# A Clear Direction 

# Your Guide to Being a Successful CEO of Your Life 

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To contact the authors please go to their website at www.acleardirection.com.au. This site contains further educational material and details of his independent financial planning practice. It also contains up to date e-mail contact and phone contact details.

## TABLE OF CONTENTS

Chapter 1 -Business Concepts ..... Page 5
Chapter 2 - Estimating Investment Returns and the Use of Models in This Book. ..... Page 7
SECTION 1 - Financial Organisation
Chapter 3 - Measuring Your Net Wealth ..... Page 11
Chapter 4 - Benchmarking Your Financial Position. ..... Page 16
Chapter 5 - Spending Less Than you Earn and Budgeting ..... Page 23
Chapter 6 - Risk and Return ..... Page 30
Chapter 7 - Record Keeping ..... Page 33
SECTION 2 - Financial Planning Strategies
Chapter 8 - Your Major Consumer Purchase - A Car ..... Page 36
Chapter 9 - Your Major Consumer Purchase - A House ..... Page 41
Chapter 10 - Reducing Consumer Debt ..... Page 46
Chapter 11 - Building a Cash Reserve. ..... Page 55
Chapter 12 - Making Additional Mortgage Repayments. ..... Page 56
Chapter 13 - The Miracle of Compound Interest and the Power of Investing
RegularlyOver Time ..... Page 60
Chapter 14 - Borrowing to Invest ..... Page 65
Chapter 15 - Contingency Planning - Insurances and Estate Planning ..... Page 72
Chapter 16 - Understanding Superannuation ..... Page 77

## SECTION 2 - (continued)

Chapter 17 - The Government Co Contribution ..... Page 82
Chapter 18 - Salary Sacrificing to Superannuation ..... Page 84
Chapter 19 - 'Where' to Build your Investment Portfolio ..... Page 87
Chapter 20 - Diversification and Asset Allocation ..... Page 92
SECTION 3 - Specific Retirement Strategies
Chapter 21 - Account Based Retirement Income Streams. ..... Page 100
Chapter 22 - Drawing on Assets in Retirement ..... Page 103
Chapter 23 - Planning Retirement with a Part Age Pension ..... Page 107
Chapter 24 - Transition to Retirement Income Streams ..... Page 111
Chapter 25 - The Basics of income Planning ..... Page 117
SECTION 4 - General Investment Topics
Chapter 26 - Understanding 'What' you Invest In: Shares, Property, Cash ..... Page 119
Chapter 27 - Realities of How Investment Markets Work. ..... Page 126
Chapter 28 - Income Versus Growth. ..... Page 128

## SECTION 5 - How We Build Investment Portfolios

Chapter 29-8 Quick Concepts that Will Make This Section Easier to Read. ..... Page 133
Chapter 30 - Indices and Index Investing. ..... Page 137
Chapter 31 - It's Time to Stop Believing in the Tooth Fairy ..... Page 140
Chapter 32 - Why Managed Funds Underperform the Index. ..... Page 145
Chapter 33 - How the Financial Services Industry Assess Managed Funds ..... Page 151
Chapter 34 - The Start of Another Investment Approach: Nobel Prize Winners, Market Efficiency and Index Funds. ..... Page 155
Chapter 35 - The Three Factor Model. ..... Page 161
Chapter 36 - Fixed Interest Investments ..... Page 168
Chapter 37 - Investor or Speculator ..... Page 172
Chapter 38 - Introduction to Asset Allocation. ..... Page 178
Chapter 39 - Decision 1: Growth vs Defensive Asset Allocation ..... Page 181
Chapter 40 - Defensive Asset Allocation. ..... Page 186
Chapter 41 - Growth Asset Allocation. ..... Page 189
Chapter 42 - Cash Studies. ..... Page 197
Chapter 43 - A Twist: High Yield Direct Investments. ..... Page 205
Chapter 44 - Passive and Index Investing - The Arguments For ..... Page 210
Chapter 45 - Passive Investing Quotes. ..... Page 216
Eureka Report Article: 'Behind Closed Doors' ..... Page 219
Eureka Report Article: 'Planner's Money Drain' ..... Page 221
Eureka Report Article: 'Dimensional Investing' ..... Page 226
Eureka Report Article: 'David Murray's Alpha Mail' ..... Page 230

## How to Read This Book

Most people won't read this book cover to cover. There will be chapters of interest, and chapters that are not as relevant. As you go through the book, you should feel free to pick and choose which chapters are relevant to you.

## Chapter 1 - Business Concepts

This book takes an overall look at a person's financial situation - from the simple issues of financial organisation like budgeting, through to the financial strategies like using superannuation and borrowing to invest through to making investments in shares, property, cash and fixed interest investments.

The focus of the book is being 'business-like' in running your personal financial situation.

The parallels between a person's financial situation and a business are significant. The key ones include:

Cash Flow - managing cash flow is one of the key issues in managing a business (if not the key issue). Similarly the cornerstone of a personal financial situation is managing income and expenses. The first hurdle to being successful financially is to spend less than you earn. As simple as this is, many people fall at this first hurdle.
'Balance Sheet' - in a business a balance sheet is the mechanism whereby the business measures their assets and liabilities, to provide a picture of their overall financial situation. Similarly, a first step in the organisation of your personal financial situation is to measure your own assets (e.g. your home, superannuation and investments) and liabilities (credit card debts, mortgages and other loans). Even if you have a 'negative net wealth' measuring this is the first step to improving the situation.

Borrowing - in a business, careful use is made of borrowed money. Businesses borrow to invest in projects that net them a return greater than the interest paid to borrow the money. They also get a tax deduction on the interest paid on their borrowing. Similarly people borrow money. Some of this borrowing is businesslike - for example borrowing to invest in a property or a portfolio of shares. People are investing in projects that they think will provide them with a return greater than the cost of the interest. They get a tax deduction for this type of borrowing. Some borrowing is not at all businesslike - for example using credit cards or personal loans to pay for something like a TV that will fall in value. This sort of borrowing does not provide a person with a tax deduction.

Strategy - in a business there are both company wide strategies, and strategies that different business units are employing. The goal of these strategies? - for the company to be successful financially. Similarly, at the personal financial level you have to identify effective strategies that you can use to be successful financially. These include:
> Investing regularly over time

Making extra mortgage repayments to get ahead financially
Using superannuation to help save tax and to invest in a tax effective environment

Borrowing to invest

Investing - businesses are often evaluating projects and looking for new opportunities to invest. At a personal finance level you need to be evaluating the best investment opportunity for your surplus income - to build assets over time.

The structure of this book is that it starts by looking at financial organisation, the key steps to getting started financially. It then moves to looking at the strategies that can be used to improve your financial situation. It then looks at the strategies specifically around retirement planning - the point in time where you become dependent on your investments to provide for your living costs. It then moves to look at investments - where and how you can invest your surplus cash flow

## Chapter 2 - Estimating Investment Returns and the Use of Models in This Book.

Being Business Like: The use of projections dominate the analysis of business projects, and the overall expectations for a business. These projections are not an exact science; however they are important in analysing goals and setting realistic targets for performance. Similarly, at a personal finance level projections are needed to see if we are on track to meet our goals.

