are working to optimal efficiency. It is a measure of what bang you get for your buck: how many dollars of sales can you generate from each dollar invested in assets.

If the answer comes to less than 1 e.g. 0.85, it means that the company is only able to generate 85 cents of sales for every dollar of assets. A number less than one is an indication that the company is capital intensive. This is typical of infrastructure companies, airlines, mining companies and similar. That is acceptable providing we make a high sales margin (in excess of 10%) to compensate for the low asset turnover.

Asset turnover multiplied by sales margin equals return on assets. This relationship is the foundation of Du Pont analysis, which we will cover soon.





This calculation can be turned around to give a value for the company if we can determine the appropriate PE multiple. We would take the earnings or profit and multiply it by the PE number to value the business.

For example, the profit after tax is \$1 million p.a. and we think an appropriate PE multiple for this type of business would be 6 times earnings. Then the company is valued at \$1 million x 6 = \$6 million.

This is the most common method of valuing businesses (although it is not the best method). Much will depend on determining the appropriate PE multiple.

$$\begin{array}{rcc}
 \mathbf{16. Dividend Yield} & & \mathbf{Dividend per Share} \\
 & = & \underline{\hspace{2cm}} \\
 & & \mathbf{Market Price per Share}
 \end{array}$$

**Comment:**

Shareholders are not normally paid all of the profits or earnings made in the year. Much of the profits are retained in the business. What are paid out to the shareholder is the dividends. This ratio measures the return made from the dividends on the investment in the share.

$$\begin{array}{rcc}
 \mathbf{17. Net Tangible Assets} & & \mathbf{Net Tangible Assets} \\
 \mathbf{Per Share} & = & \underline{\hspace{2cm}} \\
 \mathbf{(net asset backing)} & & \mathbf{No. of Ordinary Shares}
 \end{array}$$

Note: Net tangible assets = total assets - liabilities - intangible assets.

**Comment:**

This is a tough accounting measure of the value of the firm. If management has been any good, we would expect that the company is now worth much more than the net tangible assets.

## 10.4 Designing Your Own Ratios

There are many other ratios that may be employed in business. Often, ratios are devised to suit the particular industry being studied. Examples include turnover per employee, profit per employee, turnover per square metre of retail space, gross margin, staff turnover, calls per hour, call conversion rates and so on.

Airlines, hotels and cinemas are actually very similar in their operations. They invest in considerable capital assets (planes, bedrooms and cinemas respectively). They either sell the use of that asset today or it is a wasted opportunity. It is not like shoes or cameras that we can simply hold as stock for another day to sell. Consequently, important ratios in these industries are around yield management: what percentage of seats or beds had a paying customer in them that day.

Service companies like accountants, consultants, lawyers and so on usually have few assets but their largest expense is staff. So staff utilisation ratios become important such as sales per employee or percentage of time charged out to clients.

For retailers, rent and stock are the biggest issues. Therefore sales per square metre of floor space and stock turnover become key ratios.

## 10.5 Trouble or Recession Indicating Ratios

Deterioration in any ratio should be a reason for investigation. Deterioration in a combination of ratios is more alarming as there are probably some fundamental problems.

But some ratios are more likely to be a **red flag** than others.

Declining **sales margins** are always a concern. It means we are making less profit for our work, i.e. for each dollar of sales. There are a number of possible causes and we need to diagnose the correct ailment in order to prescribe the appropriate remedy.

Problems could be:

- Costs out of control – costs are rising faster than prices
- Loss of sales volume – so fixed costs are not being spread over as much volume
- Increasing competition forcing prices down
- Stupidity – discounting unnecessarily to try and gain sales

If the costs are out of control, then is the problem in our manufacturing or inward purchase or is the problem in our other costs such as marketing, distribution and administration? Looking at the trend in gross sales margin will provide the answer.

In a recession, we will normally find that stock turnover declines and customers take longer to pay us, so these working capital ratios will be interesting.

If we are worried about the future sales, we will look at the non financial accounting ratios such as forward order book, time to convert leads to sales and so on.

As we hone in on a problem. We will dig deeper with more precise ratios. We may look at manufacturing turnaround time, sales per employee and so on.

## Case Study

We looked at CarLovers with the sustainable growth rate tool. We can also see the problems via the ratio analysis.

Remember that CarLovers had losses of \$3.5 million in 2001 and \$6 million in 2002 before being placed into voluntary administration in July 2003.

Let us look at CarLovers several years earlier to see the signs of impending doom. We will look at the period 1994 to 1996.

We will only look at half a dozen ratios. The working capital ratios should not be relevant as there is little stock (some detergent) and there should be little accounts receivable since it is a cash business.

We always look at a sales margin ratio, a gearing ratio and return on assets and return on equity. In this case, we will also look at the current ratio as an indicator of liquidity (albeit not very accurate). We will also look at the dividend payout ratio since the plan was for CarLovers to grow rapidly. Therefore we would expect a policy of zero or low dividends (no more than 20% of profit) as we plough the profits back into the business to help fund the growth.

On the raw accounting figures, the business seems to be going well. Sales and assets are growing strongly and profits are rising, although not as strongly. Short form statements are shown below.

### Income Statement

	<u>1996</u>	<u>1995</u>	<u>1994</u>
	\$'000	\$'000	\$'000
Operating Revenue	15,883	10,540	5,477
Operating Profit before tax	1,807	1,673	1,357
Income Tax	674	577	433
Profit after tax	<u>1,133</u>	<u>1,096</u>	<u>924</u>

## Balance Sheet

	<u>1996</u>	<u>1995</u>	<u>1994</u>
	\$'000	\$'000	\$'000
Assets	29,371	17,841	9,260
Liabilities	17,244	6,188	1,239
Equity	12,127	11,653	8,021

You will note that accountants work backwards with the most recent year first. When we do the ratios, we will work from left to right to show the trend flow.

The ratios help us get behind the raw numbers and see what is happening. Below are the ratios for CarLovers for the years 1994 to 1996.

<u>Ratio</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>
Current Ratio	2.3	1.2	0.6

Further analysis shows that the current ratio (current assets / current liabilities) was not falling for any good reason such as more efficient use of working capital. It was falling because current liabilities were rising rapidly, most notably short term debt and hire purchase commitments. These are very dangerous liabilities: they must be paid in the next 12 months or less.

### Return on Sales (Sales Margin)

before tax	24.8%	15.9%	11.4%
after tax	16.9%	10.4%	7.1%

### Return on Assets (also known as ROI)

ending assets	10.0%	6.1%	3.9%
---------------	-------	------	------

### Return on Equity (also known as ROSF)

ending equity	11.5%	9.4%	9.3%
---------------	-------	------	------

Gearing (L/E)	0.15	0.53	1.42
---------------	------	------	------

Dividend Payout	55%	62%	71%
-----------------	-----	-----	-----

## Trend Analysis

Every one of the above ratios is deteriorating. Usually you will get one or two ratios to buck the trend but here it is consistently poor. The sales margin in 1996, by itself is not too bad but it is the trend that concerns us. The margin has more than halved. So the business needs to double the sales just to make the same absolute dollar profit.

Consequently, return on assets has more than halved. Return on equity has only dropped a little but that is because it is being covered up by the rising gearing. As the company expands, it is not funding the expansion with more equity but rather with more liabilities, especially debt. The gearing starts off too low with liabilities just 15% of the equity. But two years later, the liabilities are 142% of the equity which is too high for this business.

The dividends might be keeping the shareholders happy at the moment but the payout is far too high (and getting higher) for a company that was trying to grow at 50% p.a. or faster.

The company is on a path to distress and needs to change its direction.

What happened? Well the people who brought these results so far were still in charge.

In 1997 the current ratio and gearing did improve as the company paid back some of its short term debt. This was not the decision of the management but rather of the bank which had now done its analysis and called in the short term loans. CarLovers should have been in severe distress then except it found an ignorant benefactor, Berjaya Group of Malaysia, to pump in more equity. Berjaya kept putting in more equity until eventually Berjaya owned 80% of CarLovers and had wasted most of its investment.

The ratios for 1997 were:

Current Ratio	0.8
Return on Sales (Sales Margin)	
before tax	4.9%
after tax	2.4%
Return on Assets (also known as ROI)	
ending assets	1.2%
Return on Equity (also known as ROSF)	
ending equity	2.0%
Gearing (L/E)	0.64
Dividend Payout	99%

How do you continue a trend from such marginal profitability? You now start to slide into escalating losses until the administrator is called in.

Why didn't the managers and owners of CarLovers see the problems and take corrective action? That is another story for a later chapter. It is a remarkably common story.

## 10.6 Take Aways

Ratios are useful ways to “get behind” the raw accounting statement numbers. They help remove distortions due to size.

There are hundreds of ratios but we can obtain most of the picture with just a handful of standardised ratios: sales margin; return on assets; return on equity and gearing.

If we have time, adding more ratios will improve our understanding of the business. If working capital management is a major issue, we should also calculate the working capital ratios.

We typically add 2 or 3 other ratios that are specific to the conditions of the particular industry we are investigating.

**Analysis** of the number crunching requires appreciation of what is a good or bad number for that industry. This takes some experience.

Ratio analysis gains considerable power if we can **benchmark** the results against similar businesses. Trade associations sometimes offer this service. Alternatively, we may need to do the ratio crunching for several competitors in order to obtain benchmark data.

If we cannot benchmark, we can at least do **trend analysis**. This allows us to see whether we are improving or deteriorating, although we do not know if we started from a high or low point.

Ratio analysis is not the only analytic tool but it is a major tool. It takes all the data calculated already by the accountants and efficiently turns it into some meaningful analysis and understanding.

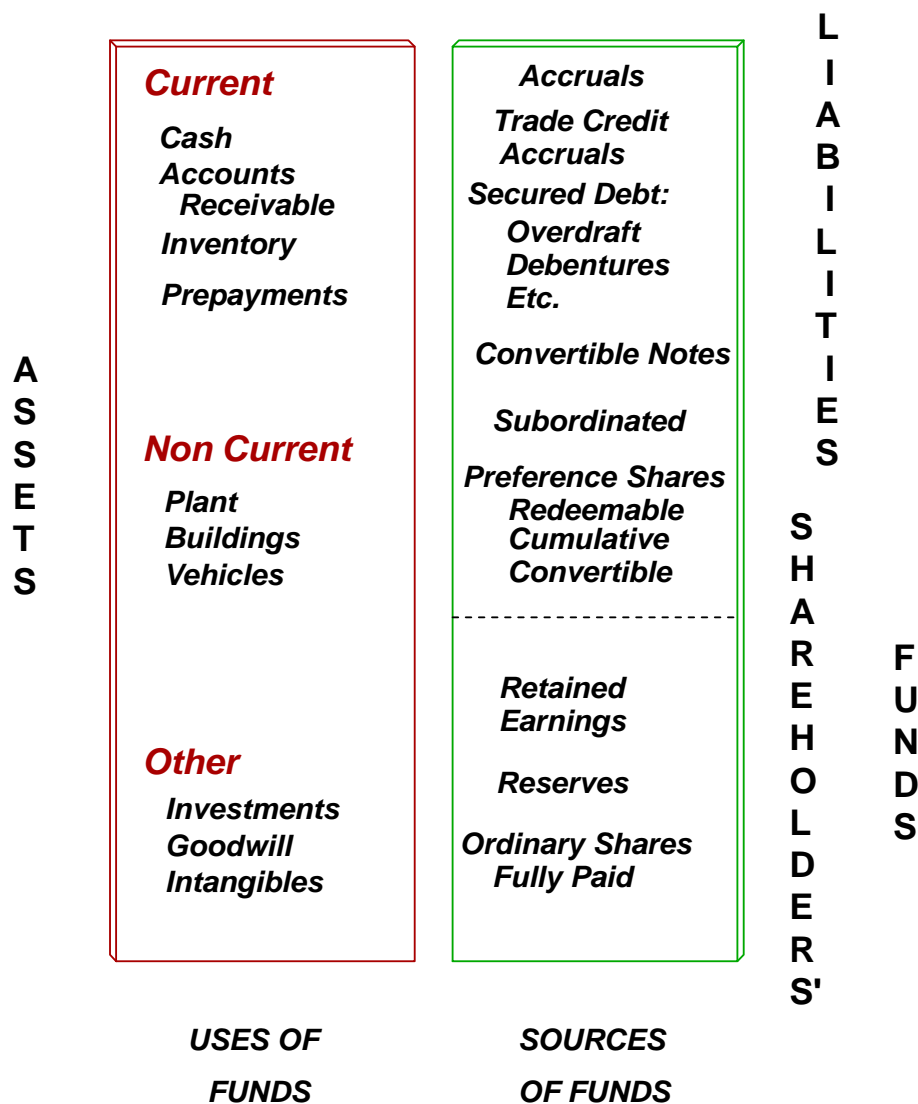
# 11. How Much Debt?

## 11.1 Balance Sheet Efficiency

In this chapter, we seek to answer a fundamental question of business: how much debt should a company have? The question is critical in both good times and bad.

We sometimes talk about “**balance sheet efficiency**”. While this may sometimes mean using the assets productively (i.e. asset utilisation), we are normally referring to the other side of the balance sheet: the funding side (liabilities plus equity). As per our balance sheet diagram repeated below:

### CAPITAL STRUCTURE





## 11.2 Why Gear A Company?

The answer is the same as why gear a personal property investment: you can multiply fairly average returns on the assets to obtain high returns on the equity component of the investment.

As an aside, if you have a negatively geared property investment, it follows the same principle. You have geared your investment by taking on plenty of debt with only a small amount of your equity in the property. The “negative” part of negative gearing is that there is not enough rental income to pay for the interest on all the debt plus other outgoings. As a result, the property makes a loss. It is a strange quirk of Australian taxation laws that the loss made is allowed to be deducted against your other personal income. You get a tax benefit from making the rental income loss. The higher your marginal tax rate, the bigger the benefit of negative gearing. Now you just have to hope for the capital gain in the property price.

Let us return to looking at gearing a company investment. Say we have a company that has \$1,000 of assets and that these assets have been funded half from liabilities and half from equity. Furthermore, we make \$100 profit on these assets.

We have therefore made a 10% return on the assets (\$100 profit / \$1,000 of assets). But the return on our equity that we put into the business is double that at 20% (\$100 of profit / \$500 of equity). We have geared up the return on our equity by matching the equity with some liabilities.

(Yes, there should be some adjustment to the profit due to the interest on the debt component of the liabilities but we can ignore that for the moment in our argument).

It is just like the gearing on a car or bicycle. We turn the wheel attached to the pedals once but it turns the small cog wheel at the back wheel several times. One turn of the pedals gives us several turns of the back wheel. In our company, we turn the gears on the assets once but it turns the wheel on the equity cog twice. By the way, gearing and leverage mean the same thing in finance: how much you add to the equity via liabilities to own more assets. It is just that one term is British and the other is American.

We have several ratios that are called “gearing” ratios. So, whenever someone describes their company’s gearing at 80% or 0.8 or whatever, you should be very wary. Ask for the definition of the ratio being used before making any judgement.

A reasonably honest definition is liabilities / equity. A tighter definition which looks at only the debt proportion of the liabilities is debt / equity (and is sometimes distinguished as the “debt to equity” or just “debt” ratio).

Mathematically, the real definition is assets / equity.

If you really like excitement and high returns, then gear up even higher at say 10:1. For every \$1 of equity, have liabilities of \$9 in order to acquire \$10 of assets. Now if you make 5% return on assets, you will make 50% return on your equity.

You are looking at the type of balance sheet banks and margin loan investors have. This helps explain why banks are actually risky for the equity investors and that is why their share prices are so volatile and they typically trade at lower PE multiples than other industries. Partly because banks are so risky, we have all the regulation and oversight of them. This is not to protect the shareholders. It is done to protect the depositors (liabilities) in order to maintain confidence in the banking system.

The higher equity returns from high gearing sounds fantastic and has been the basis for thousands of investment seminars selling anything from margin shares, options, warrants, investment properties and even tulip bulbs (the great Dutch tulip bulb bubble of the early 1600's, to show that there is little new).

So why don't we all gear up to the hilt. Well, there is just one problem: **risk**.

Gearing up multiplies the risks. What if losses are made? What if the profit or asset prices go down by say 5%? Well the return on equity also goes 10% if geared 2:1 (assets to equity). If geared 10:1, the losses on the equity are 50%.

A bank was typically geared about 12:1. So, if in the sub-prime lending market they were losing 20% of the amount lent on sub-prime mortgages they were losing 240% of their equity, which literally leads to bankruptcy. There are suggestions from America that some banks like Citigroup were leveraged up to 50:1 in some of their products. It does not take much to go wrong then to have disaster. The fallout from the Global Financial crisis of 2007 -2008, that international standards have forced banks to lower their gearing to 10:1.

[An historical aside: Lenders and money exchangers in Italy sat at their bench (banc) in the town square to conduct their business. If these "bankers" defaulted on their commitments, their bench was literally broken or ruptured by the authorities and they were kicked out of business: hence bench broken or bankrupt.]

Back to gearing: gearing up can multiply returns but it can also multiply losses and put the business at risk.

A downturn in the economic cycle leaves highly geared companies struggling. Look at airlines in the Covid19 crisis! This risk has been seen in every recession. But it is not only in recessions that highly geared companies are vulnerable. They are always more fragile and more susceptible to distress at any time. Every business

has some knocks in its life. But highly geared companies are less able to survive the knocks. When times are tough, you still need to pay that interest and make those loan repayments.

In 1997, Arie de Geus<sup>16</sup>, was looking at what characterised survival or longevity in companies. One of the 4 key characteristics of survivors was conservative financing. Just about every study of corporate failure has high gearing on the list – and usually high up on the list.

Therefore, we have tension about how much leverage to take on. Some leverage would help returns and may be still fairly safe but too much leverage or gearing brings too much risk.

### **11.3 Debt versus Equity: The Question of Leverage**

Financial theory or philosophy is not extensive. Much of it is taken from economics, and investment theory (e.g. the Capital Asset Pricing Model).

As well, real world complexities make it extremely difficult to test theories. It is further complicated by the astounding pace of development and growth in financial markets.

Starting with the fundamentals though, any company has a basic choice when raising funds of whether to use debt or equity.

There are many other subsequent decisions such as amount of funds; timing of raising; time duration funds are required; matching finance and business risk; maturity composition of the firm's capital sources.

Within the debt / equity choice, there are dozens of combinations of instruments that are available.

But the basic decision remains: how much of the funding of the assets should be via debt and how much should be via equity.

We see considerable effort and creativity employed by some firms to try and find the particular combination of capital instruments that maximizes the firm's overall market value.

But are these attempts worthwhile?

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<sup>16</sup> Arie de Geus, *The Living Company*, Harvard Business School Press, 1997

Common perceptions say yes. Why else would the firms go to so much trouble?

But what determines a firm's value? Is it the mix of funding sources or is it the assets of the firm (and the income earning ability of those assets)?

## 11.4 Modigliani and Miller

Professors Franco Modigliani and Merton Miller published their paper on *The Cost of Capital, Corporation Finance and the Theory of Investment*, in 1958<sup>17</sup>. The basic argument can be traced back even further to J.B. Williams in 1938. Both Modigliani and Miller went on to win the Nobel Prize for this and other finance contributions. Modigliani and Miller (M&M) in their Proposition 1 argue that the capital structure of a firm is irrelevant in affecting the value of the firm. The firm's value is determined by the market value of its real assets, not by the security instruments it issues to fund those assets. This says that it is the real things we do in the business with the assets that really determines what the firm is worth rather than some fancy financial engineering.

Despite the theory being around for over 50 years, evidence to either support or refute the theory is inconclusive. In part, there is difficulty satisfying the necessary assumptions M&M have in their theory. One assumption is that of an efficient market. United States capital markets generally come closest to the desired level of efficiency but are still not perfect.

“Market efficiency” is defined in how fast it takes new information to be reflected in the share price of a company.

As well, some other assumptions of the theory rarely hold in practice (e.g. no tax deduction on interest rates and no costs of bankruptcy). Consequently, testing requires making some allowance for the tax shield given to debt and other assumptions.

Even so, some studies refute the theory and some support the theory.

If we come back to basics, it is really the earning capacity of the assets and the ability of management to achieve those earnings that is the real value of a business. Playing around with the funding side does not do much that is real and can be distracting. This view is shared by Warren Buffett, the legendary investor.

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<sup>17</sup> Franco Modigliani & Merton Miller, "*The Cost of Capital, Corporation Finance and the Theory of Investment*", *American Economic Review*, 48 (3), pp. 261 - 297

## 11.5 Capital Structure and Real Life

In real life, markets are not perfectly efficient, there are tax deductions for interest costs, bankruptcy does have costs and there is not a single interest rate in the market available to all borrowers.

So does the capital structure matter in real life?

**Yes!**

Surprisingly, the assumption about efficient capital markets is probably the least important. In any case, markets are moving to greater efficiency for all practical purposes (this is mainly due to the domination of the market by the large institutional investors and more ready access to information for everyone).

The tax shield to debt by the deductibility of interest costs is the major factor encouraging greater use of debt. As corporate tax rates fall, this assumption is having less impact since the tax shield benefit also falls. Indeed, according to M&M, debt “costs” the same as equity once we adjust for risk. But remember, M&M assume no distortions by tax.

In real life though, our tax system gives a subsidy to debt: the cost of debt (interest) is tax deductible while the cost of equity is not. This artificially gives a benefit to debt (called the **tax shield**).

So, if borrowing interest rates are 9% and the company tax rate is 30%, you effectively pay an after tax interest rate of 6.3% ( $9\% \times 0.7$ ).

The excesses of using too much debt to take advantage of the tax shield are offset by the **costs of bankruptcy**. Note that a company do not need to go fully “bankrupt” (wound up) to suffer the costs of bankruptcy. Once the company is in trouble, the banks start to raise interest rates, put in more restrictive loan covenants, the company loses the ability to pick up good opportunities, the banks may even insist on asset disposals, unfavourable equity issues and so on.

Some "optimal" capital structure lies between these two effects. We pick up some subsidy from the tax shield of debt while not going so far as to pay the costs of bankruptcy.

Interestingly, an outcome of the global credit crisis was that governments legislated against predatory lending or equity skimming. This occurs where lenders make loans without sufficient regard to the borrower’s capacity to repay. The banks instead seek protection by taking a charge over the equity the borrower has in some asset (often property). While Australian legislation was unveiled in April 2009, it

was for consumer lending. Business borrowers still need to look out for themselves at this stage.

For a company then, how much should it borrow? What should be the debt to equity ratio? This will not be the same for all companies. Companies have varying degrees of business risk and so the risk of bankruptcy also varies. Consequently, we cannot entirely divorce the financing decision from the investment decision.

There is scope for adding value from capital restructuring. This is typically shown on the diagram below.

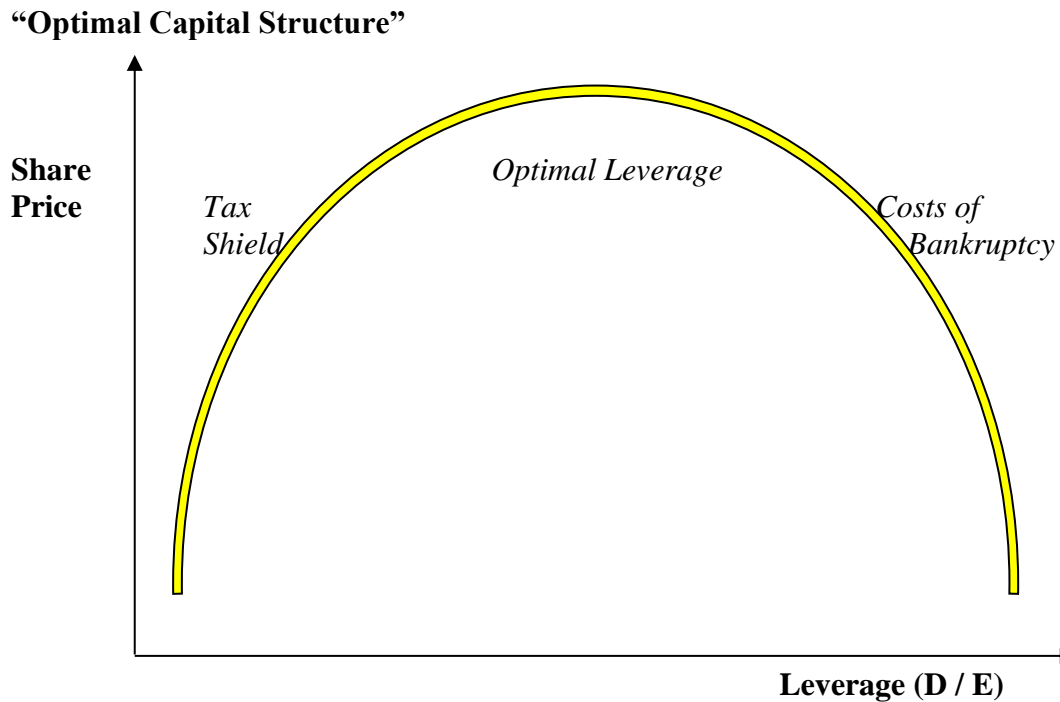
It shows that the share price or company value rises as the company takes on moderate levels of debt. Earnings per share is rising and the tax shield is a benefit. However, too much debt and the costs of bankruptcy start to exceed the benefits of the tax shield. The share price and company value then start to fall.

We have many examples of this being demonstrated – now and in the past.

Thus there is some optimal level of gearing. Unfortunately, the diagram does not say what exactly should be the level. The financial markets have “perceptions” of what is appropriate. In Australia at the moment, for a large industrial company that perception is for a debt to equity ratio in the range of 40% to 60%. In the case of total liabilities to equity, the number is about 1:1 or 100%.

More scientifically, it would have much to do with the risk profile of the company. This is best indicated by the future cash flows of the company. Stable cash flows would allow higher debt levels than more volatile or variable cash flows. That is why we often talk about typical gearing for an industry.

Mining, for example has high risks and unstable cash flows so mining companies are typically low geared. Strangely, airlines have high risk but are typically highly geared (simply because they need so many assets and cannot attract enough equity). Is it surprising then that so many airlines are in distress or even fail?



## 11.6 How Much Debt Should Your Company Have?

This is the \$64 question, the one you have been waiting for. How much debt should your company have (or you in your personal investments for that matter)?

The answer is: It depends.

It depends on how risky is your business. The best way to determine that risk in finance is **how volatile your future cash flows** are expected to be.

In business, we can categorise risk into two main groups:

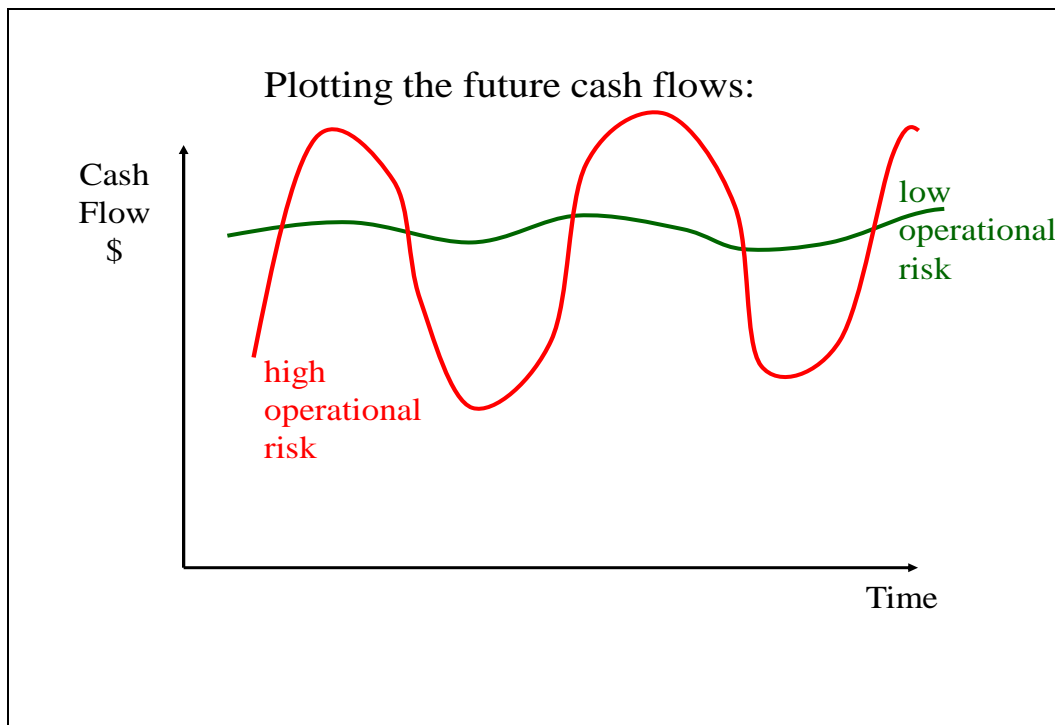
### 1. Operational Risk

This is what most people consider when thinking of risk. It is all the things that could go wrong in our operations such as:

- Competitor activity
- Equipment break down
- Default by a major customer
- Labour strike
- Product obsolescence
- Flood, fire, etc
- Litigation

These are part of business life and we have to face them.

A good way to consider operational risk is how volatile are our expected cash flows as per the diagram below.



## 2. Financial Risk

On the other hand, we can make separate and conscious choices about how much financial risk we should take on.

The most fundamental decision is how much debt. The more debt, the riskier we are because we face fixed commitments to meet interest payments and loan repayments when due. Similarly, fixed liability commitments like long term leases are a burden when sales, profits and cash flow drop.

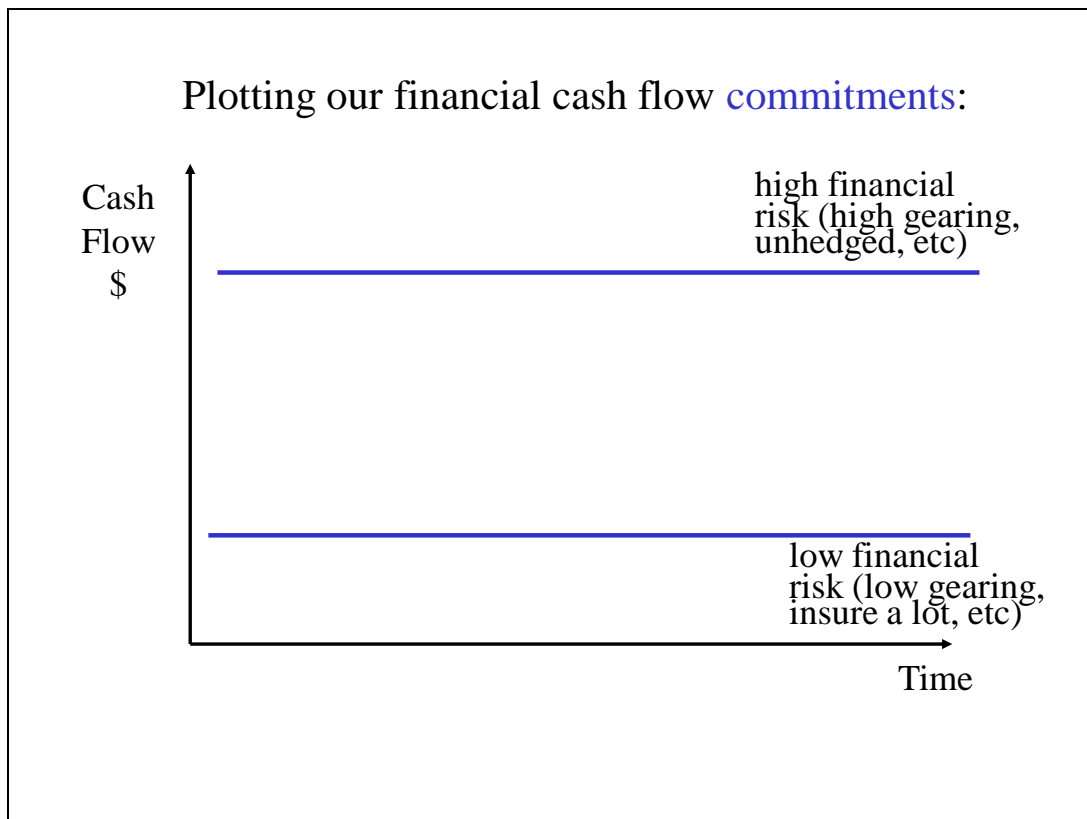
Other financial risk decisions are concerned with how much insurance cover to take and how much hedging we should do (on interest rates, exchange rates and so on).

We can adopt a low risk financial policy very easily. This would mean little or no debt nor other financial commitments, with insurance cover on everything and 100% hedging.

However, such prudence comes at a cost. The lack of debt means we miss out on the tax shield of debt and some gearing benefits and the cost of the insurance policies and hedging will reduce our profits.

We plot the finance risk by showing our cash flow commitments to servicing our finance obligations as shown in the diagram below.





We need a sensible balance. The idea is that we should understand our operational risks and then set a financing decision that **complements** the operational risk.

If operational risk is high, we should set a low risk financial policy to complement or offset the operational risks. Mining companies typically have high operational risks: volatile commodity prices and mines subject to explosions or the seam disappearing on them and so on. Typically then, we find mining companies with low debt to equity ratios and sophisticated insurance and hedging policies.

An exception was Pasminco which we picked as trying to go bust in 1998 and achieved this outcome in 2001. When the banks refloated it as Zinifex in 2003 they set it free with zero debt. The new management then bought Oxiana using debt to form Oz Minerals. When commodity prices crashed and credit tightened in the global recession, Oz Minerals fell into deep distress over its debt commitments.

The airline business is risky: there is always something to go wrong operationally from volcanoes to strikes to Government actions. So it would make sense to have mostly equity and little debt to fund the business. But airlines are not attractive to equity investors and they need huge funding for their expensive assets.

Consequently, most airlines gear to the hilt with debt or lease commitments and then suffer at the first downturn. The most successful airline is generally deemed to be Southwest Airlines in the competitive market of USA. It has made consistent profits since its inaugural year more than 35 years ago. Apart from good

management of operations, it also has a low debt to equity ratio. Share performance is still not great though – it is just a dog industry.

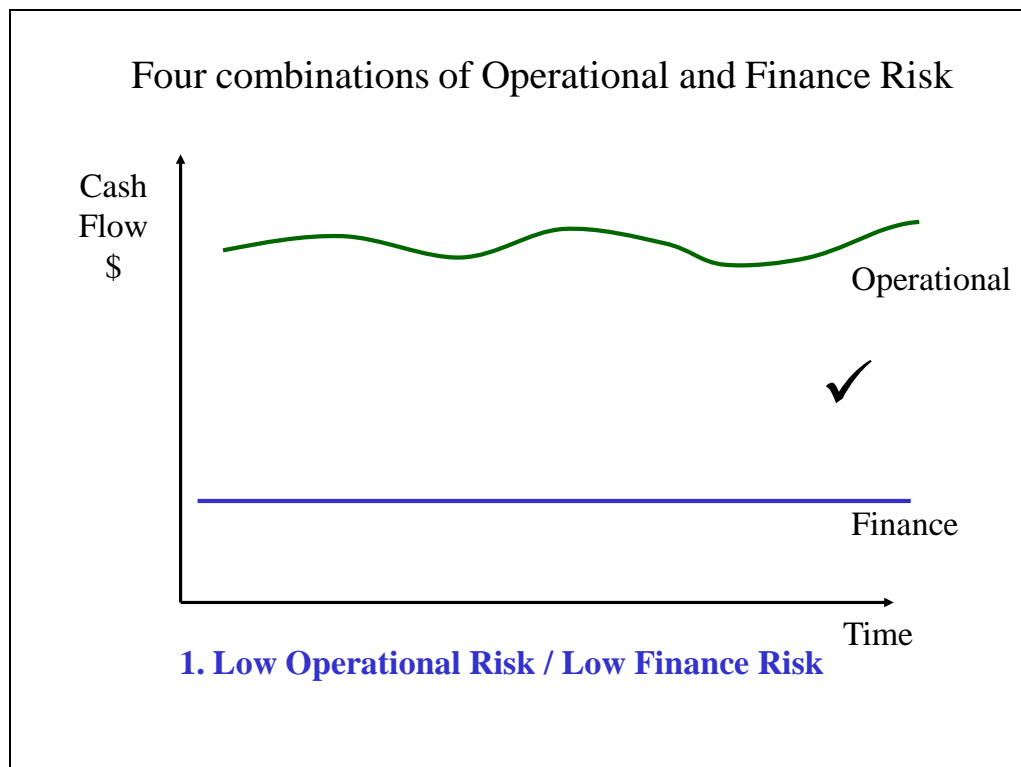
## 11.7 The Four Combinations of Operations and Finance Risk

So, we have four possible combinations of operations risk and finance risk. Three of these combinations work and one does not.

### 1. Low Operations Risk / Low Finance Risk

The first combination is to have low operations risk (shown by stable and predictable cash flows) with low finance risk (low debt and much insurance and hedging).

We could call this a **conservative** finance policy.



It is possibly too conservative, though. Returns to shareholders could be improved by taking on some more gearing and gaining the subsidy of the tax shield to debt without much of an increase in the overall risk of the company. In other words, it could improve its **risk / return trade-off**. This policy is possibly sub-optimal.

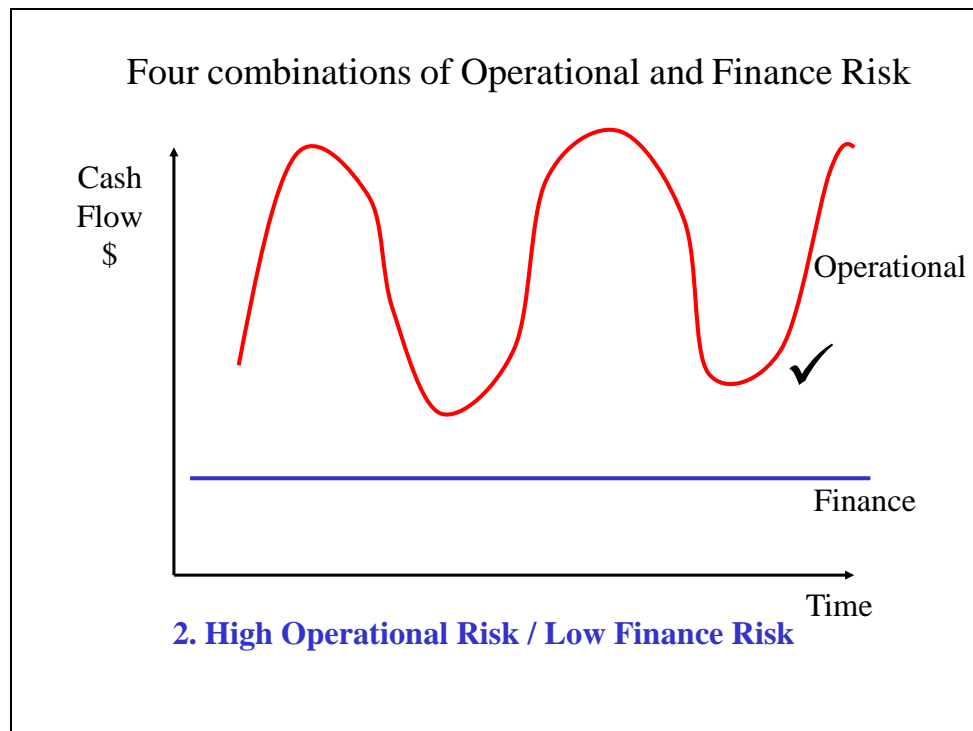
A classic example was Goliath Cement in Tasmania. It had no debt and \$15 million cash in the bank. Australian Cement Holdings convinced Goliath's shareholders to sell the company for \$30 million. The acquirer immediately reaped the \$15 million cash in the bank and then borrowed another \$30 million against the operations. In effect, Goliath Cement was acquired for minus \$15 million. A bargain!

## 2. High Operations Risk / Low Finance Risk

In this combination, high operations risk (volatile cash flow) is mitigated or complemented by setting a low finance risk policy. It is a sensible combination.

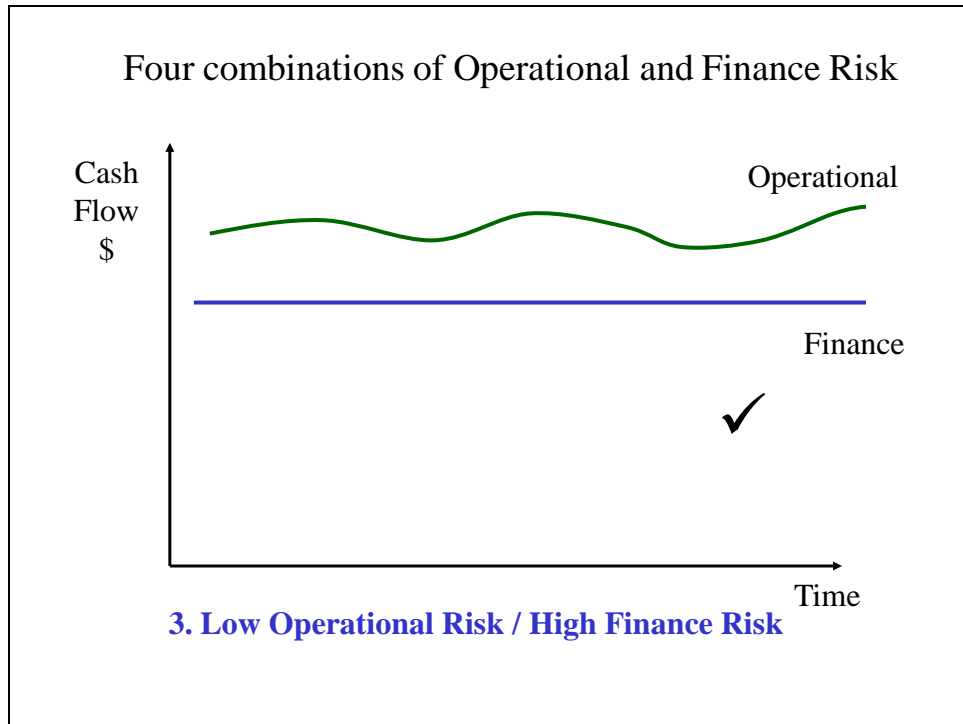
While management will still do what it can to reduce operational risk it cannot remove all the risks in a viable manner. So a conservative financial policy reduces the fixed commitments to service debt while insurance and hedging are used extensively to further offset the operations risk.

There will be reduced earnings because of the extra costs associated with the conservative financial policy but this is done to improve the chances for long term survival.



## 3. Low Operations Risk / High Finance Risk

Here the policy is to use the stable (boring and predictable) cash flows to service a higher level of debt and perhaps less insurance and hedging. While riskier than the first conservative combination, the better returns may justify the increase in risk.

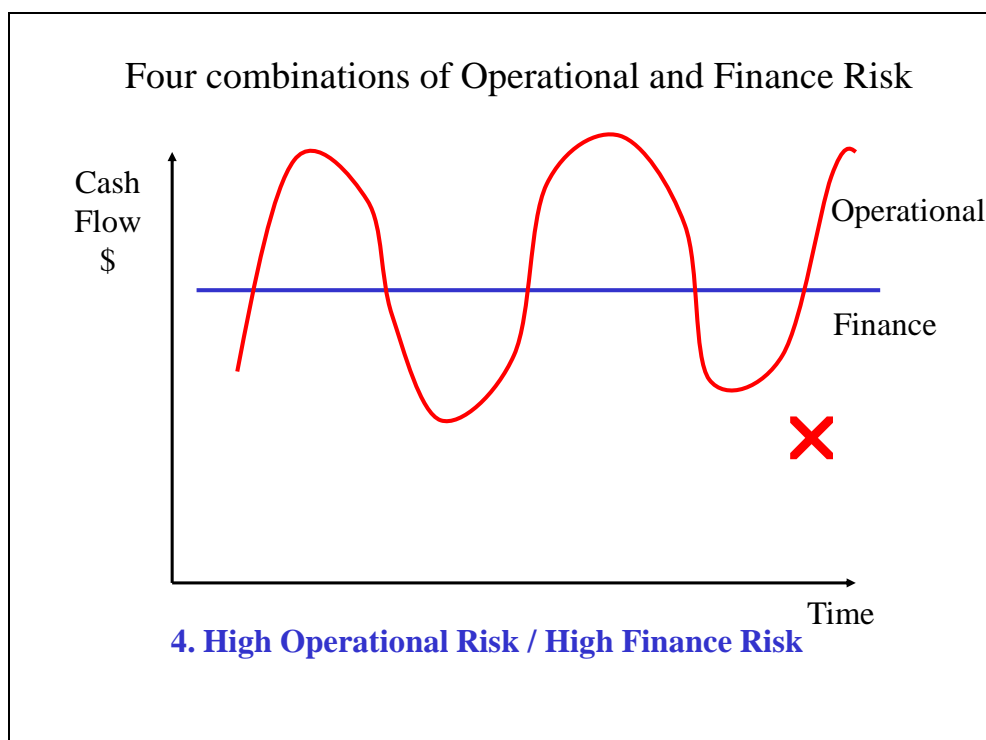


#### **4. High Operations Risk / High Finance Risk**

Not surprisingly, this is the one combination that does not make sense. You may get away with it for some years while the operating cash flows are above the financial commitments. You and others may then think you are a brilliant manager or investor.