In this book a number of calculations are done to illustrate the impact of strategies and investments over time. These are only very simple calculations, aimed at giving you an idea of what might happen. However they cannot provide exact information about long term outcomes because there is no way we can be sure of such things as:

- Actual investment rates of returns
- Legislative changes, such as changes in tax rates
- What fees might be charged in the future
- What the rate of inflation might be in the future

ASIC (the Australian Securities and Investment Commission) have a consumer website, FIDO (www.fido.asic.gov.au). They have recently looked at investment calculators, and used superannuation calculators from different websites to calculate the retirement superannuation balance of a hypothetical 35 year old. The ending superannuation balances ranged from $\$ 283,000$ to $\$ 965,000$.

This is clearly a wide range of returns, and possibly not particularly helpful. Any long-term calculation can only provide a model, based on the inputs, and should never be considered predictive.

ASIC suggests three key questions to ask relating to investment calculators. It is worth addressing these with respect to the calculations that I have done in this book, and also when using superannuation or investment calculators generally. The three questions are:

Are the assumptions reasonable?
Are related explanations clear?
Are projected benefits expressed in today's dollars?
Are the assumptions reasonable?

The first step I do when projecting financial outcomes is to set a reasonable earning rate after fees, taxes and inflation. This is the figure that is both extremely important for a calculation, and impossible to predict with any accuracy.

I think it is a figure that is often overestimated in calculating returns. I commonly see figures of $6 \%$ to $8 \%$ used to approximate investment returns after fees, taxes and inflation. I think that this is optimistic. The calculations that follow propose what I consider a more realistic rate of return.

To start to look at a realistic rate of return, let us consider what a reasonable return on a portfolio of investment assets might be. Let's consider a balanced portfolio made up of $40 \%$ Australian shares, $10 \%$ international shares, $10 \%$ listed property trusts, $30 \%$ fixed interest investments and $10 \%$ cash. Let us assume that it is a $\$ 100,000$ portfolio in total, and I have put together expected returns based on historical long run averages.

| Investment | Income | Growth | Franking Credits |
| :---: | :---: | :---: | :---: |
| 40\% (\$40,000) | (av of 4\%) | (av 7\%) |  |
| Aust. Shares | \$1,600 | \$2,800 | \$686 |
| $10 \%(\$ 10,000)$ | (av of 2\%) | (av 9\%) |  |
| Int. Shares | \$200 | \$900 |  |
| 10\% (\$10,000) | (av of 7.5\%) | (av of 3.5\%) |  |
| Listed Property Trusts | \$750 | \$350 |  |
| $30 \%(\$ 30,000)$ <br> Fixed Interest | $\begin{gathered} (\mathrm{av} \text { of } 7.5 \%) \\ \$ 2,250 \end{gathered}$ | No capital growth |  |
| $10 \%(\$ 10,000)$ <br> Cash | $\begin{gathered} (\mathrm{av} \text { of } 5 \%) \\ \$ 500 \end{gathered}$ | No Capital Growth |  |
| TOTALS | \$5,300 | \$4,050 | \$686 |

So, based on the income and growth estimates for each different investment, the $\$ 100,000$ portfolio returns $\$ 5,300$ in income ( $5.3 \%$ ) and $\$ 4,050$ in growth ( $4.05 \%$ ).

This is a total return before fees, taxes and inflation of $\$ 9,350$ or $9.35 \%$. We will not count the $\$ 686$ in franking credits here, which will reduce the amount of tax that has to be paid. If anything, the estimates used for individual asset classes may be slightly generous, however I have erred on the side of generosity, to show that even with favourable assumptions we cannot expect a high earning rate after fees, taxes and inflation.

The Reserve Bank of Australia write on their website (www.rba.gov.au) that their target range for inflation is $2 \%$ to $3 \%$. We can use the average figure of $2.5 \%$. This again is an estimation that may vary and effect results. So, the $9.35 \%$ return is reduced to a $6.85 \%$ after inflation return.

Average investment management fees are in the order of $1.5 \%$ to $2.0 \%$ for an actively managed fund. Let us assume fees at the lower end of this range. The $1.5 \%$ in fees reduces the investment returns to $5.35 \%$.

The amount of tax to be paid is difficult to estimate. However, we know that the taxable income is $\$ 5,986$ (the sum of the income and the franking credits). At a superannuation income tax rate of $15 \%$, there will be $\$ 898$ of tax payable. This will be offset by the $\$ 686$ of franking credits, leaving $\$ 212$ of tax to be paid.

It is hard to estimate the capital gains tax to be paid. Let us estimate that $25 \%$ of the funds capital gains are realized (that is the investments are sold and capital gains tax has to be paid), which is a conservative estimate, and that none of these assets have been held for more than 12 months so they are taxed at the rate of $15 \%$. (Investments held for more than 12 months are generally taxed at a discounted rate of $10 \%$ in superannuation funds.) That means that $\$ 1,012.50$ of capital gains are taxed at a rate of $15 \%$, meaning that $\$ 152$ of tax has to be paid.

So the total income tax and capital gains tax to be paid after taking into account franking credits is $\$ 364$, or $.036 \%$. This reduces the return to $5.3 \%$.

So, even making reasonably generous assumptions about investment returns, fees and inflation, and using the low tax environment of superannuation, the best return I can come up with for a balanced portfolio is $5.3 \%$.

If we look at a more extreme situation where fees were another $0.5 \%$, inflation was another $0.5 \%$ and the investment returns were actually $1 \%$ less, the total return would be reduced by another $2 \%$, giving a return of $3.3 \%$.

If the investments were not in superannuation, but were in a person's name who had a tax rate of $30 \%$, which is twice the superannuation tax rate, total tax payable would be $\$ 2,100$, less the $\$ 686$ in franking credits, to reduce your return by $\$ 1,413$, or $1.4 \%$. So, the $5.35 \%$ return after inflation and fees would be reduced to $3.95 \%$ after inflation, fees and taxes.

## Are Related Explanations Clear?

In this book I have generally used an assumed return of 5\% after inflation, fees and taxes. While I consider this is towards the top end of possible outcomes, I have chosen to use it because:

1/ As you read the book you should find ways to invest while paying less than the assumed $1.5 \%$ in fees, thereby increasing your return.

2/ Using the top end of reasonable returns helps show the power of strategies, and

3/ Now that you have read this section you are realistic enough to know that while $5 \%$ is a possible return, the possibility of lower returns must be factored in your planning.

## Are Projected Benefits Expressed in Today's Dollars?

I always express benefits in today's dollars. This is done by assuming that investment returns are after inflation, and by assuming that contributions grow at the rate of inflation.

The FIDO website (www.fido.asic.gov.au) has a number of useful calculators, including assessing managed fund strategies, loans, superannuation and repaying credit cards.

## Chapter 3 - Measuring Your Net Wealth

Being Business Like: One of the key financial statements that a business produces is the 'statement of financial position'. This statement lists the assets and liabilies of the business. The value of business assets, less the value of the liabilities, is the 'owner's equity', or the value of the owners stake in the business.

At a personal finance level keeping track of your 'net wealth', that is the value of your assets less the value of any debts allows you to understand your financial position, and check the progress of financial goals over time.

The overarching purpose of this book is to allow readers to map out a plan that will improve their financial position. The first step to achieving this is to be able to measure an individual's or family's current financial position. An accurate snapshot of your financial position will allow you to see where you are now, and then monitor the improvement in your financial position.

On the surface this seems like a simple task. However, when we start thinking about what should or should not be included, we create some complexity. For example, should we include the value of household furniture and electrical appliances as assets? If we don't include the household furniture as an 'asset', should we then include as a liability the personal loan that we used to purchase it?