But it is only a matter of time before reality hits, tough times return and operating cash flows fall below the financial commitments.

Then you are in distress and probably in breach of loan covenants. The bank will get tough. Interest rate margins will rise. You will need to put in more funds if you have them or find some equity partners or start to liquidate assets. You will need to slow down any investments or forgo new opportunities entirely. You are suffering the costs of bankruptcy!



## 11.8 Do Not Set and Forget

You also need to remember to adjust your finance policy if the operations risk changes. This is not a simple task and takes time to alter some of the financial instruments. Fortunately, operational risk normally changes over a reasonable period of time rather than suddenly – Covid19 being a significant exception for some industries. This does not mean a crisis cannot quickly loom. But if a crisis suddenly arises, it is likely that the operational risk was always high. “Risk” does not guarantee there will be troubles – just that troubles are more likely to occur and to be more severe.

Rupert Murdoch has admitted he took his eye off the ball with NewsCorp in the 1990’s. Originally the business was based on reasonably stable cash flows from newspaper operations in Australia, North America and Britain (at a time when newspapers still had some profits and cash flows).

Then Murdoch changed the nature of the business by going into new technology and markets with BSkyB satellite transmission in Britain, buying Fox Movie studios and launching a new TV network in the USA against established majors. He had changed the nature of the operations risk while the company retained a high finance risk policy of high gearing.

This will explain the volatility of the NewsCorp share price over the past 30 years. Even in the past 10 years the price has fluctuated from under \$10 to \$50 hitting under \$10 in early 2009. More recently, Rupert’s forays into China have been

questioned, the investment in MySpace was under pressure from the rise of Facebook and then there was the pricey acquisition of yesteryear's product of the Wall Street Journal.

Meanwhile, back to the 1990's. In February 1993, the share price peaked at \$31.20 before a 1 for 4 split which would give a theoretical \$7.80 share price. A few months later, in mid 1993, investors became nervous about operating cash flows hitting a slump with few subscribers for BSKyB, no hit movies for Fox movie studios and low rating programs for Fox TV and little advertising revenue. At the same time, some \$6 billion of debt was due to be refinanced. The banks were not happy and the share price was plummeting.

Some good management and even better fortune saw some improvement in the cash flows. Margaret Thatcher changed the broadcasting laws and BSKyB picked up exclusive rights to some of the football matches which finally generated some subscribers. Fox Movies had a hit at last: *Home Alone 2*. Fox TV finally had two hit TV shows that brought some audience and advertising revenue: *Married with Children* and *The Simpsons*. This will help explain the incredible license the writers of *The Simpsons* have to make jokes at the expense of Fox and Murdoch.

Even so, the banks extracted concessions out of Newscorp.

To allow for the loans to be rolled over the banks hit Newscorp with:

- A large loan facilitation fee (rumoured at over \$40 million)

- Increases to interest rates (about 180 points)

- Forced asset sales

- Forced equity issues (\$500 million in convertible preference shares directly in Newscorp and more in subsidiaries)

These are the costs of bankruptcy even though Newscorp did not go bust.

## **11.9 Take Aways**

Common sense and theory both tell us that we should be sensible about how much debt to take on.

While excessive debt will boost returns on equity through high gearing, eventually a problem will come along. The highly geared company is fragile and knocks can prove fatal or at least very distressing. A company with less debt has more ability to stay afloat and ride out the storms.

The key factor in how much debt to take on is the stability or volatility of expected **future cash flows**. Volatile cash flows demand a complementary conservative financial policy of low debt. Remember the risk / return trade-off.

If your business has above average operational risks, then you should complement it with a low financial risk strategy: little debt and consider insurances, etc.

If you are confident of stable future cash flows, then you can consider using more debt to improve the returns on equity without putting the business at too great a risk of failure.

## 12. Immediate Improvements and Turnarounds

In this Chapter, we will look at some general frameworks for turnarounds and improvements.

In following Chapters, we will look at medium term and then longer term actions.

We assume you have already done a check on your immediate survival from the tools in Chapter 4. Now we can look in a little more detail at techniques to turnaround and improve.



Can you avoid the plunge over the cliff and find a new lease of life?

### 12.1 Time Frames

Each business and each situation are unique. So a first assessment or diagnostic is required.

Then, depending on the situation and the urgency, the analysis and improvement will most likely proceed through a number of stages.

Each stage is not discrete or considered in isolation. There is considerable overlap. As well, the analyst or manager needs to always have some view to the longer term



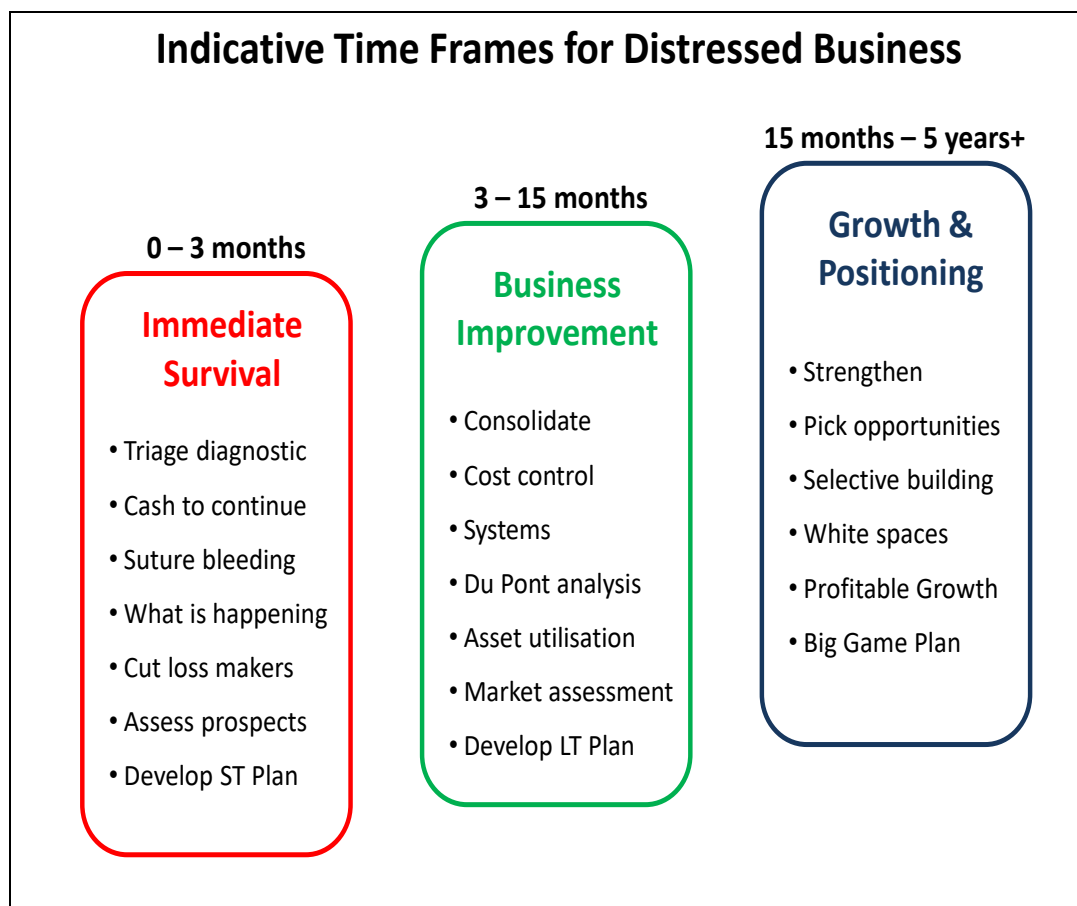
future. Otherwise, short term actions may be taken that stymie longer term benefits. This is particularly so in the business improvement stage. Care needs to be taken not to drop out of markets or remove capabilities that could be required for future profitable growth.

The diagram below shows indicative stages and time frames for a business in some distress, needing a turn around.

Within each stage, there is also a time frame or succession of actions. A distressed business in survival mode needs to very quickly determine the key problems and what must be done straight away. Stopping the bleeding of cash flow and ensuring sufficient cash for immediate survival are prime actions.

Later, more detailed diagnosis can be carried out followed by the formation of intermediate plans. Then you would move to cutting out loss makers that should not be turned around and other short term actions for turn around. Some refinancing may also be required.

Businesses that are not in distress but are looking for improvements would not require the first immediate stage and would move directly to the second stage.



## 12.2 Immediate Time Frames

You might be “lucky” and find there is just one simple problem with the business that can be quickly remedied. These situations do occasionally arise.

Unfortunately, experience tells us that in most cases, a poorly performing company has usually managed to drift into problems over several years and there will be several, often interconnected issues. Management may be the common cause and may also need to be improved or removed.

A major problem usually found in undertaking improvements or turnarounds is a poor management information system (MIS). Indeed, a poor MIS can be one of the danger signs for a business. Rarely, a successful business may muddle through with poor MIS, providing their competition is not too sharp.

Often we do not know where the costs are and what the forecast cash flow situation is. It can take up critical time obtaining an approximation of the situation. Practice and experience help give a quick “feel” which can be verified or modified as time progresses.

When banks insist that investigative accountants go into a troubled client, it normally takes a few weeks to report back, although a preliminary assessment can be made sooner.



I regret I must inform you of several departures today: our accountant Mr Smith; our payables clerk Ms Jones; and apparently, \$1 million from the company bank account.

## 12.3 Key Success Factors for Turnarounds

The prime issues (and they are interrelated) are:

- Knowing what is happening
- Knowing what to do
- Being decisive
- Pushing it through
- Having enough time

As you might gather from the list, time is of the essence and we need strong leadership. To be blunt, you intend to change what has been happening, otherwise how can you turn around or improve? Almost certainly there will be resistance from some quarters. The change managers need good health, good stamina, good personal backup and determination.

Does existing management have the skills, temperament and drive to do this? If so, great! If not, can we lift their abilities and provide help? If not, then you may need to change the management.

This is a tough call. It is even tougher when the management that has caused the problems is also the owner(s) of the business. Unless these people are very objective or are forced by the financiers, it is rare to achieve the necessary change.

### Story 1

Several years ago, we were called in to provide a business improvement seminar by the CEO of a large insurance company. General insurance was then an incredibly competitive industry with over 100 general insurers.

We asked the CEO about the main issues for the company. Surprisingly, what needed to be done had already been analysed and was known. It had been known for at least a couple of years.

The problem was that a large section of the workforce just did not support the necessary changes. They wanted to continue on as they always had, even though the business was making operating losses and falling further behind the competition.

These workers (including several senior managers) who were resisting the change were known as “*the cardigan brigade*”. They literally came to work in their cardigans and carried on as they had for the past 20 or 30 years. They hoped to be still doing the same things until their retirement. The CEO wanted yet another workshop to try and convince the cardigan brigade to embrace the changes that were being stalled.

We then told the CEO a story straight from Sun Tzu, the master military strategist. If the general has told the troops what must be done and the troops do not understand, then the general is at fault. If the general then explains it well and checks it is understood and the troops still do not comply, then the troops are at fault. And heads must roll. It is not all “touchy feely”. As your time to doom approaches and the degrees of freedom narrow, you need to act quickly and decisively. If it sounds harsh to lay off 20% of your workforce when necessary, remember that the receiver will lay off 100% soon if you do not act now.

Our advice to the CEO was that he had explained what was required and had given more than enough time. Most of the workers and managers were impatient to adopt the necessary changes. He could not wait for the laggards. Either lop them off or sideline them, but he must move. The CEO responded that he would like to give the cardigan brigade another chance and would try to convince them over the next few months.

The CEO did not realise that the sword of Damocles was hanging over his own head. The major shareholder lost patience before the CEO did and removed the CEO and most of the cardigan brigade in a few weeks.

## **Story 2**

Graeme Hart, the New Zealand entrepreneur and investor has not forgotten his roots as a tow truck driver. He was caught in the mess of Burns Philp in 1997 and with some good luck and good management and help from some nervous banks he managed to turn the business around.

When the banks agreed to the first standstill arrangement (not to foreclose yet) they imposed the following conditions:

- No payments other than in ordinary course of business
- Could not dispose of assets >\$10m
- Proceeds from assets sales to be credited to an Escrow Account
- Pay additional margin of 1.5% pa
- Would not grant additional security (except over Escrow Account)
- No ‘new’ borrowings
- No excesses over agreed limits
- A director required to sign-off on all new derivative transactions
- Capital expenditure restrictions

- Implement recommendations of the investigating accountants (Deloitte)

These are the “costs of bankruptcy” imposed on a distressed company, even though it does not formally go bust. Later, the banks agreed to a turnaround strategy but only after Hart and other investors kicked in another \$300 million of equity – another typical cost of bankruptcy.

So Hart had his investment on the line and was keen to achieve a speedy turnaround. Among other initiatives, Hart was ruthless on the head office overheads. When Burns Philp nearly collapsed, Hart had to take a hands-on role. Fortunately, a new and good CEO had also just joined, Tom Degnan, to replace the incompetent predecessors.

When Hart took over, Burns Philp had over 300 full time equivalent employees in head office administration roles, costing the company \$62 million a year (far more than the annual profit). Much of these people were paper shufflers. The example was cited of one request in 1996 by the plant manager in Sao Paolo to buy a \$2,000 photocopier. It required 22 separate memos and executive director approval.

Soon after Hart and Degnan took over, head office was cut to 43 employees, costing \$16 million and it continued to fall. (It finished at about 5).

Hart and Degnan then went on to tackle Goodman Fielder, one of Australia and New Zealand’s great underperformers and over promisers for many years. Goodman Fielder suffered **paralysis by analysis**. If a property needed to be sold and a buyer was ready with a good price, Goodman Fielder would still be analysing it more than two years later by which time the prospective buyer had given up (true example). There was a bakery in the South Island of New Zealand that was a financial disaster and barely able to operate at half a shift a week. Everyone knew for years it had to be closed down. But Goodman Fielder never made the decision. When Hart took over, it was closed within a day.

## 12.4 Take Aways

Time frames and steps involved cannot be rigidly prescribed – each situation has its own unique characteristics.

First though, we need to determine whether urgent survival action is required or do we have time for a more considered business improvement program.

Any turnaround, and most business improvements, needs good analysis and strong leadership to drive through the changes.

The following chapters will look at tools and actions for the various time frames.

## **13. Short Term Improvements**

### **13.1 Are You Solvent?**

Before looking at turning around a business in some distress, you need to quickly assess whether you are still solvent as determined by a reasonable person – the legal definition.

If you are not solvent, a director can put personal assets at risk, in addition to losing an already lost business. It is called insolvent trading and the directors can be made personally liable for all debts and liabilities incurred during the period of insolvency. A clever move by the Australian Governments in March 2020 was to put a 6 month moratorium on any charges of trading insolvently. This was to stem a potential flood of businesses going in to administration to avoid the directors losing their personal assets if trading while insolvent.

Even in normal times, you do not have to surrender immediately. Just be careful of incurring new obligations, including trade credit and consumer deposits, until you can sort out new funding. Admittedly, there is not much time for such actions.

In Chapter 4 we looked at some checks to see if you are solvent such as cash on hand and cash burn rate. Chapter 5 looked at the detailed tool of the cash flow forecast. So, if your business is in severe distress and you are concerned about immediate survival, take enough time to read Chapters 4 & 5.

If it is too grim, there may still be options such as a scheme of arrangement with creditors. This will need the creditors' approval. You might try voluntary administration but it is rare for a small company to come out of such administration – it is not worth the time and effort of the administrator who will typically move to liquidation and wind up.

### **13.2 Triage Diagnostic**

If the business is in severe distress, it needs a very quick assessment. This should only take a few days. There is not enough time to spare for more analysis.

You can see the advantage of having a reasonable management information system. At least there should be some tax returns and bank statements that approximate reality.

The analyst also needs to walk around to assess the operations. Any potential hollow logs for extracting cash should be identified. Some assessment of the competitive position might be done if time permits.

The triage report will be brief but will cover:

- Level and seriousness of the distress
- Likely major causes
- What is required to continue trading solvently
- First assessment of what needs to be done in the immediate term
- Identification of any hollow logs or alternative financing
- Timetable to stabilise the business

Such a diagnostic could form the basis of report to a concerned lender, although ideally more detail would be useful and some demonstration of the first steps in implementation of the survival plan.

### **13.3 Cash to Continue**

The most pressing need is to ensure that there is sufficient cash to make it through the first week and then the first fortnight and then the first month.

Receiver administrators face the same hurdle when called in. They normally would seek some indemnity of funding from lenders or other potential funders if there is not sufficient cash or cash flow to meet immediate commitments.

Typically, the first call is whether the next wages bill can be paid. A small company might be able to come to an arrangement with staff over the next payment but it becomes exponentially difficult as the number of employees rises.

As well, unless the company can be reasonably confident of turning around, it is only forcing its employees to lose more by deferring the inevitable.

We need to check:   How much cash is at bank

What investments or assets can be readily liquidated (this may mean selling stock to a discounter or selling debtors at a discount)

How much is left in unused lines of credit

Are additional borrowings possible and sensible (possibly not on both counts if the company is in severe distress)

Is there scope for additional equity injections immediately

Is there immediate expenditure that can be cancelled or deferred (e.g. capital expenditure)

Can we stall creditor payments legally

A short term cash flow forecast is needed to assess net operating cash flows both in and out to determine cash flow per week for the next month or two.

### **13.4 Suture Bleeding**

Frequently, a company is bleeding cash from one or two major points. This is much easier to treat than if there is general malaise over the entire business or industry.

If major points of bleeding can be identified, can they be sutured or cauterised quickly and without too much more investment to do so. Some care needs to be taken that the area to be shut down was not essential to the longer term prospects of the business. If this is the case, can it be put on hold or care and maintenance for a while until cash flow improves or can a stake in the project be farmed out to other equity investors?

In retail, it may be just a few sites that are losing money, perhaps because of over ambitious expansion or just poor site location. Shutting down such sites, remodelling them or having someone else take over the operations can be a major reduction in losses and saving of cash flow.

Often we find that the business is providing goods or services that either are not charged or charged well below their cost. Nor are these products or services needed as part of the marketing effort or customer service. When you ask why is the business doing such a dumb act, the classical response is: “we have always done that!” Dropping such services or charging for them appropriately can provide quick relief.

#### **Example**

We had a business that was always being asked for quotes on major jobs that the company was rarely going to win since the clients (not customers) already had preferred suppliers. It was obvious that these clients just wanted a competitive quote to keep their preferred suppliers honest. But each quote was costing our company \$5,000 to \$10,000 to prepare. So we started charging \$10,000 to do a quote, which we would rebate off the job if we won the contract. The technique is called “**pay to play**”. If the clients wanted us to play the game to help them, then they should pay us to play.

The response was dramatic. The vast majority of clients balked and refused to pay the fee saying they had no intention of ever using us anyway. Fine, we just saved ourselves about \$10,000 of wasted effort. The few that needed the quote paid and were now more committed to seriously using us since they now had some



investment in us (the quote fee). We actually started to win more jobs from these otherwise tyre kicking clients, while saving the costs on the wasted quotes.

### **Case Study of Dropping an Activity:**

Kelso Australia was the leading brand for wheelbarrows in Australia in the early 1990's. The company was purchased from Ogden Industries by a group of investors who had been playing in Adelaide with a new product line: a motorised wheelbarrow.

The new CEO, a marketing consultancy and the turnaround consultants all thought this new product was a farce. The motorised wheelbarrow offered no great benefits over the 2,000 year old model of a wheel, a tray and two handles. There was no saving of a person at one end but it was heavier, slower, needed more maintenance and was more awkward to use. On top of this, a top quality normal wheelbarrow retailed for less than \$200. The new motorised wheelbarrow would need to wholesale for \$1,100 to \$1,200 (the Honda engine and clutch cost \$700 to buy and then had to be engineered on to the wheelbarrow).

The investors projected their new motorised wheelbarrow would take 20% or more of the total market. Everyone else thought it was a load of rubbish. Meanwhile, Kelso had many other problems including costs out of control, falling product quality, too much debt and in default of loan repayments.

It was recommended to dump the motorised wheelbarrow. This decision could be made effective immediately at no cost. It would save about \$1million in the development costs required to take it from a prototype to production let alone later marketing and production costs. The investors refused to stop the development and after a year had made six of the barrows and could not sell any of them. The receivers soon walked in and liquidated the company.

## **13.5 What Is Happening**

Once the most immediate pressures have been satisfied, you need to check the preliminary diagnosis from the first triage. Essentially, where are the bodies buried and who put them there?

Factors to look at include:

- Product line profitability
- Stock that needs to be written off or moved
- Major cost drivers
- Productivity and cost by staff member

Perceptions by customers  
Competitor benchmarking  
Process improvement  
Overheads  
Pricing  
Credit policy and collections

### **13.6 Cutting Loss Makers**

Some easy early runs can be gained by cutting obvious loss makers. This could be products, customers, facilities or staff!

Most businesses add products and customers without considering the profit and cash flow impacts. It is taken for granted that more customers or more products are good but that is often not the case.

Unfortunately, often the management information system is too poor to be able to readily identify where the loss makers and where the profit heroes lie. Most studies tend to show that small customers or low volume products do not bear their true costs. They are cross subsidised by the big customers or long production runs. This is largely due to allocation of overheads which are done on some arbitrary basis such as percentage of total dollar sales or direct labour hours or similar. Such an allocation method disguises the costs of setting up a production run or servicing a customer or gaining a sale. Such costs are mostly fixed per transaction, regardless of the size of the sale or production run.

Some ruthless product and / or customer rationalisation generally pays off in much greater proportion to the small volume of sales foregone.

We generally find that selective pruning of 10% of customers or products can bring 30% or more improvement in profits and cash flow. Gains can be even greater if we are also able to remove the slower turning stock or the slower paying customer or the customer who demands a disproportionately high degree of service.

The main caveat is where lost sales were marginal and there is no saving in overheads. For example, cutting stock in a retail store where we cannot reduce overheads (rent or staff costs) anyway and we have now lost marginal sales that used to make a contribution to overheads. We also need to make sure that rationalised products were not required as part of a package deal for other sales. As well, in a retail environment, you do not want a shop to look empty (nor cluttered).

## **Case Study**

Let us look at that basic product for furniture manufacture: particleboard. Today, particleboard is either sold raw to the furniture manufacturers for use where it will not be seen or is veneered or laminated (usually with a paper colour or woodgrain pattern with clear melamine resin over the top for hardness).

The Pyneboard company had an old style product that was just paper bonded on one side, called Paintline. It was used as the base for painting particleboard when used in furniture. This product was cheap to make – much less than the melamine laminating. Over the years, this product had moved past maturity into the decline phase of the product life cycle as the market used the melamine laminated board or the newer MDF board. Sales were down to less than 10% of the peak days. Volumes and production runs and prices were so low, that Pyneboard found it was actually losing money on each Paintline board sold.

The decision was made to drop this product line. A few furniture manufacturers were unhappy about this proposal since they had some furniture that was still selling well and used this Paintline product. All other particleboard manufacturers had long ago abandoned this product. So, before Paintline was dropped, it was decided to try a new tactic. Put the price up 50%. Sales did not miss a beat. The last buyers of this product still wanted it and the cost of the board was a small proportion of the overall cost of the furniture. Another price rise took it 70% above its original price. It was now the second most profitable product in Pyneboard per square metre and quite profitable overall.

If you have time and there is enough volume to justify it, look at putting up prices before dropping a product line (or customer). What do you have to lose?

## **13.7 Assess Prospects**

Within the first week and preferably within a few days, there needs to be the preliminary triage assessment. This looks at solvency and what must be done to survive the first month.

Once that is done and a breathing space is gained, an assessment of the business prospects for the next year or so needs to be undertaken.

We need to know whether the best course of action is to move to an orderly wind up; set up for a sale; or a complete turnaround and improvement to retain and grow the business.

Such an assessment is necessary within about the first week or two because the final goal will help determine what actions will be taken and the required investment. Just as if you are selling a house in difficult times, you do not overcapitalise it with

a complete renovation and swimming pool when this may deter many buyers and no one will pay a premium for it anyway.

### **13.8 Develop Short Term Plan**

With an assessment of the business and its environment and an agreed if tentative and flexible goal, a short term plan can be developed. Such a plan needs to be formulated within a couple of months and will probably set out the general directions for the next two years.

We need some direction to guide the actions but in a fast changing world, we remain flexible and willing to accept any desirable opportunities that may arise.

The short term plan should at least cover:

- Goal (turnaround, sale or whatever)
- Critical investment decisions
- Key asset moves (purchases, disposals)
- Key staff to retain or hire
- Major cost initiatives
- Markets and marketing
- Enhancements to processes and systems
- Milestones and timetable
- Responsibilities

It need not be too formal but it needs to be agreed. As much as is commercially sensitive, it pays to tell the staff as much as possible. If the company has been in some distress, staff will be anxious and will want to know there is a plan and a goal beyond tomorrow. Otherwise, the staff with the get up and go will get up and go and you will be left with the dregs.

Obviously, if the plan is to liquidate the company in two weeks and everyone loses their jobs, highlighting this beforehand may not be politically astute.

#### **Case Study**

This real life example is of a motor cycle dealership in a capital city which had probably the biggest and best prospective territory in all of Australia. Yet it was continually marginal. The two principals (whom we have called here, Bill and Ben, after the flower pot men fame) had long ago lost their enthusiasm for the business and for each other. A couple of years previously, one principal had offered to buy

the other one out but the price was a sticking point so they were now like a divorced couple living under the same roof.

Except that the roof had changed. As their fortunes ran down, they had been forced to move to cheaper but less salubrious sales rooms at the other end of town, away from the main strip of car and bike dealers.

They were presently in discussions with the dealer for another bike brand in the same town to sell their business. Again however, price was likely to be an issue since the two principals had largely dissipated most of the goodwill of the business.

At the same time, they kept asking for more financial assistance from their brand importer. The following review was undertaken for the brand importer who was growing tired of being asked for more assistance but seeing few sales in what should have been the best territory in Australia.

You will see that the analysis focuses mainly on the two principals and that most of the recommendations are logical outcomes of the analysis. The recommendations are plain common sense. They just need to be undertaken.

First, some brief points and preliminary impressions.

1. The business is able to be turned around but it is certainly in strife at the moment. They are right on their overdraft limit or overdrawn and only hold about \$16,000 cash in bank (a few weeks' of operating cash flow).
2. Bill and Ben, the principals, are not doing cash flow forecasting, which is dangerous.
3. Management reports and records are scarce.
4. The business is doing about \$3 million in turnover a year for a gross of about \$550,000. Potential is for more than double these figures. Higher sales would help but this is not the major cause of the current problems. Much of the problem is in the other expenses.
5. There is nearly another \$200,000 in workers' salaries and \$90,000 in rent deducted from the gross margin before other costs. This only leaves \$260,000 for everything else, including interest, promotions, reinvesting in stock, insurances, association fees, etc.
6. The troubles began a couple of years ago from poor management and have only been compounded by the move(s).

7. They are hoping to hear back from XXXX Yamaha this week. If XXXX Yamaha accepts the price of stock plus \$200K goodwill the principals will take it. This is subject to your [the bike importer] agreement on the franchise transfer.
8. Bill has tried to sell out to Ben for some time. Ben has not accepted the price Bill wants. There are difficulties in the relationship between the two principals, mostly due to the business difficulties.
9. Have they got the fire in the belly to continue? Tough work and tough decisions are required.
10. Bill and Ben continue to extract quite good incomes: about an effective before tax salary of \$80,000 p.a. plus two cars each plus generous superannuation.

A preliminary list of 15 actions that can be implemented immediately is attached. Their cost to implement is zero or minimal.

#### **Fifteen Immediate Actions**

1. Collect outstanding debtors immediately. This means becoming as heavy as necessary. There is some \$48,000 of debtors, at least \$20,000 of it is overdue. These debtors are for spare parts on sold to various garages and dealers.
2. Cut staff to match the quieter trading (should have been done over a year ago). There are two spare parts persons with work only enough for one. The salesman, who is not able to close a sale anyway, should go and the principals get back to selling. Initially cut wages to award rates and hope they go, after that, consider redundancy. Ring the MTA to find out what the redundancies will cost.
3. Bill and Ben need to take some pain if they want to rebuild the business. The second car for each of them should go for a start.
4. Bill is to get out of the upstairs office where he is cocooned doing the accounting books very inefficiently. He should be down on the sales floor and in spares. The business needs sales power and Bill has that skill. Where necessary, get limited part time bookkeeping skills in. Bill and Ben must get more active in selling.
5. For a few hundred dollars of IT consulting, have the computer system print some daily and weekly reports out on sales and stock control. We do not even know if stock is disappearing or being sold at discounts.

6. Increase the workshop charge rate to at least \$80 an hour. There are worries that it is already quiet in the workshop – so what have you got to lose by putting up the price? Add some value by cleaning the bike after the service. [Note: we raised the workshop rate for another Brisbane dealer from \$60 to \$90 an hour despite his misgivings. His workshop is now busier than ever and he has put another mechanic on.]
7. There are slow moving spare parts or stock they can send back to suppliers.
8. There is too much of some stock on the floor, especially duplicated models. There is no stock of other items customers request. Need to get the stock balance right.
9. Get promoting. One mail out happened when they moved offering the chance to win a helmet and leathers when people visited. There is much more to be done and all the time. Try a mail out with a map saying they have arrived at the new location and including a \$50 voucher on say any service (if it is so quiet anyway) but with a limited time – so HURRY, HURRY, HURRY! Get a sign out on the footpath showing where to park for their Dealership. You cannot park outside the shop (bus stop on a main road) but there is parking available around the corner. Ring up customers when all is quiet. They have a bit of a customer database but are not active on it.
10. They must learn to make as much value as possible out of a customer. They are not, by their own admission, good at also selling the insurance or selling gear, etc. Also, they should sell the first service on the spot and learn to keep a customer. Must learn to make the money elsewhere, as done in petrol retailing.
11. Suggest they contact John X (successful Brisbane dealer) and perhaps buy some of the gear off him that he is importing to help improve margins.
12. There is a new manager at the NAB where they are overdrawn but they do not know who it is. Recommend they take the initiative and invite him around.
13. The front of the shop is grubby and the footpath dirty. It is uninviting to come in. Get out there and paint it, clean it and spruce it. Stop complaining that the landlord or Council is responsible. Just get it done.
14. Stop unnecessary discounting. We watched Ben selling some riding boots to a young guy with his girlfriend by his side. The customer had already picked out the boots, accepted the \$240 price and was handing over his credit card when Ben said “Oh, I will let you have them for \$180.” The guy was not a repeat customer and was willing to buy.

15. Offer the customers some coffee or similar from a nice mug when they come in. They will need to stay to finish the coffee. First clean up the kitchen and the mugs though!

This first analysis, the recommendations and report took one day. The actions would cut costs by about \$100,000 p.a. About \$30,000 of cash should be brought in very quickly and we are taking some actions to boost sales longer term.

Such improvements in profits and cash flow would then allow the breathing space to improve the business over the next couple of years: either to keep operating profitably or sell for a reasonable goodwill premium.

## **One More Story**

The following story is also true – just the names have been changed to protect the innocent and sometimes to protect the guilty. Some commercially sensitive numbers have been removed but the remainder is as per the report.

The company was a large printer in Australia. Printing is a bit of a dog industry and is certainly having its share of technology changes.

The setting is late 2000 and GST has been introduced into Australia. The company was also highly geared following a leveraged buy out, so it was fragile and its bank was nervous.

There were some exogenous shocks to the business. The introduction of GST had caused problems with the book printing side of the business. Previously, book publishers would over order print runs for their books and overstock the book retailers. If the book did not sell, the publishers would take back the excess stock and pulp them. This was great for book printers: extra business and long production runs. When the GST was introduced, the publishers took this as an excuse or opportunity to drop this 100 year old practice, citing the difficulties of crediting the GST on returned books. From now on, the book stores would not be able to return unsold books. Sales plummeted!

As well, in the tough times, the second largest competitor, Diamond Press, started discounting heavily to win business. This continued until Diamond Press sent itself broke owing creditors about \$200 million.

However, most of the problems could be sheeted back to the management. There was a poor costing system, staffing was out of control, quotes took too long and had too many errors, sales people did not know how to sell and so on.

So by late 2000, the company was showing signs of distress although not yet acute.



The following notes were presented to the CEO and sole shareholder. A month later, the bank called about breaches to the loan covenants and we showed the notes to the bank.

## **Pacific Print Group (PPG) Actions on Results**

### **Situation**

The markets in which PPG operates tightened and toughened considerably during 2000 and this is expected to continue through 2001.

Key Factors in 2000 included:

- Declining book volume (partly GST, partly non-returns policy introduced by publishers plus other factors)
- Continuing reduction in volume from the key account (the account is held but the client is doing less volume overall)
- Price cutting by competitors to maintain volumes, even at a loss
- Increased wages under the award
- Rising paper prices
- Less than adequate performance by production to deliver on time and with acceptable error rates.
- “Sales” staff not selling but instead fighting fires about poor production and doing “nice” but non profitable customer servicing.

The result has been a cost / price squeeze and lower volumes. This “double whammy” has of course slashed profits.

While paper prices are now showing signs of stabilising and the Australian dollar may have bottomed, the other factors will continue to affect profitability in 2001.

Whilst PPG has managed to negotiate some price increases, these have not been enough to offset rises in wages or paper and PPG risks losing too much volume on price competitiveness.

PPG cannot therefore wait for conditions to improve. This paper outlines steps PPG is must undertake now to restore profitability. PPG management has been addressing the situation throughout 2000 and this note culminates with a formal management review to be held in the first week of January 2001.

### **Focus Issues for Improved Profitability**

PPG is focusing on three fundamental issues to ensure they are achieved:

- Production: Delivery on time and right first time.
- Cost Cutting: Costs cut to allow better margins at current market prices and to achieve a lower break-even position.

- Sales and Marketing: Greater skills and achievements in selling with marketing more targeted at gaining market share.

### **A. Production: Deliver on Time and Right First Time**

Production performance has been an issue for the past two years. PPG has a market reputation for technical capability and customer concern. However, this is compromised by poor performance in delivering on time (and keeping the customer informed of delivery schedules) and too many errors in meeting specifications.

These issues have been worked on for the past two years but are now at a head.

#### **Outcomes:**

PPG will over the next 3 months achieve a quantum shift in meeting delivery schedules (90% plus) and with error and rework rates slashed (by 70%).

This will not only lead to improved customer service and retention of customers but also lower production costs.

#### **Required Actions:**

##### **1. New Chief Operating Officer**

A new head of production (Chief Operating Officer) will be appointed. The present manager has not been able to achieve the goals. We hope to retain him for his printing process knowledge but a tough manager is required at the top.

PPG has engaged executive search consultants over the past 6 months for this position but without success. We have now offered the position to a successful manager in the printing industry and expect his response in a matter of weeks.

##### **2. Management System**

Again, this is not a new response. PPG has been working on implementing a proper management production system for over 18 months and has already spent considerable time and money. This is the PRISM system which will not only move PPG from a manual paper system of production process to computer based, it will also provide greater control, truer costing and lower costs.

The PRISM system is now running parallel to current systems for checking. There are still some issues to be resolved but we are moving to PRISM over the next 3 months.

Allied to this, is a Customer Relationship Management (CRM) system which has been developed and is now being prepared for launch. This not only improves information flow to and from customers but feeds into the quoting and scheduling system of PRISM. Major clients can track orders themselves, releasing some of our customer service staff.

##### **3. Supervision / Responsibility**

Managers and supervisors are to be held more accountable for errors and performance. This is allied to the new information system.

#### **4. LLC & Butterbar Servicing**

Customer servicing for the key LLC and Butterbar accounts to be moved from marketing to operations. This recognises the location of these service staff at the Merryweather plant. Staff are then totally accountable.

#### **B. Cost Cutting**

To meet the tougher market conditions of lower demand and tougher pricing competition, costs must be reduced. This will allow greater margin at the lower prices and a lower break-even point.

Increases in award rates in 2000 and paper prices have put pressure on costs. As well, the union has enforced award conditions to have many casual workers transferred to full time employment, raising the break-even point.

There are some opportunities in the production areas – mainly rostering to reduce unnecessary overtime. There are also some opportunities in purchasing and wastage and rework. However, the main opportunity is head office head count. In most cases, redundancy costs can be avoided by short term natural attrition and reclassifying workers from redundant positions to other areas where casual labour is currently used.

#### **Outcomes:**

Initial reduction in head count and job restructuring to happen immediately. Adjustments to rostering over the next few months by tighter management and assisted as the PRISM and other systems become operational.

Longer term (over the next 12 months), further reduction in head counts with job restructuring.

#### **Required Actions:**

##### **1. Overtime Control**

Overtime as a proportion of normal time has already dropped since year ending June 2000 as attention is paid to overtime. Further reductions will be achieved. Employees with high levels of double time overtime have been identified and strategies to reduce the overtime are being implemented where possible.

##### **2. Rostering**

Rostering continues to be fine tuned, especially when reduced volumes apply. This again affects overtime levels. We have identified three families that are accounting for 45% of all overtime and double time rostering. The families typically have a member as a foreman and up to 4 other family members working at the plant. Rostering management has been removed from these foremen and is now

determined solely by the plant manager, who is being monitored to achieve reduced wages targets.

### **3. Overhead Labour Head Count**

A number of immediate positions are able to be removed. These not only provide immediate cost savings but also symbolise the new cost focus regime. 12 staff are identified to go immediately. Initial redundancy cost is \$260,000 but annual savings are \$530,000, giving a payback of just 6 months. Another 10 staff are to be identified for further redundancy (preferably by natural attrition if available in the short term).

Immediate redundant positions include:

- ✓ The two factory receptionists (any reception work will have calls transferred to other secretarial staff).
- ✓ The one catering person (for executives and guests).
- ✓ Human relations department reduced by 4 (from 7 to 3). Staff salaries and wage payments has already been moved from weekly to fortnightly, reducing administration. Award and contracts details have been largely worked through by now. A more automated wages system is being investigated rather than the current manual use of cards and time clocks.
- ✓ One position in each of the Sydney and Melbourne sales offices will be removed (one Sydney position is already vacant and will not be filled). They were doing unnecessary customer servicing and not sales anyway.
- ✓ Quote estimation time will be reduced from a planned 7 days to 3 days. Only trained professional estimators will be used rather than the current process of high turnover to other positions in PPG and subsequent cost of continual retraining. Estimation processes have been simplified. They will also be more automated with the introduction of the CRM system.

In the medium term, the customer service division will be made redundant. First, the need for this division must be removed by better delivery and quality from operations together with the introduction of the CRM system for staff and customers. It also means that production must deliver or face the consequences. This removes another 10 staff from the head count.

Also in the medium term, the scheduling department will be reduced with the full introduction of the PRISM system.

Approximately another 10 positions are to be identified for removal as the overheads are streamlined.

### **C. Sales and Marketing**

Sales and marketing are to continue their development of marketing skills and planning. As well, sales people are to be trained in selling skills and to have a greater focus on selling rather than total customer servicing. These people have traditionally come from a production or service background in the company. They need to be professional sales people. No sales, no company and no pay!

To date, sales staff have been handicapped by the poor delivery and quality performance of operations. Therefore much time and effort has been allocated to soothing customer complaints. Now, the focus for operations is to improve the performance rather than for sales people to apologise.

#### **Outcomes:**

Marketing will continue to develop focused plans on market potential and strategies.

The sales force will develop their skills in selling to achieve greater market share at profitable prices.

#### **Required Actions:**

##### **1. Clark Whitehall**

Clark Whitehall, as CEO has had to devote too much time to production. It is expected that he can now return more time to marketing. He is the greatest marketing resource in PPG.

##### **2. Marketing and Marketing Manager**

The current marketing manager to be terminated (pay out remainder of contract now). Whitehall will take on the marketing manager responsibilities.

Marketing and sales plans will be detailed (market potentials, shares, prospect identification, etc). It is to be more professional and results oriented.

##### **3. Sales Training**

“Selling” in the book publishing market does require considerable client servicing and partnering. PPG’s sales representatives generally have very good industry experience and credibility.

But they do need to hone their selling skills. Selling training will be undertaken by those representatives identified as in need. The aim is to increase the number of quotes raised and more importantly, increase conversion rates to orders. These outcomes will be monitored and included in the remuneration.

##### **4. Quote Response Time**

Currently, PPG works on a target 48 hour quote turnaround (from customer request to provision of quote. The target is not always achieved.

While this 48 hour target may have been adequate for large and complex orders, PPG's sales mix has changed to more and smaller quotes. As well, even larger clients are expecting faster response. There is anecdotal evidence that PPG is losing business solely because of the slow response time to quote rather than on pricing.

With the simplification of the quoting system, removal of time losses and the new CRM system, the new target is to be a 4 hour response time within a few months. The immediate target is for 24 hours.

As well, Ben Counter will take back control and oversight of the estimation division and quoting. With his experience, he will be charged to not only achieve the response time but to reduce errors on quoting.

We printed the largest book order of the year, Harry Potter and the Goblet of Fire and lost \$80,000 on the job because of an error on exchange rate calculations. This is unacceptable and we have not seen system improvements to prevent this in future. Counter will be charged with this responsibility.

As well, we were the only book printer able to do the job at the time and we still did cost-plus pricing (and got the costs wrong anyhow). We should move to pricing what the market will bear while ensuring this is above costs.

## **5. Other**

Customer tracking systems, possible commission payment and other incentives are being considered to improve the successes of the sales staff.

As well, operations and estimation will provide more feedback to sales staff on the optimal product mix to be sought for operational efficiencies.

## **Summary**

PPG's profitability has suffered from difficult market conditions and its own poor operational performance.

Actions to improve these matters have been in train for some time (over 18 months for some systems development).

In addition, this review has identified further actions that can be taken both immediately and in the near term to reduce costs, improve quality and boost sales. These are being implemented.

When the bank called a month later for a meeting to discuss the loan breaches, the loan manager was relieved and impressed that action had already been identified and commenced. He agreed to waive the breaches for a few months to give time for the turnaround.

Later, the business was sold for a very sweet premium to the 3<sup>rd</sup> largest printing company in Australia!

### **13.9 Take Aways**

When a business is concerned with immediate survival, obviously time and cash flow become paramount. First check for insolvency otherwise personal assets may be at risk as well as legal charges.

A quick assessment of the situation is needed. Actions which will have large impact on cash flow in a quick time need to be identified and carried out ASAP.

Once a breathing space of about a month has been gained, you look for additional strengthening gains. You should now start to get your head up for a look at the intermediate term (out to about 2 years) to insure against taking short term actions for a small gain that may jeopardise the bigger picture further out.

A tough call to make is whether the current management has caused the distress and whether it is capable of turning the business around (perhaps with some external assistance). In any case, we need to be hard headed and objective and above all, decisive and action oriented.

If you do not do the actions, it will cost the business to have an administrator or receiver do them.

## 14. Business Improvement

For most of us, this is where our main interest will lie. We are not in distress and not focused on immediate survival. Nor are we yet focused on the longer term, although it is attracting some of our attention, especially as we look to achieving our main goals in the big picture.

In the Chapter on Immediate Survival, priority was given to cash flow and its generation with profits a secondary issue.

In Business Improvement, cash remains important but profit now tends to dominate, as the measure of financial performance.

There are many actions that can be undertaken to improve profits, but which are applicable in your situation and which are achievable? In this Chapter we will look at an analytic framework and some guidance on possible actions.

### 14.1 Profits to Profitability

In Chapter 10, we saw the difference between the raw figure of profits and the refinement into profitability provided by ratios. Ratios help us to remove most of the distortions caused by size. While a \$10 million profit would be good for a local cafe, it would be highly disappointing for BHP.

The two main refinements for size are the amount invested (assets) and the volume of activity (sales). The first ratio is return on assets (also known as ROI) and the second ratio is return on sales. We may do a third size refinement, on the size of the investment by the shareholders: this is return on equity.

In most cases, we prefer to use profit after tax as the numerator since that is the net result after all expenses and taxes. However, within an organisation, we may refer to the operating profit which is EBIT. Thus we may calculate operating return on assets ( $EBIT / \text{Assets}$ ) and operating margin ( $EBIT / \text{Sales}$ ). Such ratios are more meaningful for a division within a company since the division cannot make decisions on the level of debt which affects the interest expense and thence the tax expense. Using EBIT also separates out the operating decisions from the financing decisions which are linked to our discussion of Modigliani and Miller and capital structure in Chapter 11.

You will by now appreciate that business is an interrelated system. It is too simplistic to just look at one aspect without considering the affects and influences in the remainder of the business system. Hence the good business manager (and



consultant) ideally understands something of marketing, finance, operations, people management and strategy.

Anyway, back to our discussion on profitability. We will begin our analysis with the “bottom line” ratio of return on assets (ROA).

ROA is also generally referred to as return on investment (ROI). However, in some cases, it is the shareholder speaking who is referring to the investment by the shareholder in the company, that is, return on equity (ROE). Just be clear when analysing return on investment that we are actually referring to ROA.

## **14.2 Two Limitations**

Before commencing our analysis on improving ROI, we should be aware of limitations to ROI analysis.

First, it tends to be short term focused. ROI typically works off profit and profit is rarely measured beyond a year and often only quarterly or monthly. Thus ROI analysis runs the danger of ignoring the longer term, big picture.

We can introduce many measures that will boost short term ROI. These include moratoriums on staff development and training, cut backs in marketing, deferred product innovation and no longer worrying about being an “employer of choice”. While these actions boost short term profit (or cut losses) by removing expenses, they hurt the business in the longer run, especially as the economy improves.