Companies produce 'Statements of Financial Position' or 'Balance Sheets' as part of their annual reporting to shareholders. These statements include the assets and liabilities of a company based on the accounting formula 'assets - liabilities $=$ owners equity'. We can change this equation just a little to apply it to a personal financial situation by saying that 'assets - liabilities $=$ net wealth' and calling this your 'Personal Balance Sheet'. To apply this formula properly we need to define which assets and liabilities should be included in your personal balance sheet. It is worth noting at this point that a personal balance sheet can be prepared for an individual, couple or family, depending on your circumstances.

For the purposes of planning your financial future, an asset is best defined as anything that will help you fund your retirement once you are no longer earning an income. Examples of these assets would include superannuation, shares, managed funds, investment property, cash or fixed interest or term deposit investments. These assets can be defined as 'financial assets', they exist for no other purpose than to provide you with a financial benefit whether it be investment returns from your superannuation, income from an investment property or interest from a bank account or term deposit. For the purposes of this exercise I suggest treating any property that you own for your own use, such as your residence, slightly differently to these financial assets. I will discuss this later in this chapter.

As an example of what is not included, we can consider a car. No doubt most people own a car, and it is an item of significant value for them. However, while cars may be a necessity, they certainly don't put money in your pocket or provide you with any financial benefit. In fact, they do the opposite as they require registration, insurance, petrol, and maintenance and, over time, they depreciate in value. Compare this with a share investment, which, over time, you hope will increase in value while paying you a string of dividends (ie putting money in your pocket). Items such as cars are often referred to as 'lifestyle assets'.

The important point of this discussion is not that there is anything wrong with accumulating lifestyle assets, just that you should not confuse a financial asset with a lifestyle asset. As an extreme example of what might happen in getting the two mixed up, consider a person who spent all his money investing in a large boat. Let us say that he purchased the boat for $\$ 1$ million dollars, using a loan to do so, and paid this off over the 20 years leading up to his retirement, with the boat representing his only source of wealth and one that he was proud of. No doubt, owning a $\$ 1$ million dollar boat he would have felt as if he had really achieved something. However, at retirement there was no way for this boat to generate for him a retirement income. Probably, he would have to sell the boat at its depreciated value and then consider the financial options left to him with the residual money.

Direct property that you own as your residence is difficult to categorise. Your principal place of residence provides you with a financial benefit in that without it you would have to pay rent. On that basis there is an argument for including it as an asset. However, assuming that you want to live in your house at retirement, I am reluctant to include it as a financial asset. As you plan for retirement the benefit of owning your own home will be seen because at retirement you will require less income, as you will not have to pay rent to live somewhere. The effect of this will become clearer in the next chapter.

Some people will argue that with the advent of 'reverse mortgages', where people at retirement receive an income stream from the equity in their house, that a home could be considered a financial asset capable of providing a retirement income stream. However, my experience suggests that the majority of people seem far more comfortable with the idea of not having to mortgage their residence in this way.

I propose including your place of residence and mortgage as a separate section of your personal balance sheet. This provides us with two financial measures of your situation, your net wealth and your net wealth including your residence. This separates your residence from your pure financial assets, while still recognizing that it is an important part of your personal financial situation.

A liability is easier to define. It is any financial commitment that you have to repay. Therefore it includes any personal loans, car loans, credit card debts, store credit, investment loans or any other borrowing that you have to repay, excluding debt on your place of residence as mentioned in the previous paragraph. Overall this might seem a little harsh, as you don't get to include your big screen TV as an asset, while you include the credit card debt that you used to purchase it. However, the credit card debt remains an absolute financial commitment that you will have to repay out of future income. The big screen TV will never earn you any income and is depreciating in value all the time. This demonstrates the financial folly of using debt to purchase lifestyle assets. The effect of the purchase is to immediately increase debt without increasing assets, leading to a decrease in your net wealth.

While you may include a HECS debt as a liability, I think it is reasonable to leave it out. A HECS debt does not incur any interest, increasing each year by inflation, and is paid off when your salary reaches a certain point. So, while it is a debt, it is a low interest debt that will slowly be paid out of your salary over time, and one that I am comfortable leaving out of a personal balance sheet. Your HECS payments will effectively form part of your tax bill, and we can deal with them in this area of your finances.

I have included an example of a personal balance sheet. The balance sheet is of a person who has a variety of assets including an investment property, some superannuation, cash investments in a cash management trust, a term deposit, managed fund and a share portfolio. They have liabilities that include some credit card debt, a personal loan, a margin loan and a mortgage on the investment property, giving a net wealth of $\$ 59,300$. Their net wealth including their residence is $\$ 109,300$.

This person has two ways of improving their net wealth, either through the accumulation of more assets or through reducing their liabilities. While we will discuss the topic later in this book, increasing net wealth through the reduction of high interest debt such as personal loans and credit cards is often an excellent strategy.

| Assets | Superannuation | $\$ 22,000$ |
| :--- | :--- | :---: |
|  | Cash Investments | $\$ 2,000$ |
|  | Term Deposits | $\$ 5,000$ |
|  | Managed Funds | $\$ 2,300$ |
|  | Shares | $\$ 25,000$ |
|  | Investment Property | $\$ 120,000$ |
| TOTAL |  | $\mathbf{\$ 1 7 6 , 3 0 0}$ |
|  | Credit Card Debt | $\$ 2,000$ |
| Liabilities | Personal Loan | $\$ 5,000$ |
|  | Margin Loan | $\$ 10,000$ |
|  | Mortgage <br> Investment Property | $\$ 100,000$ |
| TOTAL |  | $\mathbf{\$ 1 1 7 , 0 0 0}$ |
|  |  | $\mathbf{\$ 5 9 , 3 0 0}$ |
| NET WEALTH |  | $\$ 250,000$ |
|  | Estimated Property <br> Value | $\$ 200,000$ |
| Residence | Outstanding <br> Mortgage | $\mathbf{\$ 5 0 , 0 0 0}$ |
|  |  | $\mathbf{\$ 1 0 9 , 3 0 0}$ |
|  |  |  |
| TOTAL <br> EQUTITY |  |  |
|  |  |  |
| NET WEALTH <br> Including <br> Residence |  |  |

To finish this chapter I have included a blank template to use to calculate your personal net wealth.

| Assets | Superannuation (1) <br> Superannuation (2) |  |
| :--- | :--- | :--- |
|  | Cash Investments |  |
|  | Cash Investments |  |
|  | Term Deposits |  |
|  | Managed Funds |  |
|  | Shares |  |
|  | Investment Property |  |
|  | Other - |  |
|  | Other - |  |
| TOTAL | Credit Card Debt |  |
| Liabilities | Personal Loan |  |
|  | Margin Loan |  |
|  | Mortgage <br> Investment Property |  |
|  | Store Credit |  |
|  | Other - |  |
|  | Other - |  |
| TOTAL |  |  |
| NET WEALTH |  |  |
| Residence | Estimated Property <br> Value |  |
|  | Outstanding <br> Mortgage |  |
| TOTAL HOME |  |  |
| EQUTITY |  |  |

## Chapter 4 - Benchmarking Your Financial Position

Measuring your financial position, as we did in the previous chapter, does not mean a great deal in isolation. Let us assume that you have calculated your net wealth to be $\$ 50,000$. So what?

The next step is to work out what that means for you at your stage of life. If you are 25 , a net wealth of $\$ 50,000$ might be a great start to life, whereas if you are 50 the meaning may be quite different.

For the purpose of this chapter, whenever I refer to net wealth I am referring to the calculation of net wealth excluding your residence as we discussed in the previous chapter.