To counter such “short termism” we usually need to impose a few other objectives for the business or the business unit manager. These may include setting low staff turnover ratios, requiring two new products to be brought to market each year, maintaining a certain market share and so on.

Second, ROI is a profit measure. We need to remain aware that cash flow is also important and must be assessed against our actions to boost ROI. Remember the sustainable growth rate formula discussed in Chapter 6 where sales growth would lead to better ROI but could drive the company to distress. We may take actions that will be slightly counter to improving ROI but which have a large impact on cash flow such as not extending over generous credit terms to customers and maintaining a tight inventory policy, even at the risk of stock-outs to customers.

## **14.3 Consolidation**

First step in the improvement process, if moving on from the survival phase, is consolidation. We need to check and verify that the early decisions in the survival phase were correct and are still valid.

We will then continue to move along the paths begun in

- cost control
- tighter asset management
- product / service rationalisation
- checking of customer profitability
- turning around or closing any loss making activities
- getting finances and gearing under control
- ensuring the management information system is adequate

Much of the early focus is on costs. The main reason is that they are internal to the business and so are the most controllable and often the fastest to implement. Many other actions need to work in conjunction with customers or competitors and so are less certain in their outcome and have a longer period of implementation.

After consolidation, we move to longer term actions such as profitable sales growth.

#### **14.4 Need for an Analytic Framework**

When Peter Drucker, the late but eminent management guru, moved from academia to consulting he undertook an assignment on General Motors for the legendary Chairman, Alfred Sloan. Drucker was impressed with how Sloan could analyse businesses he did not know, so effectively. Drucker came to realise that Sloan must have some analytic framework to help him understand complex business situations so quickly.

So, apart from a significant fee, what does the management consultant bring to an assignment? Hopefully:

1. Experience: The consultant has seen many businesses and business situations and has ideas on what may or may not work.
2. Objectivity: Often the business management is too close to the problem or is inhibited by political or emotional attachment. The external advisor should not be constrained by such issues.
3. Skill set: The skills and arts needed to improve or turn around a business are additional to the day to day management tasks. Current management may not have these skills.
4. Time: In these days of tight and lean management, there may simply not be enough spare management time to undertake an additional assignment or analyse a business improvement.
5. A framework for analysis.

With reading and training, management may be able to pick up the skill set and some of the experience. Professional management may also be able to maintain objectivity. Perhaps there may even be enough slack time to undertake the analysis and improvement tasks. All you will then need is the analytic framework. Easy!

Most management consultancies have an analytic framework that is taught to the consultants. The framework may be given a fancy proprietary name to demonstrate intellectual property and rigour.

However, if you scratch below the surface of most consulting frameworks, you will normally find a framework based on, or similar to, Du Pont analysis.

## 14.5 Du Pont Analysis

Du Pont analysis was developed by the Du Pont chemical company and has been around for decades. Until recently it has been overlooked. It is a simple but powerful analytic tool for improving an organisation's performance.

The well known consulting firm, McKinsey & Co. refers to their framework as Du Pont Analysis and has published papers on the technique and its application.

If you read the annual report for Woolworths, you will see a section of the report devoted to Du Pont analysis – the only public company known that reports thus. It is not by accident that Woolworths manages its operations so well.

### Shareholder Value

from Woolworths Annual Report

	2011 52 Weeks	2010 52 Weeks	2009 52 Weeks
<b>ROFE (Pre-tax return on funds employed) (%)<sup>(5)</sup></b>			
Normal	29.28	30.98	31.93
<b>Du Pont analysis (%)</b>			
EBIT to sales	6.05	5.96	5.68
Service burden <sup>(6)</sup>	92.02	93.14	93.28
Tax burden <sup>(7)</sup>	70.99	71.00	70.82
Asset turn <sup>(8)</sup>	2.74	2.91	3.03
Financial leverage <sup>(9)</sup>	2.61	2.47	2.56
Return on equity <sup>(10)</sup>	28.01	28.10	28.67

In its basic form, Du Pont analysis looks at return on investment (ROI). In most cases, this is defined as profit / assets. Remember, we can look at operating return if we use EBIT / Assets or Return on Capital Employed (ROCE) which is EBIT / (Debt + Equity). They are similar concepts. ROI is typically expressed as a

percentage. So if the profits are \$2 million per annum and the assets invested in the business are \$10 million then the ROI is:

$$\text{\$2 million} / \text{\$10 million} = 20\%$$

ROI is the key performance indicator for most businesses. Managers and investors alike concentrate on it. But it is merely descriptive. It does not tell you how to achieve a "good ROI" or how to improve ROI.

This is where Du Pont analysis helps. It breaks down ROI into its component parts:

$$\begin{aligned}\text{ROI} &= \text{Profit} / \text{Assets} \\ &= \text{Profit} / \text{Sales} \times \text{Sales} / \text{Assets}\end{aligned}$$

Profit / Sales is the *sales margin ratio*. This is what percentage profit is made on each dollar of sales. If profit is \$2 million and sales are \$20 million, then the sales margin is:

$$\text{\$2 million} / \text{\$20 million} = 10\%$$

Sales / Assets is the *asset turnover* ratio. It measures how much sales can be serviced by each dollar of assets. If sales are \$20 million and assets are \$10 million then the asset turnover is:

$$\text{\$20 million} / \text{\$10 million} = 2$$

Sales margin times asset turnover equals return on assets.

In our example, it is  $10\% \times 2 = 20\%$ .

## 14.6 Improving ROI

This still does not show how to improve ROI but it is more informative.

Any actions that improve the sales margin will improve the ROI. Likewise, any actions that improve the asset turnover ratio will improve the ROI.

### Improving Sales Margin

In general terms, there are only two ways to improve the sales margin:

1. Raise prices
2. Lower costs

## Improving Asset Turnover

In general terms, there are only two ways to improve asset turnover:

3. Sell more
4. Use less assets

In the sell more method, we need to increase sales by a greater percentage than the assets increase. In the use less assets method, assets must be reduced by a greater percentage than sales fall. If we do it well, sales may not fall at all.

So the four ways or levers to improve ROI are:

1. Raise prices
2. Lower costs
3. Sell more
4. Use less assets

Typically, management has concentrated on just one of these four methods: lower costs. This generally means reducing the number of employees. The next method to receive the most attention from most managers is to reduce assets.

The focus on costs and assets is probably because they are the **easiest to control**. They are internal to the business and can be done readily. Increasing prices or sales volume is more difficult work. You need to have developed the right products and distribution channels, have good marketing and sales management. You need to be able to beat your competitors and meet your customers. These external factors are not easy to control. BUT, they give the best long term pay-off!

Du Pont analysis reminds us that there are other levers than just cutting costs.

Experienced and good consultants are aware of the 3 steps to improving ROI other than cutting costs. McKinsey has published more than one paper showing the effects on ROI of adjusting the four levers above.

We normally find that the two levers that have the most impact on ROI, and in order, are:

- 1. Prices**
- 2. Sales (volume)**

McKinsey in a 2007 study found that raising prices by say 5% had much greater impact on improving ROI than raising sales volume (2<sup>nd</sup> greatest impact) with a large gap to cutting costs and reducing assets. The only exceptions were high

margin but also high fixed cost industries such as ethical drugs, where raising volumes had more impact than raising prices.

In any case, the analyst will look at all and any opportunities to raise prices; increase volumes; cut costs; and reduce assets. The point of the above discussion is to not neglect prices and volumes, which is a tendency of management when looking for a simple fix.

## **14.7 How to Do It**

Now we come to the difficult part. So far, the analysis is still descriptive.

It now requires detailed information about a business's operations in order to come up with feasible actions to raise prices, lower costs, sell more or reduce assets.

Some possible actions might be:

- changing the product mix
- more effective marketing
- exploring new distribution channels
- product rationalisation
- sale and lease back of assets
- lower overheads
- cheaper sources of finance
- more productive staff (e.g. multi skilling)
- add value and on selling
- customer segmentation and pricing for value

## **14.8 Detailed Du Pont Analysis**

Du Pont analysis goes beyond just the asset turnover ratio and sales margin. We keep breaking up the ratios to their constituent parts. The analysis details the various costs and assets that make up the business. This is usually put on a large chart, either physically or in an electronic spreadsheet. We model the entire business through its balance sheet and income statement.

A major power of Du Pont analysis is that it also **quantifies** the analysis. Actual numbers are put in for the sales, costs, different assets and so on. From this the ROI is calculated. (We can even go further and include gearing and then calculate return on equity).

Then any changes made to assets, prices, costs or sales volumes are adjusted on the chart. The new ROI is then calculated.

Simple Du Pont charts are attached. In reality, they would be more detailed than can be fitted on to a book page. For example, current assets would be broken down into debtors, stock and other assets. Expenses would be detailed into major categories.

The following chart is for a U.S. example, Yellow Tail Marine. The company was making leisure boats and painting the stern yellow. Hence the great marketing name used of Yellow Tail Marine.

You might note the very thin sales or profit margin of 2%. This margin would be low for a supermarket which would have much greater asset turnover than a leisure boat manufacturer. So straight away, Du Pont analysis tells us where a major problem may exist and the more detailed boxes that comprise the calculation of the sales margin tell us where we should look to take action.

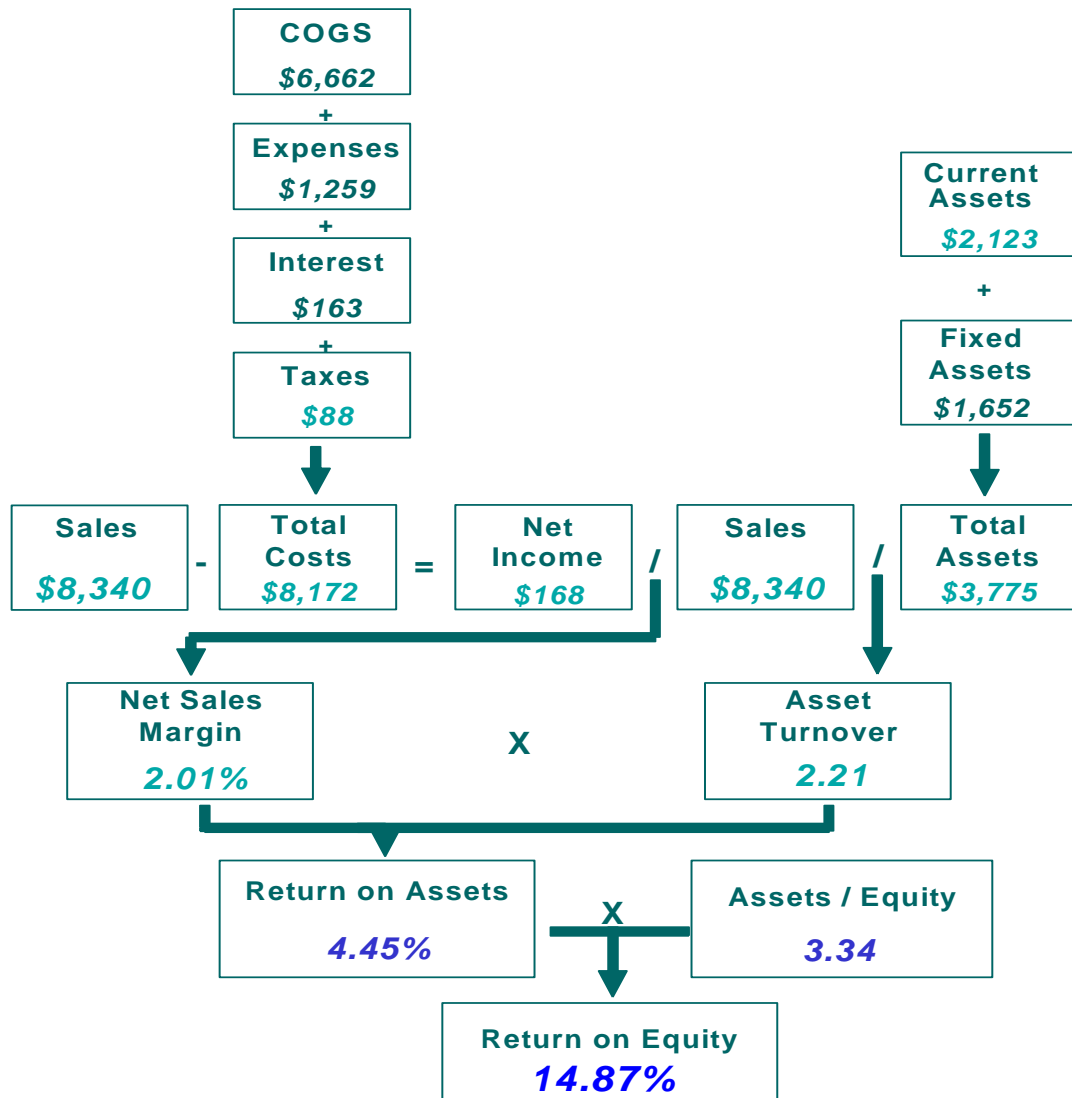
Having read the chapter on accounting and the financial statements, you might notice that the detailed Du Pont analysis is actually the Income Statement (the boxes on the left hand side of the diagram) and the Balance Sheet (the boxes with the assets on the right hand side of the diagram).

This makes sense since the Income Statement (performance) and Balance Sheet (investment) together describe a business. In a full Du Pont chart, you would break the boxes into more detail to help your analysis. For example, the box on Current Assets would be split into its components of debtors, inventory and other assets if they were significant. Likewise, the fixed or non current assets might be split into its components of buildings, equipment, vehicles and so on.

In the case of Yellow Tail Marine, it was performing so poorly, that it was taken over. The new owner analysed the company and decided poor marketing was a major issue and cause of the thin sales margin. So the new owner employed a marketing manager to be the new CEO.

# Du Pont Analysis

## Yellow Tail Marine Example



In the case, the new CEO decided the costs were largely alright so attention was then focused on prices. The new manager decided to raise the prices on the largest boats by about 40%. Justification? She thought she could.

She raised prices by about \$30,000. However, she did increase the marketing spend by about \$300 per boat. This went towards providing a photo album showing the buyer signing the contract for the boat plus a picture of how the boat would look when completed in 3 months plus the plans for the boat. This cheap added value is valuable to the customer who now has a brag book to display to everyone.

At the end of each month the buyer would receive a progress photo plus the progress payment invoice. When the boat was finished, the buyer would be invited

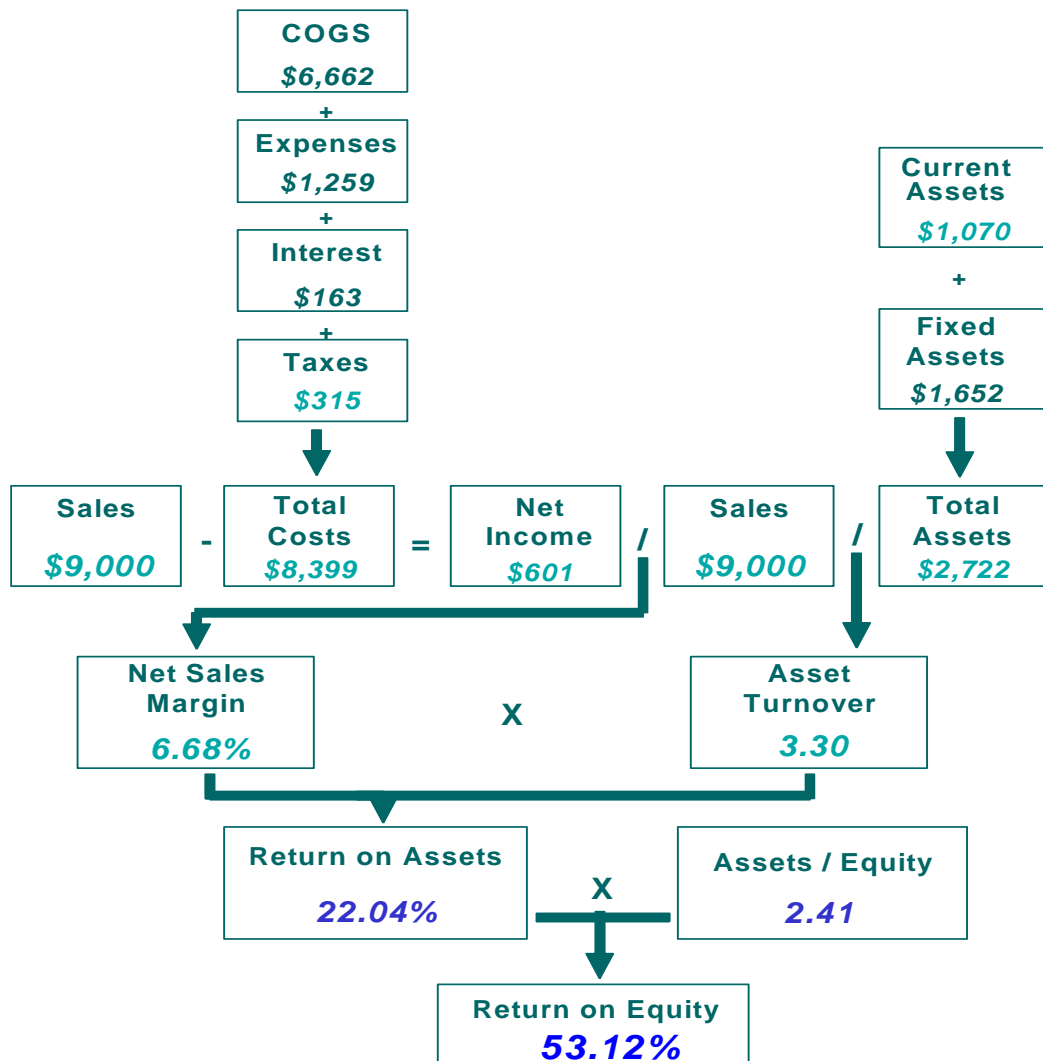


to the launch where he (always a “he”) would receive his skipper’s cap with the boat’s name. Repeat orders and referrals ran strongly!

The other action was to reduce the amount of stock held on the smaller boats and to speed up the production process.

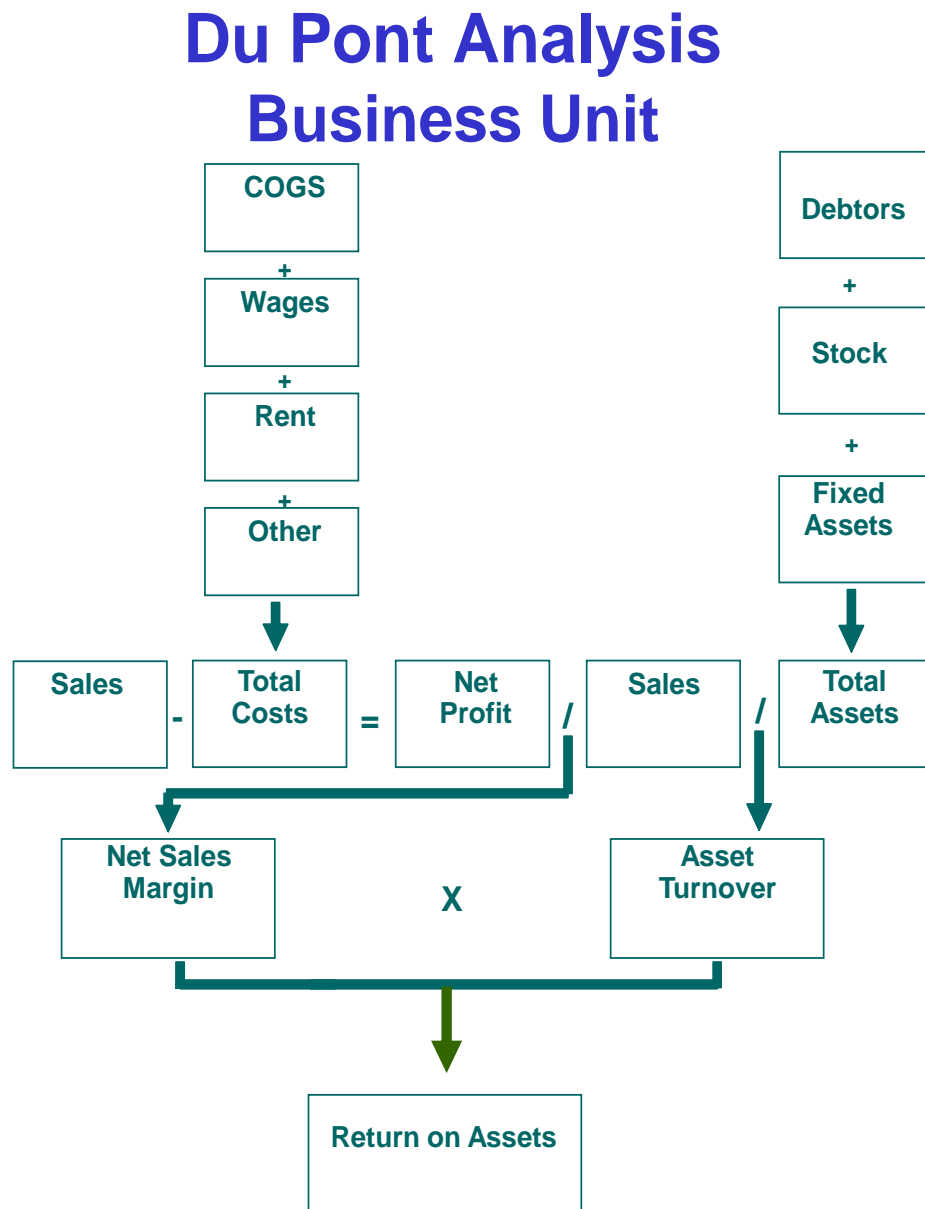
The results are shown below together with an improvement (reduction) in the high level of gearing used previously.

## Du Pont Analysis Yellow Tail Marine Example



## 14.9 Business Unit Du Pont Analysis

If we are analysing a business unit within a larger company, or are just interested in the operations aspect of a company, we can use the simpler business unit chart as shown below.



### Example

We have used this chart method with a large hardware distribution chain. The store manager would have a large cardboard chart on the office door which modelled the store. The chart had boxes that showed how much assets were tied up in stock, debtors, store fittings and the delivery truck and forklift. The chart also modelled the income statement showing sales and cost of goods sold, wages, rent and so on.

Then, if anyone had an idea, it could be tested on the chart to see what its effect would be on the return on assets. Note: anyone is allowed to have an idea. Management is not the sole repository of ideas: it could be a staff member, a customer, supplier or anyone! Management's role is to ensure that the good ideas are enacted.

Say a sales representative wanted to take on a new customer, but that customer wanted 45 days credit and a new line of power tools stocked. Previously, the management would have been at a loss to know what would be the impact on store ROI if the new customer was taken on. With the Du Pont chart, the manager could write in the new sales level, deduct the extra cost of goods sold and increase the amount of debtors and stock to service the customer. Then follow the calculations down to the sales margin and asset turnover to see the change in ROI.

Perhaps the storeman had found a buyer for some steel reinforcement that had been sitting at the back of the warehouse for a couple of years and was starting to deteriorate. But the buyer wanted a substantial discount to take the reinforcement. Again, crunch the numbers in the chart and check the effect on ROI.

## **14.10 Spreadsheet**

We could model the business unit on an Excel spreadsheet or similar. Some of the big accounting firms have rediscovered Du Pont analysis and are offering the software to major clients to attach as a final analysis of the budget process. They are only charging several thousands of dollars for the software.

Alternatively, you could write up a spreadsheet yourself.

Alternatively, you can log onto <http://www.pulseconsultants.com.au> and download a simple spreadsheet that covers both Du Pont Analysis and Sustainable Growth Rate (see Chapter 6). The two analyses are combined in the one spreadsheet since most of the inputs are common to both.

By all means, use the spreadsheet as a starting template to build your own more detailed and personalised model of your business.

## **Case Study: Kelso Australia**

We met Kelso Australia, the wheel barrow manufacturer in the previous Chapter where we tried to have the development of the motorised wheel barrow abandoned in order to save the \$1 million of cash spent on the development of the production model. That was necessary in order to obtain breathing space to execute a more general, medium term turn around.

The turn around plan used Du Pont analysis as one of the prime tools for assessing Kelso Australia. There were other tools used such as pro forma forecast statements, production process mapping and break-even analysis. But Du Pont is the tool for the big, overall turn around view.

Some of the problems found at Kelso are shown below. This is followed by a Du Pont chart of the business. It is not a pretty picture: the minus signs at the bottom of the chart highlight the magnitude of the problem.

You might care to try your hand at being a turn around specialist. See what you would do to improve Kelso. Once the analysis has been done and the problems identified, it should almost be common sense about the actions that need to be taken. Alas, common sense is all too rare at times.

You really need to be very familiar with the operations to make detailed responses and be able to quantify the changes in the chart. However, some common sense and some of the additional information provided below will get you started with the ideas.

Some operating information on Kelso:

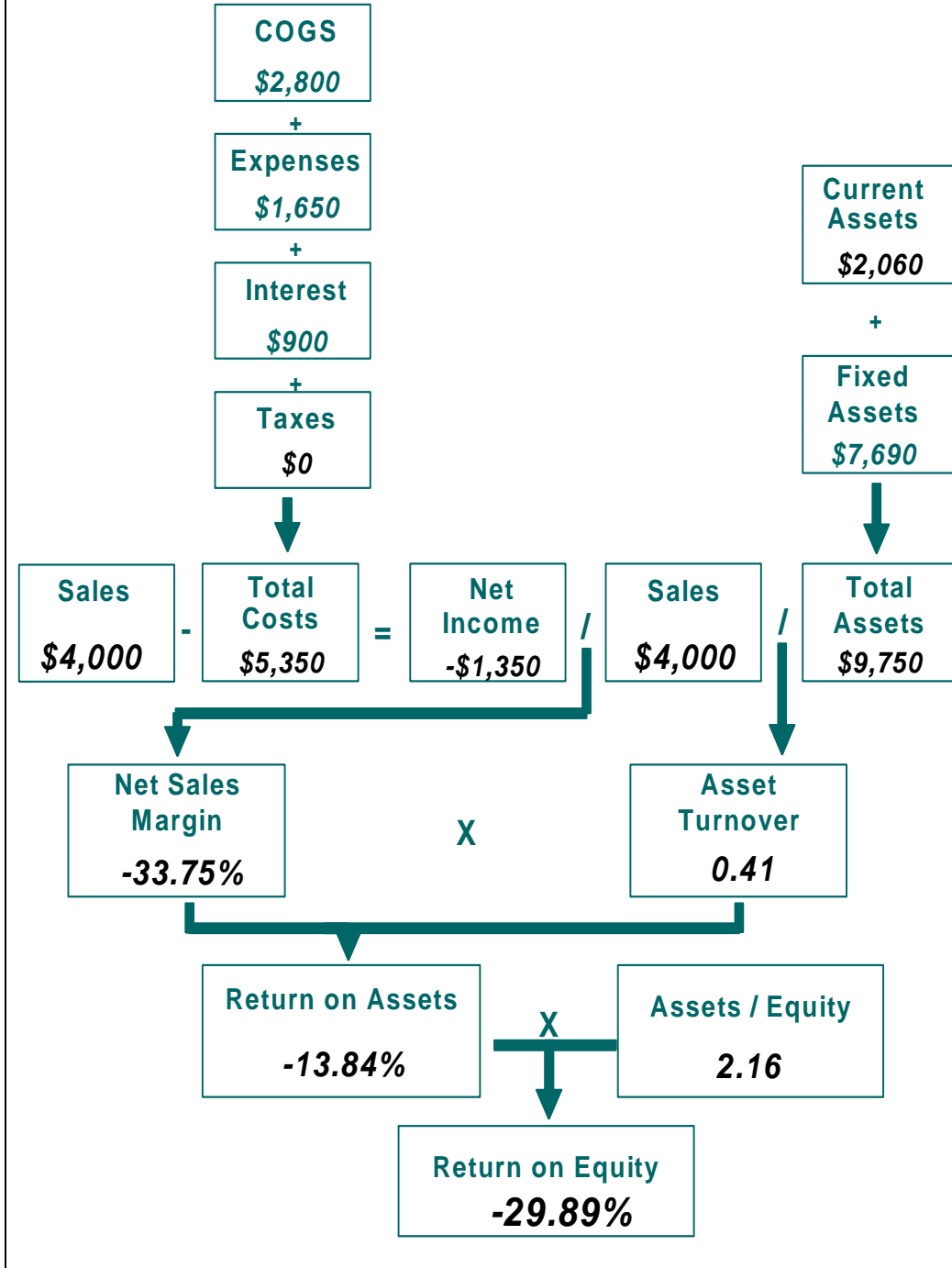
- The company made some 47 different types of wheel barrows. Just 3 of these types accounted for over 90% of sales. The situation was similar with the hand trolleys that were the other major product line.
- They were working on a motorised wheelbarrow. This in fact was the dream of the Chairman and the Factory manager. They were spending one million dollars and a year of management time developing this motorised wheelbarrow despite a marketing consultant's report saying it would never sell. (Basically, it would cost over \$1,000 to make when a normal wheelbarrow would retail for about \$150 to \$200, it was heavy, needed maintenance and had to be fuelled.)
- There were many different types of components kept. For example, there were 3 different types of tyres (a radial, a cross ply and some combination). But there was no known difference in their performance.
- Factory organisation and performance was poor. For example, it was taking 6 weeks for a wheel to go through its manufacturing processes.
- There were some 300 customers on the accounts and it was requiring considerable administrative costs. But just 2 customers accounted for 60% of sales. The top 10 customers were over 80% of sales. The top 20 customers accounted for 90% of sales. The bottom 200 customers were less than \$1,000 of sales per annum.
- There was a general manager, finance manager, marketing manager, sales manager, factory manager and factory foremen on sales of about \$4

million per annum. For some of the competitors, all these positions were held by just one person.

- Production costs and purchasing information were poorly known and out of date. This resulted in erroneous decisions on product mix and made purchasing power difficult to exercise.
- The factory manager was not sure how many people worked in his factory since he was spending all his time on development of the motorised wheel barrow. The consultants found that there were always at least 64 “workers” clocked in each day but they never managed to find more than 45 when walking through the factory.
- At the same time the factory was on overtime. When the consultants checked what was being made on this expensive overtime, they found it was wheel barrow wheels. A check found that there were already 4 weeks supplies of wheels.
- Days debtors on average was out past 60 days. Some stock was actually held as consignment in the stores of some customers.
- Kelso had an offer from the NSW Government Housing Commission to buy their site for \$4.5 million. The Housing Commission did not want the site straight away and was willing to lease it back to Kelso for \$200,000 per annum for the next two years to allow Kelso to move. This would have allowed Kelso to pay off its bank loan of \$4 million at the then interest rate of 20% per annum.
- The product was viewed as the leading brand and had a price premium of about 20%. However, this quality perception was under threat due to little reinvestment in product design or manufacturing process.
- The information system was tied into the business of the previous owners. It was out of date, unwieldy and soon to be turned off. There was little knowledge of true costs.
- The company was struggling under the burden of servicing the \$4 million debt it had taken on.

# Du Pont Analysis

## Kelso Example



We can find 15 or more major actions to undertake – how did you go? Most of the actions should be just logical conclusions from the analysis.

Curiously, Kelso began to work on most of these actions. However, there were two major actions they would not take and this proved fatal. See what they were in the final chapter.

## 14.11 Some Other Analytic Tools

The consultant / analyst will use a number of other analytic tools, depending on the circumstances.

Analytical tools could include:

1. Supply chain management
2. McKinsey 7S evaluation
3. SWOT analysis (Strengths, Weaknesses, Opportunities & Threats)
4. Competitive mapping
5. Value chain analysis
6. Pro forma (forecast) financial statements
7. Capital expenditure plans
8. Key staff assessment
9. Management ability
10. Sustainable growth rate
11. Break Even
12. Due diligence, including risk assessments such as legal and environmental
13. Funding issues including ability to make issues or otherwise refinance

It is not expected that all (or even most of these techniques) would be used for each assessment. The analyst needs to use discretion as to which tools are most useful in the circumstances.

## 14.12 Break Even Analysis

Break even analysis is one of the two simplest but most useful calculations in business (the other is Du Pont analysis).

We introduced break-even analysis in Chapter 8. Break-even or **contribution analysis** is a method of determining the break-even point: how many sales are needed just to break even i.e. no longer make a loss. It is also known as marginal analysis, variable costing and contribution margin analysis.

This is a simple but very powerful tool. It is “back of the envelope” stuff but is a useful “first screen” to see if the project is worthwhile before conducting more extensive and more expensive detailed analysis.

It is also a particularly useful tool for start-up projects. In such cases, there is no detailed history on which to conduct ratio or some other analysis. The break even analysis, allied with some market analysis and common sense can help determine if the project can be viable.

Examples would include launching into a new market or with a new product or opening a hotel or golf course or starting a restaurant. It can apply anywhere.

The basics of break-even analysis lie in understanding the fixed and variable costs of the project or business.

All businesses have some *fixed costs*. These are costs that are borne whether there are any sales or not. Examples may include rent, salaries, interest on loans and so on. Fixed costs are also known as **period costs** since you have to pay these costs per period of time regardless of the level of activity.

The other costs in a business are *variable costs*. These increase as sales increase. Examples may include raw materials, packaging, commissions, and so on.

In real life it can be quite complex to split costs between fixed and variable. However, it is a worthwhile exercise if you want to make logical management decisions. You need not be perfectly precise. You just need to be accurate enough to make sensible decisions.

For an airline flight, nearly all the costs are fixed. This means that the flight is VERY volume sensitive. When Qantas first floated, its profit forecasts were based on 76% seating utilisation (i.e. 76% of all seats would have a paying passenger in them). If the seating utilisation rose by 2% to 78%, then profit doubled. On the other hand, if seating utilisation fell 2% to 74%, then profit was wiped out.

This is why an airline like Qantas no longer hangs on to poor routes in the hope it will improve. Code share it or drop it fast!

### **14.12.1 Break Even Point**

The break-even point is one of the most fundamental pieces of information we need to know in business. For any project or product line or even for the whole company, how many units do we need to sell just to cover all our costs?

We looked at cost behaviours, contribution analysis and break-even in Chapter 8. We will only do a brief recap here and extend the analysis to using the formula to assess potential improvements like raising prices.



We can do break-even analysis on a yearly basis or monthly, weekly, daily or whatever. It can be a very sobering exercise to calculate the daily break-even point. How many sales do we need to make each day just to break even? Why not let all the staff know the point. There is a story that tailor shops in Hong Kong know their daily break-even point and no staff member is allowed to take a break until the break-even point is reached. Hence the desperation to get those early sales in!

To calculate break even, we need to split our costs into **fixed costs** and **variable costs**.

Fixed costs do not change when we change the volume of sales – we have to pay them anyway. Variable costs are directly linked to the sales volume. The more you sell, the more variable costs you have.

The break-even point is calculated using fixed and variable costs and the **contribution margin** per unit of sale.

Every time we can make a sale, we get money into the business. But to make a sale it costs us for the variable costs: the raw materials, fuel, commissions and so on.

What we have left over after making each sale and paying for the variable costs is the **contribution margin** per sale. We give it the symbol “m”

The contribution margin is not profit yet because we have not paid for the fixed costs. It is contribution towards paying for the fixed costs. The fixed costs are **NOT** broken down to a per sale cost. They are a big lump that must be paid each month or year or whatever - regardless of what sales are made. Fixed costs are sometimes called **period costs** since they are so much per period of time (month, year, whatever).

After the fixed costs have been covered (i.e. the break-even point) any additional sales will make contribution to profit.

The break-even equation is: fixed costs / contribution margin per unit.

If our sales unit was tickets or beds or widgets, then the break even is in those units. If our unit of sale was per dollar, then the break even is in dollars. Likewise with the time period: if we used fixed costs per month, then the break even result is in sales units per month. If we used annual fixed costs, then the break even result is in sales units per annum.

### **Example**

We have a shop that has fixed costs per month of \$20,000 (for rent, salaries, power, advertising, etc). For every dollar of sales, it costs 75 cents for variable costs (for goods purchased for resale and a little gift wrapping).

So how many sales (in dollars) does the shop need each month just to break even?

The contribution margin on each dollar of sales is 25 cents (\$1.00 of sales minus \$0.75 cents of variable costs).

The break-even point is:  $\$20,000 / \$0.25 = \$80,000$

The shop needs to sell \$80,000 of goods each month just to break even. The break even is a monthly figure because our fixed costs were per month. If we used annual fixed costs then the break-even point would be how many sales per annum. If we use fixed costs per plane flight, then it is how many passengers per flight.

We have seen even large projects that have proceeded too far before they hit the reality check of a break even analysis. These have included a hotel which needed a daily room occupation rate of 138% to break even or a safety light that needed 120% share of the total market – and there were already 5 established competitors.

#### **14.12.2 Break Even With Multiple Products**

The above discussion has revolved around a single product. Real life is usually more complex. There are multiple products and they share some or all of the fixed costs.

This can lead to complex cost allocation problems. Activity Based Costing and transfer pricing can be very complex issues involved in allocating costs.

For conducting break-even analysis with multiple products, the process can still be simple as long as we do not have to worry about trying to allocate fixed costs or overheads to actual products.

Even so, we need to simplify the situation. Imagine conducting a break-even analysis for a supermarket with thousands of different products. Typically, we simplify the vast product range down to a few product categories – groupings of products with similar characteristics. The unit of sale can no longer be bunches of flowers and so on. The common unit now is dollars. We express the sales price, variable costs and contribution margin in dollar of sales. The fixed costs remain a lump of dollars per time period.

#### **Example of a Liquor Store**

Let us look at a local liquor store. For simplicity, we assume that there are three major product categories: 1. beer; 2. wine & spirits; 3. other (cigarettes, chips, etc). The fixed costs are \$30,000 per month for wages, depreciation, advertising, interest, etc.

We now calculate the contribution margin for this store. The variable costs are basically the purchase cost of the items. We also allow some variable electricity for the cold room for the beer.

Note that we still need to understand how costs operate. For example, in most places, there is a liquor retail tax or licensing fee. If this fee is calculated on dollar turnover or per bottle then it is a variable cost. If it is a flat monthly or annual fee, then it is a fixed cost. Excise on alcohol content would be more difficult.

<b>Product</b>	<b>Beer</b>	<b>Wine &amp; Spirits</b>	<b>Other</b>
Price	\$1.00	\$1.00	\$1.00
Variable Costs	<u>\$0.92</u>	<u>\$0.65</u>	<u>\$0.50</u>
Contribution Margin	\$0.08	\$0.35	\$0.50

So what is the break-even sales value per month?

Unlike our previous example, we cannot yet calculate the break-even point in dollars of sales from the above information. We need one additional piece of information.

We need to know the **product mix**. What proportion of the sales are beer, wine & spirits and other? Once we know that we can calculate the break even.

We use the product mix to calculate the weighted average contribution margin. We multiply the variable costs and the contribution margin by the weighting of sales shown by the product mix.

<b>Product</b>	<b>Beer</b>	<b>Wine &amp; Spirits</b>	<b>Other</b>	<b>Weighted Average</b>
Price	\$1.00	\$1.00	\$1.00	\$1.00
Variable Costs	<u>\$0.92</u>	<u>\$0.65</u>	<u>\$0.60</u>	<u>\$0.85</u>
Contribution Margin	\$0.08	\$0.35	\$0.40	\$0.15
Product Mix	75%	20%	5%	

In doing the weighting, we took 75% of the variable costs for beer (69cents), plus 20% for wine & spirits (13 cents), plus 5% for other (3 cents) to give a weighted average 85 cents variable cost. We do the same for the contribution margin to find a weighted average contribution margin of 15 cents per dollar of sales.

The break-even point is now found by our simple equation of fixed costs divided by contribution margin. In this case, it is \$30,000 divided by \$0.15 = \$200,000 per month (i.e. \$2.4 million per year).

Unless our liquor store can turn over this much in sales, it will be making a loss.

Note also that for every dollar sale above break-even, the store now makes 15 cents profit. So if the annual sales are \$3 million, it is \$600,000 above break-even. The store will now make \$90,000 profit per year (\$600,000 x \$0.15).

### **14.13 Adding Profit Targets to the Calculation**

The break even calculation can be modified to give it considerable scope for profit planning. What if we want to make \$7,500 per month profit instead of just breaking even? What dollar volume of sales is needed now?

We simply treat the target profit figure like another fixed cost to be met.

We would divide the fixed costs + profit by the contribution margin:

$$(\$30,000 + \$7,500) / \$0.15 = \$250,000 \text{ per month } (\$3.0\text{m p.a.})$$

Alternatively, we can use the equation to work out the volume needed to make say 5% profit margin. We would treat this margin like another variable cost of 5 cents in the dollar.

So now our contribution margin would be \$0.10.

The “break-even” volume to make 5% sales margin would be:

$$\$30,000 / \$0.10 = \$300,000 \text{ per month } (\text{or } \$3.6 \text{ million p.a.}).$$

On this level of sales, we actually make 5% profit, which is \$15,000 per month.

So it is quite a flexible little equation!

As we add more product lines, the calculation becomes more complex. It starts to become more useful to have a spreadsheet model.

Again, we have some software samples available for you to download free of charge at <http://www.pulseconsultants.com.au>

These models can be modified to approximate your business.

### **14.14 Du Pont Revisited**

Finally you should note that we now have an additional factor to use in running the business and improving profit. The Du Pont Framework gave us:

1. Raise Prices
2. Lower Costs

3. Increase Sales
4. Decrease Assets

The additional factor is:

5. Change Product Mix.

How can changing the product mix affect the profits? Concentrate on the highest profit margin lines!

Product mix can also affect the asset intensity. For example, sell products that need less inventory or less equipment to make. We can also change the customer mix, for example, prefer those customers that pay faster or are less price sensitive. Plus there are other ideas.

### **14.15 Marginal Costs and Revenues and Logical Decisions**

Firms with large fixed costs are keen to utilise excess capacity and to spread those fixed costs over as many units of production as possible. A crude but sometimes effective way of increasing sales is to drop the price. Further analysis will show that price discounting should be approached with great wariness – it is rarely worth it.

If we do discount, it is better if we only have to drop the price on the extra volume gained rather than across all of our output. This is possible if we can keep the discounted goods or service separate from our normal markets. Legal methods of this include marginal pricing for exports and tenders for government contracts.

If we gain 10% extra sales, we may not have 10% extra costs. This is because most of the fixed costs should remain static. It should only be the variable costs that rise 10%. This would be items such as raw materials, packaging, distribution, sales commissions and similar.

Note though, that we cannot provide a blanket ruling on this presumption. It may be that as we increase sales volumes, we may move past a threshold point where we need to increase capacity and hence fixed costs: such as needing to employ an extra shift of workers or requiring more equipment and thus depreciation.

To make these decisions, we need the contribution analysis work done on fixed and variable costs for the break even analysis.

Traditional financial accounting information is good for reporting past performance (the balance sheet, income statement and even statement of cash flows). However, financial accounting is very poor for making management decisions. This is because financial accounting absorbs all the manufacturing or purchasing fixed costs into

the product value. The method is known as **absorption costing**.

To make management decisions, we need to know how costs are affected by changes in sales volume. We need to break the costs into fixed and variable. So **management accounting**, which is involved with making sensible management decisions, is sometimes referred to as **cost accounting**.

We need to understand both financial and management accounting.

## 14.16 Adding and Deleting Product Lines

Understanding fixed and variable costs helps managers with logical decisions about product lines (and customers).

Consider a retail outlet selling two products, imaginatively called Product A and Product B. Their prices and costs are shown below. The shop has total fixed costs of \$6,000 a month which is simply split between the two products. These fixed costs are the rent, utilities and cost of the shop assistant. In the period, 1,000 units are sold of each product.

<b>Product A</b>	<u>Per Unit</u>	<u>Total</u>
Price	\$10	\$10,000
Variable Costs	\$8	\$8,000
Fixed Costs Allocated	<u>\$3</u>	<u>\$3,000</u>
Loss	\$1	\$1,000

<b>Product B</b>	<u>Per Unit</u>	<u>Total</u>
Price	\$15	\$15,000
Variable Costs	\$11	\$11,000
Fixed Costs Allocated	<u>\$3</u>	<u>\$3,000</u>
Profit	\$1	\$1,000

Overall, the shop is just breaking even. The owner has decided to drop Product A and its losses and thereby start to make a profit. The owner acknowledges that there will not be a replacement product for Product A.

Is this decision correct?

Alas it is wrong. The fixed costs in this case are unavoidable. They will still be there whether Product A stays or goes. However, by staying, Product A is contributing \$2,000 towards fixed costs:  $(\$10 - \$8) \times 1,000$ .

By dropping Product A, this \$2000 contribution is lost. Instead of breaking even, the shop now makes a loss of \$2,000 by dropping the "unprofitable" line.

Sometimes it is straightforward to drop product lines. Examples include where the price is less than variable costs and there is no hope of raising prices or cutting costs. Sometimes it may be worthwhile to drop a profitable product line. This can occur when we can replace it with an even more profitable product if they are mutually exclusive products so that we could not have both. This is typical of retail situations where there is only just so much shelf space available.

### **14.17 Relevant Costs**

Relevant costs are those that will affect or be affected by a decision. There is no hard rule as to whether any particular cost is relevant or not. It requires some thought by the analyst in each particular case.