Thomas Stanley and William Danko, in their excellent book 'The Millionaire Next Door', (Longstreet Press, 1996), propose a formula for measuring net wealth based on a persons age and income. They suggest that a persons net wealth target should be:

- Age multiplied by Pre Tax Household Income divided by 10.

By this formula, a 30 year old person with an income of $\$ 30,000$, would have a target wealth of $(30 \times \$ 30,000) / 10$ which equals $\$ 90,000$.

Stanley and Danko are Americans who were writing from the perspective of a study done on wealthy individuals in America. This formula became a way of defining wealth for them.

This is a useful start, but a model more suited to the Australian context and to your personal financial journey can be developed. Importantly, I think that the formula proposed by Stanley and Danko is unrealistic for people just starting work, and for those at the point of retirement.

For example, someone who attended university following school, is 22 years old and earning $\$ 40,000$ is unlikely to have the target net wealth calculated under the Stanley and Danko formula of $\$ 88,000$. At the pre retirement stage someone who is 60 years old and earning $\$ 100,000$ would be calculated as having a net wealth of around $\$ 600,000$. If they were planning on retiring, they might be disappointed to see that this level of assets might only generate a retirement income of $\$ 30,000$ to $\$ 35,000$ annually, based on the $\$ 600,000$ providing an income stream of $5 \%$ to $6 \%$. So I suggest that we construct a more flexible wealth benchmark model to measure personal financial progress.

Stephen Covey, the bestselling author of the book 'The Seven Habits of Highly Effective People' proposed that 'Beginning With the End in Mind' is a key habit of success. To build our model of wealth benchmarks at different ages, it is critical to define where we want to end up. To do this I propose two basic assumptions:

1. We are all hoping to be able to retire at some stage
2. The onus will continue to shift away from governments funding our retirement through the age pension, to us having to fund our own retirement

To work out our final wealth requirement, we can calculate that around 18 times our required retirement income will provide this income. So, if we decide that we require an income of around $\$ 50,000$ in retirement, a final net wealth of around $\$ 900,000$ would be sufficient to provide this outcome. To provide an income of $\$ 50,000$ annually the $\$ 900,000$ needs to provide an income return of $5.55 \%$. Currently Australian Shares are paying gross income (including the value of franking credits) of around $5.7 \%$, Listed Property Trusts $7.5 \%$, Fixed Interest Investments $6-8 \%$ and cash around $4.5-5.5 \%$. So we can see that a balanced portfolio of $\$ 900,000$ should comfortably provide this level of income, providing we are not losing too much of this income in fees to financial planners, fund managers and the like.

By choosing some investments with growing income streams, such as Australian Shares and Listed Property Trusts, we allow for the income stream to increase in line with inflation over time. This provides a growing income stream for the remainder of your life with the $\$ 900,000$ staying in tact.

In the last chapter it was debated whether or not we should include your home in your calculation of net wealth, and I thought it better not to. At this point in time it is worth noting that the benefit of owning your own home will show in required retirement income stream. If owning your own home provides a saving of $\$ 5,000$ a year in rent, then this will show as a lower required retirement income and a therefore a lower net wealth required to provide this retirement income.

You will notice also that I have disregarded taxes. That is, I have said that if you require an income of $\$ 50,000$, you only need to generate an investment income of $\$ 50,000$. I have done this on the basis that a couple, with their financial situation carefully planned, should be able to earn around $\$ 50,000$ a year tax free by careful use of superannuation income streams and the Senior Australian Tax Offset.

If you are a couple wanting to earn more that $\$ 50,000$, or a single person more than $\$ 30,000$, it might be worth thinking about how much tax you might pay and include the tax as part of your required income stream. It is likely that you will pay a maximum tax rate of $15 \%$ for a couple earning up to $\$ 150,000$ of income, and a single person earning up to $\$ 70,000$.

At or below this threshold it makes sense to aim for a net wealth at retirement of 18 times your desired retirement income. At this stage let us assume that your intended retirement age is 60 . This effectively allows you to retire 5 years before the age pension age of 65 . Later in this chapter we will discuss what to do if you are close to retirement and this aim does not seem feasible.

So, the benchmark at retirement can be defined as 18 times your required retirement income.

We need to pick a starting point for our model, and I suggest that age 25 is a reasonable starting point. This means that prior to this we can assume that generally people are traveling, studying and spending most of the money that they earn. Of course, this is a gross generalization. However these generalizations are required to build a generic model. So, at age 25 we will assume that people have a starting wealth of 0 times their required retirement income.

It seems to be wise to pick 5 years as a timeframe for checkpoints. This gives people 8 checkpoints from age 25 to retirement, to measure progress. In each 5 year period net wealth can be increased by two things, wealth saved and investment returns. Wealth saved will simply be the sum of all the money saved and then invested over a period. Investment returns will be the returns earned on the wealth invested in any period. It is reasonable to assume that in any 5 year period your investments receive a total return after inflation of $25 \%$, or $4.55 \%$ a year. Two really important comments need to be made here. Firstly, 5 year returns are likely to vary widely, so you will need to expect higher returns in some periods and lower and even negative investment returns in other periods. Secondly, the $25 \%$ total return in any period after inflation is only a very rough estimate of returns, so you should be cautious in using this as a prediction of expected returns.

I have assumed that between the ages of 25 and 45 the person or couple has the capacity to save 1 times their required retirement income each 5 years. Remember, this saving includes the contributions made to superannuation over this period. For example, let us consider a couple who are both earning $\$ 40,000$ and require a total retirement income of $\$ 50,000$ in today's dollars. The model suggests that in any 5 year period between ages 25 and 40 that they would have to save around $\$ 50,000$, which is 1 times their required retirement income. Each of them would be building their superannuation balance each year through compulsory employer contributions equal to $9 \%$ of their salary, less the $15 \%$ contributions tax that they would be charged on these contributions. Together, this equals $\$ 6,120$ a year, or $\$ 30,600$ over the 5 year period. So, they only need to save another $\$ 4,000$ a year, or $\$ 80$ a week, to reach the required saving of $\$ 50,000$ in this period.

Between the ages of 45 and 60 I have assumed that the person or couple is able to save 2 times their required retirement income in each 5 year period. I have assumed this higher saving rate based on the assumption that the house mortgage may be paid off, people tend to be at the point in their life when their income level is highest, if a couple has had children they might be moving towards independence and if one member of a couple has stayed home to care for the child, then that person may be returning to the workforce.

## Table of Wealth Benchmarks Over Time

All figures are expressed as a multiple of final required retirement income

|  | Starting <br> Wealth | Wealth Saved <br> Over Period | Investment <br> Earning Over <br> Period | Ending <br> Wealth |
| :---: | :---: | :---: | :---: | :---: |
| Age <br> $\mathbf{2 5 - 3 0}$ | 0.00 | 1.00 | 0.00 | 1.00 |
| Age <br> $\mathbf{3 0 - 3 5}$ | 1.00 | 1.00 | 0.25 | 2.25 |
| Age <br> 35-40 | 2.25 | 1.00 | 0.56 | 3.81 |
| Age <br> 35-45 | 3.81 | 1.00 | 0.95 | 5.77 |
| Age <br> 45-50 | 5.77 | 2.00 | 1.44 | 9.21 |
| Age <br> $\mathbf{5 0 - 5 5}$ | 9.21 | 2.00 | 2.30 | 13.51 |
| Age <br> $\mathbf{5 5 - 6 0}$ | 13.51 | 2.00 | 3.38 | 18.89 |

Ending wealth: expressed as a multiple of desired income expressed in today's dollars.
Note: At each state the 'desired income in today's dollars' will have to be reassessed.

## An Example of the Benchmarks in Action

Let us assume that I am a 25 year old with a net wealth of $-\$ 10,000$ (credit card debt). I am working and earning $\$ 35,000$ a year. At this stage I would like to retire at around age 60 on an income of $\$ 30,000$ in today's dollars.

To be on track at age 30 I should have net wealth of 1 times my required retirement income of \$30,000 in today's dollars.

Based on an income of $\$ 35,000$ my $9 \%$ employer sponsored superannuation contributions will be $\$ 3,150$, less around $\$ 470$ in contributions tax a year, which is $\$ 2,680$ a year or $\$ 13,400$ over the 5 years. That means that outside of super I need to save around $\$ 16,600$ over the 5 years as well as getting rid of my $\$ 10,000$ high interest credit card debt. If I commit around $\$ 100$ in additional payments a week to my credit card debt, I can see that will take just over 2 years to get rid of that. Then, saving $\$ 120$ a week for the remaining three years will leave me with $\$ 18,000$ before any investment returns. Easily bringing my net wealth above the $\$ 30,000$ that I am aiming for at age 30 !

The following table shows the dollar amounts for a person starting at age 25 with $\$ 10,000$ of credit card debt and wanting to retire at age 60 on an income of $\$ 30,000$.

|  | Starting Wealth |  | Wealth Saved Over Period |  | Investment Earning Over Period |  | Ending Wealth |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Age 25-30 | \$ | -10,000 | \$ | 40,000 | \$ | - | \$ | 30,000 |
| Age 30-35 | \$ | 30,000 | \$ | 30,000 | \$ | 7,500 | \$ | 67,500 |
| Age 35-40 | \$ | 67,500 | \$ | 30,000 | \$ | 16,875 | \$ | 114,375 |
| Age 35-45 | \$ | 114,375 | \$ | 30,000 | \$ | 28,594 | \$ | 172,969 |
| Age 45-50 | \$ | 172,969 | \$ | 60,000 | \$ | 43,242 | \$ | 276,211 |
| Age 50-55 | \$ | 276,211 | \$ | 60,000 | \$ | 69,053 | \$ | 405,264 |
| Age 55-60 | \$ | 405,264 | \$ | 60,000 | \$ | 101,316 | \$ | 566,580 |

## Using Inflation in the Wealth Benchmark Model

One criticism of the simple model that I have proposed is that it does not seem to take into account inflation. That is, if a person projects that at age 60 they would like to earn a retirement income of around $\$ 30,000$, they really mean a retirement income equal to $\$ 30,000$ in today's dollars. In the model I have assumed an earning rate of $4.55 \%$ a year after inflation. So we have accounted for the effect of inflation there. We could also assume that each year a person's income rises, on average, by the rate of inflation. So all we need to do to make sure that our saving rate is keeping pace with inflation is to increase our savings a little bit more whenever we receive a pay rise. That way, when we come to our next 5 year benchmark we will hopefully have a little more than we set out to achieve, because we have increased our saving rate and because our investment returns have been $4.55 \%$ plus inflation.

The one part of the model that has not changed is our required retirement income. I think that the most useful way of modifying this is to revisit the level of income required each 5 years. In the example previously given the person aimed to have $\$ 30,000$ saved by age 30 . Assuming that she received some pay rises and increased her savings levels at these times, as well as receiving some investment returns, she should actually have a little more than $\$ 30,000$ at age 30 . At this point in time, as she considers her plans for the next 5 years, she should revisit the idea of how much money she will need in retirement and rework her figures from there - recalculating the benchmarks and planning the next 5 years.

The other way to change this would be to use the ABS statistics for inflation to adjust your required retirement income. For example, if over the 5 year period between the age of 25 and 30 inflation was $10 \%$, adjusting up the required retirement income and the benchmarks by $10 \%$ will adjust for this.

My strong preference is that every time you use the model as a guide, you redefine what level of income you think that you will need in retirement, and re-plan from there. I suggest this method because over time many things other than inflation will impact on your required retirement income such as changing tastes, a greater understanding of what you might want to do at retirement, getting married or taking on an expensive hobby. So, it makes sense to simply use the benchmarks as a very rough guide while you continually improve your financial position.

## Four Comments on the Wealth Benchmark Model

1/ The model is proposed as a rough but robust guide to plan realistically for your retirement goals. It would be unwise to read into the model any greater level of accuracy than that. The biggest assumption made relates to the $25 \%$ investment earnings in any 5 year period, and you should consider what will happen if this
level of investment earnings is not received, particularly in the periods close to your retirement.

2/ If you are under the age of 25 , do not be reluctant to start building wealth early! The earlier you start the greater your investment returns will be over time and the sooner you will be to reach financial independence. Don't use the fact that I have assumed a net wealth of $\$ 0$ at age 25 as a reason to procrastinate prior to age 25 , rather use it as a way to motivate yourself to ensure that you are well ahead by age 25! If you actually had one times your retirement income saved by age 25 years, you can say that you are already on track to retire 5 years early!

3/ If you look at the model and find yourself behind, there is no need to panic. You can address this by increasing your rate of saving, working a little longer (ie past age 60) or being prepared to accept a slightly lower retirement income. The important factor will still be that you are making the conscious decision to build your net wealth which will inevitably improve your retirement situation.

4/ If you are close to retirement and well behind financially, you will be able to use the age pension as a safety net to increase your retirement income. Remember, you will still be rewarded with a higher retirement income if you increase your net wealth between now and retirement, allowing your investment earnings to supplement the age pension that you will receive.

## Chapter 5 - Spending Less That you Earn and Budgeting

The next chapter of this book looks at the process of budgeting. 'Budgeting' creates images of penny pinching, counting every dollar and generally just too much mathematics. Budgeting in the context we are going to look at it is an important and achievable part of the financial planning process.

Being Business Like: When we discussed measuring your net wealth we compared this measure to the balance sheets that companies prepare for their reports. Similarly, the budget we will do is very similar to the 'Statement of Cash Flows' that a company includes in their reports. These statements of cash flows are crucial as they give us a strong indication of the health of a company, with healthy companies having a positive cash flow and funds available for investing in new projects.

Similarly, preparing a statement of cash flows will provide you with information on your own financial health and whether you are spending too much, as well as letting you know how much surplus cash flow you have available to build wealth.

The most interesting published work that I have read relating to spending habits is the book 'The Millionaire Next Door' by Thomas Stanley and William Danko. Stanley and Danko are both researchers with Ph.D.'s. They set out to study the wealthy in America. In completing their study they surveyed more than 11,000 high net wealth or high income respondents, conducting interviews and focus groups with 500 millionaires. There are a number of fascinating findings and conclusions that they present.

They came to the conclusion that $80 \%$ of American millionaires are 'first generation' rich. That is, they built their own wealth.

Stanley and Danko put together a list of seven factors that are common amongst those that have built wealth for themselves, the most important in my opinion being;

- these people live well below their means (ie spend less than they earn) and
- they believe that financial independence is more important than displaying high social status.

When they studied specific items purchased, they found that $50 \%$ of millionaires had never spent more than $\$ 399$ on a suit, $\$ 140$ on a pair of shoes or $\$ 235$ on a watch. When the study looked at motor vehicles it found that more than $50 \%$ of millionaires paid less than $\$ 24,800$ for their latest vehicle. Even adjusting for the fact that these are American dollar prices a few years ago, the trend towards frugal consumption habits is clear.