A cost that is relevant in one decision may be irrelevant in another. A fixed cost may be relevant or irrelevant, depending on the circumstances. Even variable costs may be irrelevant in special circumstances.

The only guide is whether the presence of the cost (or revenue) has any effect on the outcome. If it has no effect, then it is irrelevant. If it has an effect, it is relevant and should be included in the analysis.

Two examples may help illustrate the position.

Firstly, there is the case of the firm which has invested \$50 million in plant and equipment producing slide rules. Sales have now stabilised at zero.

The firm is considering converting the factory over to producing calculators at a cost of \$20 million. This will have the effect of making the machines producing slide rules unable to produce. Therefore, the \$50 million invested in the slide rule plant will be made redundant.

Is the cost of investing in calculators \$20 million or is it \$70 million (\$20 million conversion costs plus the \$50 million write off of the slide rule plant). Logic tells us that the \$50 million write off is irrelevant to the decision to enter into calculator production. The plant was already useless. Simply having to admit this now should not affect our decision to go into calculators.

This seems obvious. However, it can often be clouded by politics and attempts to cover up dud decisions - both in business and government.

In the second example, a firm is thinking of adding a new product line to its business. It has worked out its revenues and costs to see if it is profitable. As part of the exercise in estimating costs, it was decided to split the costs of the head office management function between the new product and the existing product. This was despite no increase required in head office costs to administer the new product. Such a decision is typical of many head office accountants.

While this allocation of head office costs may be admirable in terms of cost allocation, should these costs be included in the analysis of whether to introduce the new product line? Are they relevant costs to our decision?

Hint: the answer starts with "n".

We cannot give a blanket ruling that variable costs are relevant and fixed costs are not. The answer depends on the circumstances.

The only guide is the **with / without principle**.

If you go **with** a project, what revenues and costs do you have? If you go **without** the project (do not proceed), do you still have those revenues and costs? If the answer is that you have the revenues and costs both with and without the project, then those revenues and costs are **irrelevant** to the decision. They are there anyway and are not affected by the decision. They should be excluded from the decision..

However, if you only have those revenues and costs with the project (you do NOT have them without the project), then they are **relevant** to the decision and should be included in the analysis

## 14.18 Restructuring

If the standard business improvement actions and strategies are not sufficient to achieve the desired outcomes, more radical action may be required. This is often referred to by the term **restructuring**. Restructuring generally refers to actions to alter the ownership of liabilities and / or assets.

There are two views of restructuring:

1. Value creation (the “good” view)
2. Value or risk redistribution (the cynical view)

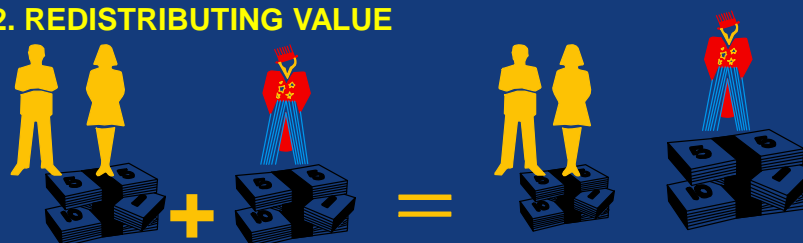


## CORPORATE RESTRUCTURING: TWO VIEWS:

### 1. CREATING VALUE



### 2. REDISTRIBUTING VALUE



#### 14.18.1 Value Creation

In value creation, we sometimes find that assets have more value (i.e. earning power) in different hands.

Some sources of value creation include:

- Reducing complexity. For example, the corporate structure becomes so complex and unwieldy, that no-one understand it any more, including investors and lenders, or we need a simpler management structure to make decisions fast (as in the case when Graeme Hart took charge at Burns Philp)
- The buyer can make better use of the assets. This is especially so if the buyer can add the assets to an existing business without the need for matching overheads. Incremental acquisitions to fill in gaps in geographic distribution or customer segments would be an instance. Toll Holdings grew phenomenally in the 1990's and the new millennium as shown in the list below. Most of these businesses were bought cheaply because they were not of much value to their existing owners. But in the hands of Toll, they were added incrementally to Toll's existing freighting businesses without the overheads and then Toll ran the businesses better. In some cases, Toll was even paid to take the businesses off the hands from their previous owners due

to their losses. Toll was able to turn such business around very quickly, sometimes within 6 months. Toll had great knowledge of the businesses it was buying.

Toll only really tripped on the two publicly listed companies it bought: Finemores and Patrick Corporation. But they were big trips. The biggest fall was Patricks. In the end, Toll was forced by the ACCC to spin off many assets that became Asciano. Toll suffered badly and the share price more than halved. Eventually, Toll was taken over by the Japanese postal company in 2015.

- Remove negative synergy. It is possible that a business unit can inhibit or reduce the profitability of the entire corporation. One example is where a business unit is viewed as a competitor to potential major customers and they are refusing to deal with the main business as a consequence.

Cynics could point to other examples where companies with asbestosis liabilities are hived off or quarantined from the main business to avoid the responsibility of the liabilities.

- Removal of costs. A prime example (actually many examples) has seen the Packers privatise various public companies to reduce the costs (and scrutiny) of publicly listed vehicles so saving listing fees, annual report distributions and other costs.
- Management incentives. The classic case here is for a management buy out (MBO). Management may have grown complacent in a stable business. The high gearing and personal stake in a leveraged buy out can re-energise management and reinvigorate the focus on cost control.
- Funding. Reconstructions can involve adjustments to the liabilities side of the balance sheet. During the present recession, there have been many companies seeking to replace debt with equity in order to realign funding risk with reduced cash flows. We may also seek to restructure liabilities by timing of payments or fixed to floating interest or vice versa.

### 14.18.2 Redistributing Value

Cynics would see reconstructions being a case of the smart or powerful taking from the dumb or weak (in the case of earnings or assets) and giving to the dumb or weak (in the case of liabilities and costs).

Examples of redistributing value include:

- Management taking value from shareholders. In contravention to **agency theory**, some managers act more in their own interests rather than the interests of the shareholders. This may range from issuance of cheap options on shares to excessive salaries to excessive management perks (junkets, jets and jacuzzies, etc).
- Majority shareholder taking from minority shareholders. There have been too many examples for our libel lawyers to handle but you can probably think of several.

Minority shareholders may be lumbered with the loss making operations via transfer pricing or by paying excessive management fees to the majority shareholder's interests.

If you are a minority shareholder in a private company, it is worthwhile to take a leaf out of the practices of venture capitalists when in minority positions: ensure a strong shareholder agreement for protection.

- It is possible for a minority shareholder to hold the majority shareholder to ransom too. Greenmail by a minority shareholder preventing full acquisition by the majority shareholder is one example. The case of the young investor in BrisCon calling a shareholders' meeting to wind the company up and so avoid the call on the shares was against the interest of the major shareholders who eventually bought out the voting rights of this one minority shareholder in order to scuttle the vote to wind up.
- Reducing tax. In this case, the government (and all other taxpayers) are ripped off by restructures designed to minimise tax in the home country. Changing domicile of the head office, avoiding sales tax, stamp duties and other imposts are all part of the arsenal for tax minimisation. Consider the tax arrangements of Google, Apple, Paypal, James Hardie and many others.

- Raising gearing or other liability restructuring. More subtly, taking on more debt can transfer risk from the shareholders to lenders. This may not require outright deception. Adding new lenders is one way that companies have geared up far beyond the intention of the original lenders who find their security position diluted if they took no preferential security as is often the case in negative pledge lending.

In summary, reconstructions can add value, especially if they remove negative synergy or where the assets can be better utilised by the new owner.

When it comes to the cynical view, a quote from legendary investor Warren Buffett should be kept in mind: *“In the long run, managements stressing accounting appearance over economic substance usually achieve little of either.”* We generally remain wary of just shuffling deckchairs on the Titanic. We should have a preference for real actions and real results.

## 14.19 Market Appraisal

The final tool to be considered here is a market assessment. This will provide information on the customers, attractiveness of the industry, some competitor information, how the company and its products are viewed by customers, any gaps in the product and service offering (gap analysis) and growth opportunities.

The results will feed into the final analysis: the long term positioning of the business.

Some of the tools used include:

1. Economic forecasting
2. Industry Analysis e.g. “Porter Analysis”, microeconomics, product life cycle, legal and environmental issues, technology
3. Environmental scanning (STEEPLE or similar mnemonics are used)
4. SWOT analysis (Strengths, Weaknesses, Opportunities & Threats)
5. Competitive mapping
6. Value chain analysis
7. Market position
8. Market growth and development forecasts

A final report on the market by major market and customer segments should clarify the position and actions needed to defend against threats and to take up the best opportunities.

## 14.20 Take Aways

This has been the longest chapter because it is where most of our interest is likely to lie. We have touched on several analytical tools and there are many more.

Throughout your professional management life, you will add and hone skills at using such tools.

In an improvement scenario, the emphasis generally moves from the cash focus of survival mode to profit as a measure of financial performance. We need to consider long term profit and not just immediate success, especially if short term actions may harm long term performance.

We first look to check and consolidate gains made in the survival mode if applicable.

A practical tool for analysing a business for profitability improvement is the Du Pont framework. Using this tool, we can model the business through its balance sheet and income statement. Power comes from quantifying the results.

The Du Pont framework reminds us that there are four basic actions to improve return on investment (ROI): raising prices; cutting costs; boosting sales volumes; and, reducing assets. Note that raising prices and volumes have more impact than cutting costs and assets.

We can then use break even or contribution analysis to test and check many of our decisions. Logical decisions require us to only include relevant costs and revenues in our decisions. In reality, this can be difficult to determine, although we have guidance from the “with / without” principle.

Finally, we begin to look at the longer term, beginning with an appraisal of the markets in which the business operates.

## 15. Growth and Positioning

### 15.1 Strengthening

As with the improvement phase, we first ensure our house is in order and we should consolidate our position before embarking on any growth strategies.

By now, deficiencies in the business should have been identified. These deficiencies may be internal such as poor management information systems or disaffected workers and so on. The deficiencies may be competitive such as high cost position or poor location. Deficiencies may also be related to customer satisfaction such as poor distribution channels, inferior product or service, ineffective marketing or lack of product innovation.

The business has a basic choice regarding major identified deficiencies: fix (if the investment is worthwhile) or bypass with strategy. To do nothing is to leave the company vulnerable if the deficiencies are significant.

Some deficiencies or weaknesses may relate to risk such as a poor management or costing system. Other weaknesses may revolve around competitiveness or customer satisfaction such as cost control, poor service or lack of innovation.

Remember though, your cost benefit analysis. You are not in search of the excellent company: it is likely to cost more than it is worth, plus the world keeps changing anyway. Also, a weakness is always relative – it is only a major weakness if you have it worse than your competitors or potential new competitors.

### 15.2 Growth Goals, Fads and the Halo Effect

It is almost an article of faith that to be a successful business, you must have growth.

But why must we have growth? Remember the goals you set back in Chapter 1 – that is what you are really after.

Nonetheless, the growth goal has been ingrained into the management psyche.

Books such as “*The Circle of Innovation: You Can’t Shrink Your Way to Greatness*<sup>18</sup>” by Tom Peters pander to the populist pandemic for growth.

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<sup>18</sup> Tom Peters, *The Circle of Innovation: You Can’t Shrink Your Way to Greatness*, Hodder General Press, 1999

Tom Peters, with fellow McKinsey consultant, Robert Waterman wrote the all time best seller of management books: *In Search of Excellence*<sup>19</sup> in 1982. For this book, they surveyed 62 companies that they and fellow McKinsey consultants considered to be top performers. The original group of 62 companies was refined to 43 before printing because some of the original “winners” were starting to lose before the book was completed. The success of this book, selling 3 million copies in the first 4 years, spawned a plethora of simple management guides. Peters wrote many himself, including the *Heart and Soul of Excellence* and *A Passion for Excellence*, not to mention *The Pursuit of Wow!*

The publishing success of Peters has encouraged many emulators including Jim Collins’ *Good to Great*.<sup>20</sup> How can anyone rail against books with such emotive titles exhorting us to excellence and greatness?

These books resonate with managers seeking the quick fix. Typically, the books have identified some “excellent” companies and all you need to do is to copy their practices.

The practice is known as the **Halo Effect**, identified by psychologist Edward Thorndike in 1920. Just copy these companies and you too can bask in the glow of their haloes. Please send \$50 in small bills or cheques made out to cash to my Swiss bank account.

The Halo Effect in management has been well exposed by several researchers, including **Phil Rosenzweig**<sup>21</sup>, a professor of strategy and international management at the International Institute for Management Development in Switzerland. Rosenzweig has a number of items to check for fads (see his website).

The halo from *In Search of Excellence* did not take long to tarnish. By 1984, *Business Week Magazine*<sup>22</sup> reported that of the 43 'excellent' companies one-third were in financial difficulties within five years of Peters and Watermans' surveys. Some of the companies originally identified included such losers as Atari, DEC and Wang Labs.

As Rosenzweig points out, real life is not as simple as following a few copied practices. Life is richer and more complex. Reality requires the business manager to

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19 Tom Peters & Robert Waterman Jr., *In Search of Excellence*, 1982

20 James C Collins, *Good to Great*, William Collins, 2001

21 Phil Rosenzweig, *The Halo Effect: . . . and the Eight Other Business Delusions That Deceive Managers*, New York: Free Press, 2007

22 *Business Week*, *Oops. Who’s Excellent Now?*, November 5, 1984

critically think about the situation and the needs of the business. Then unique strategies are devised to meet the circumstances.

### 15.3 The Growth Choices

First, we need to be clear as to what growth we are seeking. Amazingly, many businesses view sales growth or some similar measure (like market share) as the growth goal.

Some of this focus on market share can again be sheeted home to populist management writers and even some studies such as the Profit Impact of Marketing Strategy (PIMS). PIMS started as a study in General Electric in 1960, was taken over by the Harvard Management Science Institute in 1975 and has been run by the American Strategic Planning Institute since 1975. While PIMS does look at competitive factors beyond market share, most of the commentary has been on market share. The more market share, the more profitable. The Boston Consulting Group's business portfolio model of cash cows to fund the stars while dropping the dogs and being undecided on the problem children runs on a similar premise that market share is good in its own stake.

The facts just do not support the proposition. We have many examples of companies with major market share being absolute dogs (e.g. Southcorp in the Australian wine industry before it was taken over by Fosters who then had major market share in wine and wished it had none) while there are many, many smaller companies that are far more profitable than their bigger competitors.

More of this myopic view about sales and market share can be explained by the necessity to have sales in order to be in business. The argument is that if some sales are necessary, more sales are better. The sustainable growth rate formula (see Chapter 6) has already shown us that too much sales growth can strain the cash flow and financial viability. But even beyond sustainable growth rate, there is little point in taking on more sales if it does not add to more profits or at least better cash flow. Our challenge should be for **profitable growth**.

That said, we have four basic business areas in which to grow sales and hopefully profits. These are shown in the matrix below.





### 15.3.1 Market Penetration Strategies

In this quadrant, the firm continues to supply the same markets with its existing products and services. Growth is achieved by market penetration strategies: seeking to either grow total use of the product by the market or else to capture market share off competitors. This is how most companies seek to grow their sales and hopefully, profits.

It is the quadrant where the business should feel most “comfortable” in that it knows the products and the market.

Market penetration strategies can be reasonably successful for the businesses with relatively small market share. Going from 4% market share to 6% market share in a static market would effectively increase the sales of the business by 50%. Such a market share increase is unlikely to attract retaliation from the bigger players. Incremental improvements to the business can deliver such results e.g. improving distribution coverage, effective advertising, product features.

Companies with large market shares find it both mathematically and practically difficult to grow rapidly in their home market. Such companies need to consider the other quadrants in the matrix if growth is the goal.

### **15.3.2 Product Development Strategies**

In most cases, this is the least risky quadrant to choose when moving beyond the home market. While we need to learn about making and delivering new products and services, we are remaining with our established market demographic. In most cases, it is more complex to learn about new customers (what they want, how they decide and how to reach them) than it is to learn about new products.

Such is the argument behind cross selling and on selling. You already have the customer so what else can be sold to them. Hence banks want to sell wealth management products and even insurance and travel to their customers. We then have buzz phrases like “bigger share of wallet”.

Unfortunately, you may not only find your competitors doing much the same but you could find businesses from other industries now targeting your traditional customers.

### **15.3.3 Market Development Strategies**

In this quadrant, we take our existing products and services to new markets: either geographic (to new regions or countries) or demographic (new types of customers in our existing locale).

If there is a want for our product or service that is not being currently met in other markets, then such a strategy should be reasonable. Otherwise, you will need to enter the market with little knowledge of the customers and take market share from established locals – not easy!

### **15.3.4 Diversification**

If you like challenges (and risk) then try selling products and services you do not have experience in, to customers you know little about.

There are examples of success but they are rare and usually required considerable luck. There are many examples of disasters.

However, if your existing products and services are at the end of their product life cycle and / or your market is shrinking, you may need to consider a radical diversification move. Examples include modem manufacturers changing to become mining companies.

Avastra, was a public listed company in Australia. It floated as a biotech company providing laser activated sleeves to replace sutures in surgery. The fact that the technology did not work and the company was banned from proceeding with trials

put a dampener on the business plan. So the company was taken over in 2007 by other investors who turned Avastra into an owner of sleep therapy centres in America. The sleep therapy business continued to rack up losses and the share price bumped along around 5 cents until ultimate failure. The company was liquidated in 2013. Avastra tried for new services in a new country to a new market where it had neither the competence nor competitive advantage.

### **15.3.5 Round Up**

We shall only briefly look at general strategic directions here. Every company has a unique situation and will need its own unique set of strategic directions with accompanying detail for the implementation plans.

What we see is that small companies normally have potential to achieve significant sales growth in their existing sphere of products and markets by picking up market share. Large companies normally need to select fast growing markets to enter in order to achieve above average growth rates.

If the present market is believed to be saturated or that gaining additional market share is difficult, then product development or market development are then considered. Diversification is normally viewed as a last resort because of its risks but it may sometimes be required to break out of a declining product or market.

## **15.4 Assessing the Environment**

To properly cover industry analysis and strategy formation is another book in itself. At least here though, we will start you thinking about the long term assessment and management of your business.

The basic questions are: **What is happening and where is it going?**

These questions are frequently implied under several headings, including **external analysis** and **environmental scanning**.

If we are going to position our business for the future, we must first answer these questions. We need to know where we want to be in the future and where the best opportunities lay.

There are a number of tools to guide the analyst in answering the question.

## **Socioeconomic Trends**

These are sometimes referred to as megatrends. These are long term fundamental movements. They may not predict the next month or even year, but their movement is like a glacier: inexorable. They are very useful guides when planning how to position your organisation say 5 to 10 years from here.

Some megatrends at the moment include

- ❑ aging populations in the Western World
- ❑ strains on the environment – resource depletion, pollution, global warming
- ❑ rise of consumer markets in China and India
- ❑ rising power of consumers
- ❑ ubiquitous information (internet, mobile phones, etc)
- ❑ skill shortages

What do the megatrends mean for your business?

## **Localised Trends**

Often, localised trends may dominate the future. Issues here may include

- ❑ growth rate in your markets or area of operations
- ❑ product life cycle
- ❑ pace of technological change
- ❑ degree of substitution

## **Consumer / User Behaviour**

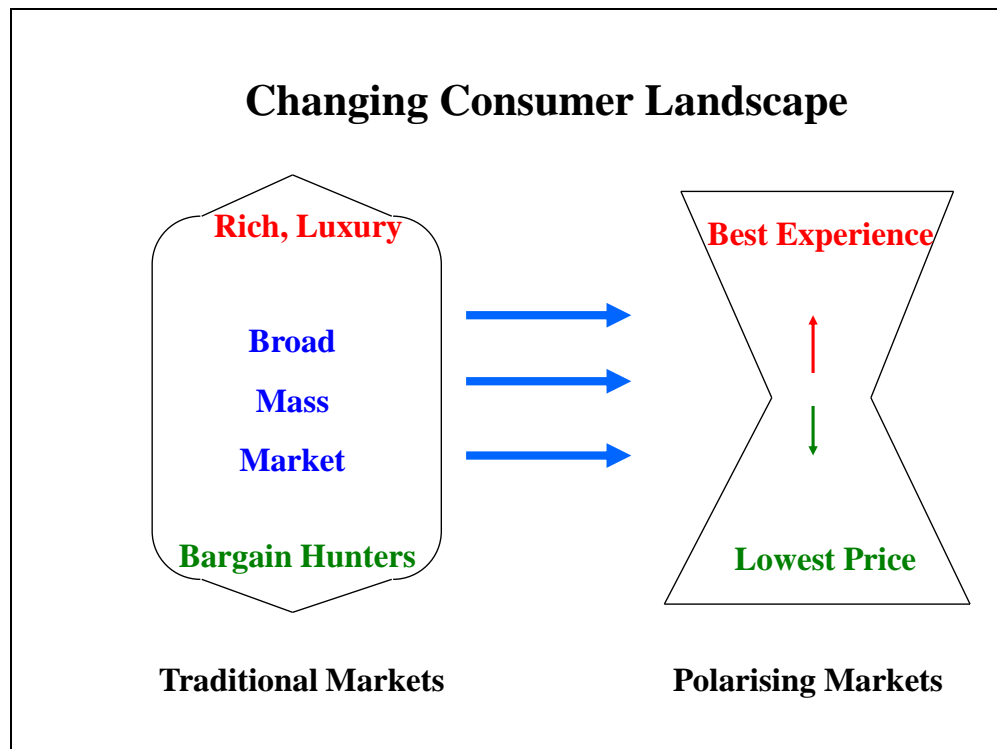
This may also be referred to as **psychometric behaviour** and other terms. What is happening to our consumers or clients?

Two major user trends being found generally are:

- ❑ Greater segmentation – the idea of the large mass market is rapidly becoming obsolete. Customers and clients are being satisfied with ever more targeted offerings. Just ask the mass media newspapers, magazines and television stations about their dwindling markets and influence.
- ❑ Polarisation away from the middle market. Not only is the mass market segmenting, but markets are seeing growth at the top end in terms of quality and growth in the bottom end for those who see value as the lowest price. Suppliers to the mass middle market are again being squeezed. See the diagram below.

For your own product or service, what is happening with the client or customer? What are they doing and what do they want? How fickle are they? Are they sampling between suppliers? Is brand or image important? Is price the key determinant or is it quality or availability or convenience (or all of the above with today's consumer)?

What are your competitors offering? Offering more for lower prices is a powerful enticement if it is sustainable.