When I talk about the habit of spending less than you earn, we should bear in mind that we are living in a time where it has never been easier to spend more than we earn. Credit cards, personal debt, interest free store loans and mortgages that allow us to redraw from our home loan all provide us with the easy mechanisms to spend more that we earn.

We also handle cash much less than we used to. You don't have to go back in time too far to find people who remember receiving their pay as cash in a small envelope. Similarly paying for goods and services by EFTPOS, credit cards, BPay and electronic transfer was not an option. People just paid cash. Now the money generally goes straight into our account and out again without us ever physically coming into contact with it.

I think that this has the potential to diminish our sense of the value of money. After all, most of us work hard to earn our money, and it is worth remembering this hard work when you come to spend it. The average wage in Australia is around $\$ 1,000$ a week. After tax this would come down to around $\$ 760$ a week and around $\$ 19$ an hour, based on a 40 hour working week.

So, every time you are spending $\$ 19$ you are actually spending one hour of work. If you buy your lunch the $\$ 10$ you spend is equivalent to working for 30 minutes. If you pay for parking at work rather than take public transport, the $\$ 15$ extra you pay for parking is 45 minutes of work. For bigger amounts of money it becomes more important. If you are weighing up buying a new car for $\$ 25,000$ and the same car second hand for $\$ 15,000$ you are talking about a difference of 525 hours of work, or just over 13 weeks of work. You can assess for yourself whether the new car smell is worth 13 weeks of work.

The next chapter deals with preparing a budget, so it is interesting to look at Stanley and Danko's findings with regard to millionaires and budgeting. They found that the majority of millionaires had a budget and, amongst the minority who did not have a formal budget, more than half had identified how much income they could save and invest.

Clearly a budget is a tool used by millionaires and one that will help build your financial future.

As already stated, getting an understanding of your cash flow is an important aspect to organising your financial affairs. That said, a budget should not lead to an onerous examination of all your spending habits to try to track every last dollar. I think its purpose should be limited to identifying three important points;

1/ What surplus cash is available to use for building investment wealth
2/ Should I be putting aside regular amounts of money to pay for irregular expenses as they fall due?
3/ Is there any area where unreasonable amounts of money are being spent that is, should I be looking to modify any spending habits?

Let us look at each of these questions in turn.
1/ Identifying surplus cash means that you can separate the money from your day to day money and build a plan to use this money to increase your wealth whether this be through investing it, paying additional money off the mortgage or making additional contributions to superannuation. Once you identify this surplus cash you can put it to use to build your net wealth.

2/ This is for people who find that they are under significant financial pressure when a number of expenses occur together. For example, if they have to find $\$ 1,500$ to pay for their car registration and insurance at the one point in time. To get around this you can identify all the irregular expenses or bills that occur as 'once off' type costs, such as car insurance, car registration, holidays, Christmas and the like. By working out how much you need to meet these expenses you can put money away on a regular basis so these bills don't become stressful. So, if you calculate that you need around $\$ 5,200$ a year for these bills, putting away $\$ 100$ a week into a separate account will mean a lot less financial stress when these bills and expenses arise. To help organise this I have shaded a number of the expense items in the budget following that tend to occur irregularly. By adding the total of these expenses you can work out how much you need to put away on a regular basis to meet these costs when they fall due.

3/ Looking at your spending habits on paper will help you decide if there are any habits that you want to modify or reconsider.

At the end of this chapter I have put together a simple budget sheet that can be used to calculate your expenses. You can then compare your after tax income from all sources, including your salary, investments, child support and centrelink payments with your expenses.

Within the budget sheet I have included a benchmark figure for each of the seven categories that the budget is broken down into. Businesses regularly benchmark their expenses against industry standards to get a sense of how they are performing, and it makes sense that we do this at a personal level as well. The benchmark is given as a percentage of your after tax income. For example, the benchmark for transport is $20 \%$ of your after tax income. For a person earning an after tax income of $\$ 40,000$ that implies that around $\$ 8,000$ a year would be a reasonable cost for transport.

I have broken the budget down into seven categories being:

- Accomodation
- Transport
- Food and Clothes
- Entertainment
- 'Other Expenses'
- Insurances
- Long Term Savings

The benchmark figure for each category is loosely derived from Household Expenditure Survey data that is taken from the most recent census. I have then compared that against what a person on an average income could spend on each category. I have then checked that this figure is feasible against the average wage. I say that it is loosely derived from the Household Expenditure Survey data because it is difficult to draw an exact figure for each category.

With accommodation and related costs the benchmark figure is different depending on whether you are renting or own your own home. If you are renting, a benchmark of $30 \%$ of your after tax income is suggested with $10 \%$ of your after tax income being committed to long term savings. If you are paying off a home, a benchmark of $35 \%$ of your after tax income is suggested for housing costs, with $5 \%$ of your after tax income being committed to long term savings while paying off your mortgage.

Of course, the benchmark figures are just a guide. Once you have finished paying off your home you will certainly not dedicate $35 \%$ of your after tax income to this. If you have children going through education then it will be another major expense.

Within the benchmark figures you will see that I have included consumer debt such as personal loans, credit cards and any other consumer debt as part of the entertainment category. As I explain in other sections of the book, people's aim should be to reduce this type of debt to nothing as soon as possible, and this should initially take priority over any long term savings. This does not refer to using a credit card that you pay off on a month-to-month basis, but rather the situation where there is ongoing debt.

If you make an effort to use the budget to answer the three questions posed at the start of the chapter, and think about the benchmark figures and your own expenditure, you can use a budget to help control your financial situation in a sophisticated manner, just as a business does. And, just as a business has to, you need to be prepared to make changes if your cash flow is not covering your expenses and allowing you to have some surplus cashflow from which to build your financial future.

| Expenses | Benchmark | Annual Cost |
| :---: | :---: | :---: |
| Accommodation | $30 \%$ if Renting 35\% if Own |  |
| Rent/Board |  |  |
| Mortgage |  |  |
| Body Corporate |  |  |
| Rates |  |  |
| Electricity |  |  |
| Gas |  |  |
| Repairs |  |  |
| Phone |  |  |
| Internet |  |  |
| Pay TV |  |  |
|  |  |  |
| TOTAL |  |  |
| Transport | 20\% of Income |  |
| Insurance |  |  |
| Servicing |  |  |
| Registration |  |  |
| Loan Repayments or Saving for next car |  |  |
| Petrol |  |  |
| Public Transport |  |  |
| Taxi Fares |  |  |
|  |  |  |
| TOTAL |  |  |
|  |  |  |
| Food and Clothes | 15\% of Income |  |
| Groceries |  |  |
| Take Away Food |  |  |
| Clothes |  |  |
| Make Up/Self Care |  |  |
|  |  |  |
| TOTAL |  |  |
|  |  |  |
| Entertainment | 15\% of Income |  |
| Dining Out |  |  |
| Sporting Events |  |  |
| Gym/Sporting Fees |  |  |
| Cultural Events |  |  |
| Travel/Holidays |  |  |
| Gifts (Christmas, Birthdays ) |  |  |
| Cigarettes |  |  |
| DVD/Video hire |  |  |
| Personal Loans |  |  |
| Consumer Debt |  |  |
| Credit Cards |  |  |
|  |  |  |
| TOTAL |  |  |


| Other | $\mathbf{1 0 \%}$ of income |  |  |  |
| :--- | :--- | :--- | :---: | :---: |
| Medical Costs |  |  |  |  |
| Hair Cuts/Personal Groom |  |  |  |  |
| Stationary |  |  |  |  |
| Newspapers/Magazines |  |  |  |  |
| Education |  |  |  |  |
| Professional Association fees |  |  |  |  |
| Donations | $\mathbf{5 \%}$ of income |  |  |  |
| TOTAL |  |  |  |  |
| Insurances |  |  |  |  |
| Health Insurance |  |  |  |  |
| Home and Contents Insur. |  |  |  |  |
| Life Insurances (excluding those in <br> superannuation) | $\mathbf{5 \%}$ of income if <br> paying a mortgage, |  |  |  |
| TOTAL | $\mathbf{1 0 \%}$ if renting |  |  |  |,

## Chapter 6 -Risk and Return

Being Business Like: This is the crux of making business like decisions on where to invest money - what is the risk of an investment, and what is the likely return?