### PEST and PESTLE

These mnemonics can refer to different items. In general though, PEST refers to:

- Political
- Economic
- Social
- Technological

More recently, with the rising importance of the environment (see megatrends) and of lawyers, we see the mnemonic of PESTEL (or PESTLE if you want it to spell a word). PESTLE stands for:

- Political
- Economic
- Social
- Technological
- Legal
- Environment

For those seeking ever larger mnemonics, there is also **STEEPLE**. Here, the “S” becomes socio-demographic and the extra “E” becomes Ethical factors. STEELED adds demographics for the D.

While these mnemonics are favoured in the public sector and not-for-profit sectors they are really only checklists. Usually additional detailed reminders of what to check are given under each heading. The headings by themselves do not yield much insight or show interactions.

You need to list what is happening under each of the headings but the main analysis and insight comes from synthesising the points to gain a coherent view of the future and what that means for your business.

### **Case Example:**

We looked at the example of AutoNexus and its CEO, Paul Morris in Chapter 1 when considering setting goals.

But the goal Paul set for the business was not just plucked out of thin air. The first goal set proved likely to be unattainable when the market was fully assessed and even after some radical plans had been considered.

As mentioned in Chapter 1, much of the push to reconfigure the company came from an assessment of the environment and predictions of the future.

Back in 2007, while most of the industry was basking in consecutive years of record vehicle registrations, Paul and his team were seeing clouds on the horizon. Some of the STEEPLE issues included:

- Doubts about the sustainability of such record registrations (actually they have continued)
- Growing environmental concerns about cars (including their disposal)
- Potential very cheap imports of Chinese and Indian cars and what this would do to the low end of the market and used car prices
- Changes in the dealer distribution network
- Polarising of market into very cheap prices or great service

Consequently, even though there were boom times, AutoNexus management considered that some major changes needed to be made to meet the future. This was a big call when everything seemed so good (see the Sun Tzu quote later).

### **Microeconomics**

Microeconomics offers detailed theoretic explanation of how industries, firms and markets work with some forecasting power (at least movement towards dynamic

equilibria). This has been at least since Edward Chamberlain's Theory of Imperfect Competition and Joan Robinson's The Economics of Imperfect Competition, both published in 1933. The theory also incorporates behaviour.

The microeconomic models are highly developed and the theory can become complex. Some of the concepts we gain from study of microeconomics include:

- ❑ Nature and behaviour of industry structures: monopoly; oligopoly; competitive; and, perfect competition (a value judgment term of economists where super profits are competed away)
- ❑ Demand and supply interactions leading to price and quantity decisions
- ❑ Income, price and cross (substitutes) elasticity concepts
- ❑ Movements and adjustments → dynamic equilibria
- ❑ Consumer behaviour, utility and sovereignty
- ❑ Cost structures and behaviour – effects of fixed costs and marginal cost and marginal pricing
- ❑ Private versus public goods and getting a “free ride” on use of public goods
- ❑ Not adequately pricing or costing public resources such as air, water, some infrastructure, etc. Carbon taxes are a response to such a free ride.

### **Porter's 5 Forces**

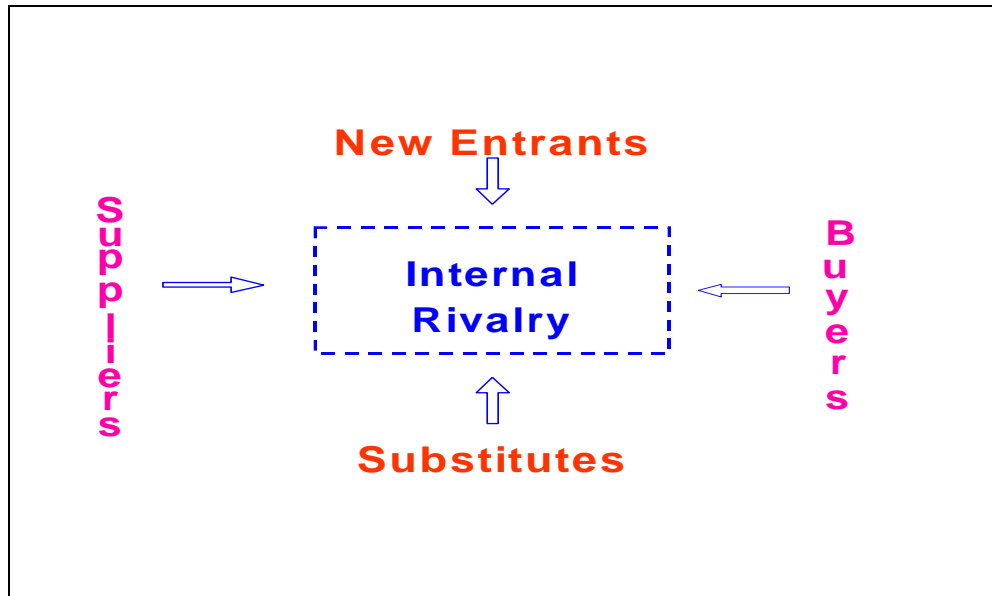
Michael Porter was a microeconomist. In the late 1970's and into the 1980's, he began developing his model on industry analysis. Basically, it is Chamberlain's and Robinson's microeconomics made simple for non economists.

Porter's model had four major innovations that made it attractive to business strategists:

1. It made microeconomics understandable and usable to the lay business community.
2. The model forces the analyst to think wider than just the business and its competitors in defining the industry: Porter adds suppliers, buyers, new entrants and substitutes to the definition of the industry.
3. The model implicitly looks at interactions between factors within each of these sectors of the industry and also between the sectors themselves.
4. By describing the sectors or factors as “forces”, the model looks at where the industry is being pushed or is heading – what will the future look like.

Given these features, it is little wonder then that Porter's 5 Forces model proved both useful and popular. It has stood the test of time reasonably and is still the most widely used environmental analysis tool in business strategy development.

His model is shown in the diagram below.



Note that traditional microeconomists since Chamberlain have described a highly competitive industry where producers can only make normal returns as “perfect competition”. Porter's view is to try to avoid such industries. The mission instead, is to gain and sustain, above average profitability (“supernormal” profits). In a closed system, this is primarily a zero sum game, so the supernormal profits of the industry players (those in the internal rivalry sector) must normally be taken from the other sectors e.g. from the suppliers or buyers or else from each other.

Porter provides a checklist and factors for each force to determine its effect on the industry. It is almost a “paint by numbers” guide to microeconomics for industry analysis.

### **Criticisms of Porter's 5 Forces Model**

The model, despite many advantages, does have flaws or shortcomings and these flaws have been growing wider as time moves on. Porter either neglects or downplays the importance of government as a force. This is counter to experience in many countries and industries and counter to one of our megatrends cited earlier.

The model is still largely descriptive. Many users of the model try to apply scores to each of the factors but it is difficult to give an overall score or rating, especially as the weighting between the sectors varies across industries and time.



A practical issue is defining the “industry” being analysed. Where does the analyst draw the boundaries to the industry in terms of geography and scope of the products / services offered? Practicality suggests a tight definition since most detailed analysis is normally conducted on the “internal rivalry” sector and a broad definition might entail too much detailed analysis and too much time taken. Yet, a tight or narrow definition runs the risks of marketing myopia and being “blindsided” to new rivals from beyond the industry definition used.

The model is not sufficient in itself, although to be fair, Porter never claimed such status. It is not a complete model for analysing the external environment. Nor is the model sufficient across our entire scope of strategy. Porter’s model is lacking in assessment of internal analysis or capabilities but rather relies on other tools such as SWOT or Value Chain, which is fair enough.

Overall, the model is a useful **tool** for analysing an industry and the interaction of the forces. It is dynamic in that it seeks to predict where the industry structure and behaviour is likely to be heading. But the model is certainly not a complete answer or even sufficient analysis in itself.

Distinguishing between customers and consumers and giving more attention to how consumer preferences are shifting is an improvement. When supplemented with other tools such as megatrends and localised trends, product life cycle analysis and technology developments, the model can lead to insight and compelling forecasts.

## **15.5 Internal Analysis and Strategies**

When the external analysis has been done, we need to conduct internal analysis: **what is happening within our business.**

We have all undertaken a SWOT analysis on internal strengths and weaknesses and external opportunities and threats. We have all probably been dissatisfied with the tool as vague.

The use of the tool can be improved by quantifying data, checking relativities against competitors and focusing on the major issues. We also need to supplement the SWOT analysis with other tools such as value chains, the McKinsey 7S diagnostic and competitive mapping.

We then move to devising possible strategic choices. Here, the SWOT analysis is quite useful as a guide to formulating the strategy. Our strategy should build on our **strengths** to minimise or offset our **weaknesses** while picking up the best **opportunities** and defending against the most serious **threats**.

We can use a number of methods to assess the strategic choices to choose the one(s) that best suit our business and our goals.

The steps sound simple but the thought processes are complex and require a holistic view of the external and internal environments and ability to synthesis it all into a strategy that can be communicated and implemented.

## 15.6 What About Macroeconomics?

You may have noticed that in all of the above tools, there was no mention of macroeconomic issues like employment, interest rates or recessions.

That is deliberate.

The economic cycle does just that – it goes up and down. The recessions pass. Good times will come again. Then recession will come again and so on. But there is little in the economic cycle that will have long term fundamental effects.

We find in business that generally, the macroeconomic effects have less impact than the industry characteristics such as product life cycle, degree of competition, concentration of buyers and so on. Finally, it is largely the firm level characteristics that usually have the most effect on business performance and whether the business will become distressed. These firm specific factors generally sheet home to management and include factors such as cost levels, culture, debt gearing levels, product innovation and the like.

Peter Drucker, the management guru, was also a sceptic about the effects of macroeconomics on business trends and forces.

Despite the protestations of failed business leaders, most of the problems come down to management. Admittedly, there will be times when industry or macroeconomic forces may be overwhelming, but those times are generally rare and short lived.

## 15.7 Take Aways

Do not get so close to the day to day problems of a business that you, as the leader of the business, spend all your time **in the business**. As the leader you must spend some time **on the business**.

Administrators work in the business. As the business leader, you must get your head up at times and look to the future. You need to know where you want to go (remember your goals in Chapter 1) and have a view of the path to travel. Then communicate this to your staff (and maybe customers) and lead the way.

Certainly you need to make sure your house is in order and the business is running properly before setting out. That is why the earlier chapters were devoted to finding out what was happening and making sure your business was on a firm footing.

The Americans have a quaint saying: *“how do you drain the swamp when you are up to your arse in alligators?”* Once we have the alligators away from our arse, we can look to achieving the bigger picture. Your prime job is to have the long term goal of draining the swamp.

For many businesses, the ultimate goal is considered to be growth. Be aware that you (and your staff) may have other goals! At the least, qualify any growth goal to be **profitable growth**.

Depending on the circumstances, there are 4 broad strategies for growth:

1. Market Penetration
2. Product Development
3. Market Development
4. Diversification

Each needs to be assessed for its potential returns and potential risks. Then you need plans on how to achieve your goals.

In a rapidly changing and competitive world, it is unwise to set rigid, long term plans. But you still need an overall goal and a rough route map, allowing for flexibility and detours along the way. Scanning the environment and analysing the trends, helps to improve your chances of making the journey relatively unscathed.

## 16. Wrap Up

We have endeavoured to present a balanced view of operating throughout the business or economic cycle.

We have looked at techniques for determining how your business is performing and shown tools for turning around a distressed business or improving a good business even further. These tools and techniques are skills that should be in the kitbag of every business leader – for good times and bad.

In this final chapter, we will take a brief recap and then look at concluding messages.

### 16.1 Recap

1. As the business leader, remember to raise your head, at least occasionally to see the big picture and to focus on your big, end goal(s).
2. Despite the dramatic rhetoric, few businesses fail. However, many more do suffer distress some time during their lives. There might be an increase in distress during a recession. Most businesses that come into distress arrived there after years of neglect and mismanagement. Sometimes, global or even local events may overwhelm us but such occurrences are rare. Let us hope that Covid19 or some other pandemic does not repeatedly surface!
3. A starting point for understanding how our business is performing and its current financial state are the financial accounting statements: balance sheet and income statement. We need to know enough of the accountants' language of accrual accounting to interpret the statements.
4. Ratio analysis helps us to “get behind” the raw figures of the accounting statements to determine how we are travelling. Benchmarking or trend analysis improve the quality of our analysis to decide if the ratio figure is “good” or “bad”. Key ratios or key performance indicators (KPI's) should be watched closely and communicated as widely as commercial sensitivity will allow.
5. A key metric for any business, distressed or not, is the cash flow forecast. It needs to be accurate but not precise. That means it should be mathematically correct with reasonable assumptions but not so detailed as to be unwieldy. It is only a guide. To be useful, the cash flow forecast should be easy to operate to conduct sensitivity and other analysis.

Certainly, conduct the cash flow forecast and other tests for solvency regularly. The risk to personal assets and of incurring other sanctions by trading while insolvent is high.

6. A short hand cross check on the cash flow forecast is the sustainable growth rate formula. It shows how fast we can grow our sales without blowing out the gearing to dangerous levels. Faster growth will require us to adjust the levers accordingly: higher profit margins, better asset utilisation, reduced dividends or inject more equity.
7. For every business there is a sensible level of debt. It is a balance between gaining the benefits of the tax shield or subsidy on interest costs, balanced against the costs of bankruptcy from too much debt. Stability or volatility of future cash flows is the main determinant of how much debt we should sensibly have in the business.
8. If a business is in distress, then the focus is on short term cash flow for survival. Once a breathing space has been achieved, we look to see where the business is bleeding cash and to staunch the wounds.
9. A business seeking to improve will have a medium term outlook. The Du Pont framework reminds us that there is more to life than cutting costs or reducing assets. Indeed, the two biggest winners are usually raising prices and increasing sales volumes. While cutting costs and even assets can be quick and simple, the big payoffs require time and hard work to be in a strong competitive position. This means good strategy and good implementation.
10. Good strategy requires us to understand what is happening around us and the direction in which it is heading. We also need to know what our business has going for it and where it may have deficiencies: strengths and weaknesses or internal capabilities. Strategy is devising choices on how to operate in the future to meet the external and internal conditions.
11. If we do pursue a growth goal, we should ensure it is profitable growth, not just sales growth for the sake of it. Small businesses can usually achieve their immediate growth goals from picking up additional market share via market penetration strategies.

Larger companies need to consider branching out to new products or new markets. Picking a growth market is a key to growth success for large companies. Diversification can be considered although the risks of unknown products and unknown markets are considerable.

## 16.2 Luck

It has been an article of faith by management writers who are trying to plug their latest snake oil to ignore luck or chance. These spruikers are trying to make money by selling you their latest simple and patented ideas that are fool proof.

But luck or chance does occur: both good and bad. When Napoleon was asked what qualities he looked for in his marshals, he replied that he was looking for just one quality: “was he lucky?” Napoleon himself was lucky in some of his victories. On the other hand, he was perhaps unlucky to lose at Waterloo when his cavalry under Marshal Ney failed to turn up on time due to some blunders.

Research into why companies fail shows that we can perhaps predict a company running into distress. Picking actual failure is far less certain. There is a discontinuity or leap across from severe distress to failure and luck plays a role here.

Some companies call in the administrators too early, while they are still viable or there are ways out. Other companies survive which should have died. Burns Philp survived despite massive mismanagement because neither the banks nor the biggest shareholder (Hart) realised just how bad it was and so invested more into the business.

If this sounds like it is all a lottery and that we should just forget about good management, please think again.

**Good management and good strategy are no guarantee of success.**

**But they do improve the odds greatly.**

On the flip side, bad management does not lead to a certainty of failure, but you will need outstanding luck to keep surviving.

How much of the rise and fall of electrician turned coal baron, Nathan Tinkler, was due to good management and how much to luck? (A large part of the rise was also due to true entrepreneurial risk taking).

### **Case Study: Kelso Revisited**

In Chapter 13, we looked at the Du Pont framework for business improvement and we saw the problems with Kelso Australia, the wheelbarrow company.

Logical analysis shows many common sense actions to take to turn the business around. These include laying off the excess workers (it is not all “touchy feely”), laying off the excess managers, product and customer rationalisation, streamlining the manufacturing process, stopping consignment selling, collecting debtors faster and so on.

All of these actions make an improvement and help. But they were small beer compared to the two big decisions that had to be made. The first was to drop the idea of the motorised wheelbarrow. It was never going to fly and everyone from the CEO to the turnaround consultants, to the marketing consultancy, to customers thought so. This action would have saved \$1 million in development costs and could be implemented immediately at no cost.

The second decision needed to be made was the sale of the premises (the NSW Government Housing Commission was offering \$4.5 million now with a lease back for up to 2 years to allow the business to move). This money would have paid off the bank loan and saved the \$800,000 in interest less the \$200,000 in rent on the lease back. Better yet, it would remove all debt from the business and have the bank off their back with money left over to invest in other improvements.

Alas, the Chairman of Kelso had considerable influence over the major shareholder. The Chairman did not want to drop the motorised wheelbarrow (it was his dream from the backyards of Adelaide) and he planned to redevelop the site later and become a multi millionaire property developer. When the business went into receivership, the receiver canned the motorized wheelbarrow and liquidated the property straight away. Unfortunately, the economy was then in recession and the property sold for just \$1.8 million – so someone got a bargain.

The most frustrating aspect for everyone, but especially the newly appointed CEO, was that Kelso could have been turned around and been a great business. But it had the bad luck to have a myopic but influential Chairman. After the receiver came in, we found out that the Chairman’s business experience amounted to two other businesses that had also gone bust!

The problem with bad management does not stop with them running the business into trouble in the first place. Bad managers often prevent the turnaround. Often bad managers will not even recognise there is a problem. If they do recognise the problem, they are then unlikely to know what to do or have the skill set to achieve the turn around. If you follow the probabilities down through these stages, you will begin to understand why so many businesses continue on the path to destruction when everyone else can see the problems.

## 16.3 Beyond Recessions

Recessions come and pass.

The strong business can actually use a recession to pick up opportunities. Toyota has been noted for its ability to pick up position and opportunities during recessions. (As an aside though, the 2008 -9 recession hit even Toyota which posted its first ever consecutive losses and a rush to grab some of the relief money being doled out by the Japanese Government).

The Commonwealth Bank used the same financial crisis to pick up just the parts of BankWest that it wanted for a very good price – certainly better value than Westpac agreed to pay for St George just before the crisis hit.

Yes, you need to be a good manager in good times and even better in bad times. But you need to manage for all seasons.

We do come out of the storm of recession. There is light on the other side.

**But you and the world will be different.**

Recessions hasten change and remove the garbage. Hopefully, at last, the US car industry will be restructured and finally aligned to customers' wants – but on past experience, you would have doubts. In Australia, the car industry has finally gone. Other industries will also disappear or be reconfigured. Already we are having legislation for bankers to take more responsibility in determining the ability of consumers to meet their loan obligations. How long will it be before the legislation is extended to SME business customers? On the other hand, Covid19 has led to calls for some renewed self-sufficiency in Australian manufacturing.

As well, most recessions only last a little while, rarely more than a year. But **the effects of a recession last longer.**

Globally, the 2008 – 9 global recession saw a triple whammy of rising unemployment, credit squeeze and asset deflation, especially housing. Such a triple whammy comes infrequently. Such recessions are deeper and longer than normal. Even when the recession had passed and economic growth resumed, it was at a much slower rate than previously for several years. Housing price deflation can last up to 5 years or more. Then in Australia it boomed. Then by 2016 it was declining again and so on.

Covid19 will have a direct impact of a year or so. But the long term structural changes around social distancing will last much longer and some industries will be fundamentally changed.



Like businesses, some economies have been better managed than others and are more able to withstand a recession than other economies. Luck can also play a part.

The Australian economy has been well managed (superannuation contributions, low Federal debt, Reserve Bank oversight and strong local banks, etc) and we have had some luck (mineral wealth near a booming Chinese economy). The luck helps but is not sufficient. Australia is better placed than most economies but we cannot be totally immune to the global events.

Whatever the immediate impact of the recession, the high growth figures prior to the recession could not be expected after the recession – despite the rhetoric of spruiking politicians. It will be a tougher business world. Now Australia is facing an economy where the mineral boom is over.

## 16.4 The Bigger Challenges

A theme in this book has been that the recessions are significant but they pass.

As a business owner or leader, you have other big issues to face, some sooner than others.

Some changes are inexorable – like the slow but certain movement of a glacier. You will not stop the glacier, you can only adjust and stay ahead. Much of bricks and mortar retailing thinks it will outlast the internet and changing consumer buying patterns but their hopes are largely forlorn and as likely to survive as video shops.

Other changes happen suddenly – what economists call exogenous shocks. Covid19 virus has been the biggest global shock in a long way. What it is doing is hastening some of the glacial changes. The virus and isolation may pass but there will be pain for some time and many industries will be changed forever.

**Global warming** and carbon taxes are a major issue that has been put on the back burner during the pandemic but they are still there and still require further response..

Allied to the environmental issues are growing **resource constraints**. This is not just oil despite the recessionary drop in global demand since 2015 and over supply by Saudi Arabia and Russia. There are resource constraints in esoteric stuff like water and air. Travel to China or India and see how important these resources are and their scarcity, if you want quality. If you think water is not important in Australia, look at the desalination plants being built and the politics of water. How long will it be before South Australia goes to war with Queensland over water for the Murray-Darling river system? (Just kidding – I hope!)

Recession may temporarily ease a constraint on finding workers as companies reduce employment and employees are less prone to job hop. Even some baby

boomers have been forced to postpone their retirement. On the other hand, rural industries relying on cheap imported itinerant workers are finding it tougher.

But eventually the demographic forces of retiring baby boomers are unstoppable – except by death in the next few decades, which is why we are trying to increase cremations and have burial plots reused (truly). **Gaining and retaining staff** will return as a burning issue.

Markets continue to segment and specialise. The days of the mass market are fast disappearing. Today, consumers expect to be able to get precisely what they want and at ever lower prices. As McKinsey pointed out a few years ago, the concept of consumer sovereignty is now dead. It has been replaced by the **consumer as tyrant**.

We are also seeing calls in mainstream society for a new economics system beyond the economics of greed and rampant consumerism. While some businesses are paying lip service to being green, the demands of consumers and staff will be for real changes in how we treat the environment and our community. Real bite will be put into these two aspects as well as profits in true **triple bottom line** reporting.

Meanwhile, the pace of change is ever quickening. **Technology** is destroying and creating industries and societies on a scale that can be likened to the industrial revolution on steroids.

To these macro trends, you can probably add as many localised trends that will affect your business.

When you think about it, there is plenty to consider beyond any recession.

Good luck!

Better still, good management!

In the good times, strengthen your business: ensure costs are under control, the information systems are adequate, gearing is not too high, products and services are being improved. In the bad times, you should be in a position to look for bargains and opportunities, to gain against weakened competitors and anxious customers.

As the master military strategist, Sun Tzu, wrote some 2,500 years ago: ***“In peace prepare for war, in war prepare for peace.”***