There is often debate about the best way to define investment risk and investment return. However, some level of intuitive understanding of risk and return is important because it will remind us that amongst the scope of investment opportunities if it seems to be too good to be true, it almost certainly is!

The term 'return' refers to the return derived from an investment. It is usually measured in a percentage return annually. For example, you might say that the average return over the long term from Australian Shares is around $12 \%$ a year. Or you might say that the return from Leighton Holdings shares last year was $45 \%$, being a combination of a dividend of about $5 \%$ and growth in the price of the shares of $40 \%$.

Risk refers to the likelihood of your investments fluctuating in value. For example Australian shares have returns that fluctuate significantly. Since 1971 their lowest return has been $-29 \%$ in 1982 and their highest $74.3 \%$ in 1980. So you can see that there is a marked degree of fluctuation in value. Compare this with the returns on cash investments that have ranged between $18.5 \%$ (1990) and $4.0 \%$ (2003). You can see that there is a much smaller spread of returns.

For those with a statistical bent, the 'risk' of an investment is most commonly represented by the standard deviation of returns. A small standard deviation of returns means that data is clustered closely around the average return, while a large standard deviation of returns means there is a greater fluctuation of returns.

For example, the average return from Australian shares over the past 25 years has been $13.74 \%$ with a standard deviation of returns of $17.31 \%$. The average return from international shares over the past 25 years has been $15.02 \%$ with a standard deviation of returns of $24.17 \%$. This shows that the return from international shares has been higher than the return from Australian shares, and there is an increased risk, or fluctuation of returns, from international shares. This is born out by more closely looking at the returns from year to year, with Australian shares having four years of negative returns over the past 25 years compared with six for international shares and Australian shares having three years with returns over $30 \%$ and international shares having six.

The table below shows the relationship between risk and return for the most common asset classes. Cash has the lowest investment return with the lowest risk (level of fluctuation of returns) through to international shares, which have the highest returns, and the highest risk.


## Investment Risk - (Fluctuation of Returns)

Another way to think of this is that the greater the fluctuation of returns, or investment risk, the greater the chance of negative returns in any one year.

Given this relationship how should we react then to an investment opportunity that promises high investment returns with apparently no risk? According to this relationship, it is not possible. An element of suspicion is very reasonable.

The Australian Securities and Investment Commission (ASIC) has a consumer website FIDO (www.fido.gov.au). One of the topics that they are concerned about is investments that promise high rates of return with no explanation of the risks involved. FIDO suggests that the long term average return of the Australian sharemarket is $12-13 \%$, and any investment promising a return higher than this must be taking on a high level of risk to do this. Currently there are a lot of 'fixed interest' style investments suggesting that they are offering low risk returns of 8$12 \%$ per annum. These investments have caught the eye of the ASIC investigators, who are concerned that investment returns of this order must involve a reasonable level of risk. Recently a number of these investments, such as those offered by Westpoint investments and providing a $12 \%$ rate of return to investors, have collapsed.

Another case study of this is Fincorp, which is offering investments with returns of up to $9.75 \%$. ASIC is concerned that advertising by Fincorp using terms such as 'Invest with Certainty' and 'A Strong Measure of Security so you Can Sleep Soundly at Night' suggested low levels of investment risk, which could not be the case given the level of returns.

ASIC successfully stopped Fincorp from using these slogans, and then forced them to offer to return all investments moneys raised from a previous investment product. This offer had to be made because Fincorp had not adequately disclosed information about the risks, and the use of the money - which was invested by property development companies related to Fincorp. I suspect that most investors never considered that their $9.75 \%$ 'invest with certainty' return was being propped up by the considerably risky property development industry. The Fincorp scheme is now in receivership.

By now I hope that you have built up a clear understanding of the relationship between investment risk and return - and the underlying relationship that says a high investment return is not possible without a high level of investment risk.

I want to finish by offering one final argument for this. Let's say that I did invent a process that allowed me to get high investment returns without much or any risk say returns of $25 \%$ a year. What am I going to do with that? I am going to borrow whatever money that I can - personal loan, credit card, draw down on my mortgage, use my savings, sell the dog - and invest it in this process. With an ability to make a risk free return of $25 \%$ a year then I will soon be very rich. As selfish as it sounds, the last thing I am going to do is give this risk free or low risk high return to everyone else. If the return is this good I am going to use it to create a business and wealth for myself!

## Chapter 7 - Record Keeping

Being Business Like: A lot of financial organisation has to do with thinking of yourself in a more 'business like' way. That is, seeing your 'financial self' as a business entity.
And, just like a business you need to keep your important records. There are two key reasons for this.
1/ Just like a business you have a relationship with the Australian Tax Office, and need to justify your income, expenses and capital gains tax situation.
2/ You need to measure the returns from your investment decisions over time - just like a business - so need to be able to calculate these returns from your records.

The records I want to talk about include:

- Records relating to the purchase or sale of assets
- Records relating to income received from investments
- Records related to investment expenses
- Records relating to work related expenses
- Records relating to tax deductible donations

Let us consider these one at a time.

## Records relating to the purchase or sale of assets

When you buy or sell investments, such as shares, property or managed funds you need to keep the record of these purchases and sales, so as to be able to calculate capital gains tax. You should also keep a record of transaction costs associated with the purchase or sale, such as brokerage with shares. Records for inspections and legal costs for properties should also be kept. The bottom line is you should keep the record of all expenses associated with buying or selling assets, and then investigate whether they will be useful in reducing the amount of capital gains tax you eventually have to pay.

If you set up a plan of regularly investing into a managed fund, say \$200 a month, you will have to be particularly careful with your record keeping as for every 12 month period you will actually have 12 different managed fund purchases.

## Records relating to income received from investments

Investment income can come in the form of interest payments received, rent received, managed fund distributions and share dividends. At the end of each year you need to have an appropriate record of the income received. Most investments will provide an income statement at the time of paying income, and some will also include an end of year tax statement. If you lose an income statement there is often a charge to get a replacement one. You need these statements to prepare your tax return.

Re-investing dividends or distributions is the same as receiving the income from an investment and then purchasing additional units or shares in that investment with the income. If you choose to re-invest dividends or distributions you are still taxed on the income paid to you. You need to keep the record of the 'purchase' of new shares or units that you have made with this income, and the income itself.

## Records related to investment expenses

Expenses related to your investments may include the interest costs associated with an investment loan, magazines related to your investment activities, the cost of depreciation of fittings and fixtures in an investment property or payments to professionals providing advice related to your investment activities. You may be able to claim these expenses as a tax deduction.

## Records relating to work related expenses

The ATO (www.ato.gov.au) has a reasonable level of information on what work related expenses can be claimed. They divide work related expenses into the categories of:

- Self education
- Clothing and laundry
- Travel expenses
- Car expenses
- Other work related expenses


## Records relating to tax deductible donations

In a Sydney Morning Herald article on the 22nd of November 2004 Professor Myles McGregor-Lowndes, from the Queensland University of Technology Centre for Philanthropy and Non-profit studies, stated that maybe only one third of all giving to charity is recorded as tax deductible donations by the Australian Tax Office.

While the article did not explain this gap further, one can assume that poor record keeping is part of the reason people are not claiming tax deductions for charitable donations. I am of the opinion that making your charitable giving business like and targeted may be the best for both yourself and the charity. From your own perspective you research where your money is going and are confident that it is making a difference. Plus, making a few targeted donations makes it easier to keep your records. From the charities perspective having substantial, ongoing donors allows them to free up resources from collecting funds to delivering services.

Getting organised financially is, at least in part, about developing good financial habits, one of which includes keeping good records.

## SECTION 2 - Decisions around Strategy

Every business has a key strategic direction. It might be to takeover another business, to grow through an aggressive advertising campaign or to launch a new product range.

In the same way people have a personal finance strategy. Perhaps the strategy might be to pay extra to their mortgage, invest regularly over time (dollar cost averaging), borrow to invest or salary-sacrifice to superannuation.

Before jumping straight into the pure strategy topics, we look at the issue of purchasing a car or home. Why? Purchasing a home is the biggest single investment you are likely to make and purchasing a car is the single biggest investment you will make in something that will go down in value. These are key decisions and will impact on your capacity to make other strategic decisions.

## Chapter 8 - Your Major Consumer Purchases - a Car

Being Business Like: Companies are careful with their acquisitions - often having specialist 'procurement' officers to ensure that they are not paying to much for the inputs into their business. A car is a large purchase at the personal finance level and it makes sense to think carefully about such a significant acquisition.

The second largest purchase you are likely to make, after your house, is a car. So it makes sense to think carefully about how you can make this purchase without it getting in the way of your other financial goals.

The following chapter looks briefly at the running costs, depreciation and interest costs associated with owning a car.

It recommends that there is a strong case from a financial perspective to purchase a car that is two or three years old, rather than a new car.

## Running Costs

There are a quite a few costs that you should factor into the purchase of a car, and so it makes sense to put together a full budget for the proper running of a car. The important costs that you should consider include:

Insurance - Comprehensive car insurance protects you for damage to your own car and any damage your car causes. Usually there is an 'excess', which is the amount you have to pay in the event of repairs being necessary. The insurance company then covers all the costs over the excess. The insurance will depend on what type of vehicle you own (sports cars cost more to insure than basic 4 cylinder cars), where you live, whether you have an alarm on the car, your previous insurance record, your age and where you park the car at night. As an estimate, comprehensive insurance for a 23 year old is often around $\$ 800$ for a 4-cylinder sedan.

Registration - Registration is the amount you pay to the State Government to register the car to drive on the road. Part of your registration cost is compulsory third party insurance. This insurance protects you against damage that your car may do to other people (but not property). If you drive an unregistered car you drive without third party insurance. If, for example, you were in a bad accident and killed another person you could face legal action for millions of dollars for which you would have no insurance - and this is a key reason why you should never drive an unregistered car! Registration for a basic four cylinder car in Queensland now costs around $\$ 600$.

Petrol - The average car travels around 15,000 kilometers a year (roughly 300 kilometers a week). If we assume an average fuel consumption of 10 litres per 100 kilometers then a car uses around 1,500 litres of fuel a year. At an average price of $\$ 1$ a litre, which is being conservative based on current prices, this costs around \$1,500 a year.

Repairs - Most makers recommend 6 monthly service intervals. Assuming $\$ 150$ a service, a conservative figure, then this would amount to around $\$ 300$ a year.

Tyres - Assuming two years of wear from each set of tyres this means completely replacing the tyres at a cost of around $\$ 75$ a tyre, or $\$ 300$ in total, every two years or an average of $\$ 150$ a year.

RACQ - This costs a minimum of $\$ 60$ a year in Queensland. Compared to the other costs this is minor. Given the benefit in an emergency, it makes sense to subscribe.

The costs that we have come across so far are summarised in the following table:

| Insurance | $\$ 800$ |
| :--- | :--- |
| Registration | $\$ 600$ |
| Petrol | $\$ 1,350$ |
| Repairs | $\$ 300$ |
| Tyres | $\$ 150$ |
| RACQ | $\$ 60$ |
| TOTAL | $\mathbf{\$ 3 , 4 6 0}$ |

On a weekly basis this amounts to $\$ 67$.
And this hasn't even dealt with the larger costs of owning the car - any loan repayments you make on the car or the largest cost of all, depreciation.

Depreciation is the difference between how much the car is worth now, and how much it will be worth down the track when you come to sell it. And this is the characteristic of buying a car that makes it downright unattractive. When you come to sell the car it will almost certainly be worth substantially less than when you bought it.

As an example I have looked at the basic Toyota Corolla Ascent, 4 door, 1.8 litre 4 speed automatic prices over the last few years, based on 'Glass's Guide' to used car prices.

Current Purchase Price: $\quad \$ 23,990$
1 Year Old: $\quad \$ 17,600$
2 Year Old: $\quad \$ 15,800$
3 Year Old: $\$ 14,700$
4 Year Old: $\quad \$ 13,800$
5 Year Old: $\quad \$ 12,000$
6 Year Old: $\quad \$ 11,000$
So, if you bought a new Corolla for $\$ 23,990$ and sold it three years later for $\$ 14,700$ you would have lost $\$ 9,290$, or the best part of $\$ 3,100$ a year, or a further $\$ 60$ a week on top of the $\$ 67$ a week in running costs.

However, if you had bought the three year old car for $\$ 14,700$ and then sold it three years later for $\$ 11,000$ you would have lost $\$ 3,700$, or just over $\$ 1,200$ a year. This is around $\$ 23$ a week - nearly a third of the depreciation of the new car.

On the $17^{\text {th }}$ of August 2005, channel nine's program, A Current Affair, ran a story on the depreciation of cars. They used the example of a person who had paid nearly $\$ 80,000$ for a new car which, 2 years later, was only worth around $\$ 24,000$ as a trade in. While there seemed to be some mitigating factors as to why the car had depreciated so much, including that the car had traveled around 80,000 kilometers, this still demonstrates how expensive depreciation can be.

## But Wait There's More - the interest repayments

If you use a personal loan to purchase the car you are obviously paying interest on the loan. These interest costs need to be included in the cost of buying the car. Assuming an interest rate of $11 \%$, over a 5 year repayment term, you end up paying around $\$ 7,320$ in interest. This is an extra $\$ 28$ a week.

However, if you had purchased the three year old Corolla then your total interest repayments will be $\$ 4,480$, or around $\$ 17$ a week.

I think that there are two key points that this chapter makes. The first is simply that owning a car is expensive. The second point is that substantial money can be saved simply by buying a three year old car. The table below shows that a new Toyota Corolla, hardly an elaborate car, will cost you $\$ 155$ a week or around $\$ 672$ a month. A three year old Corolla costs around $\$ 107$ a week or $\$ 464$ a month.

|  | New Toyota Corolla | 3 <br> Corolla | Old |
| :--- | :---: | :--- | :---: | Toyota 1 \$67

Currently there is plenty of speculation in the press that cars are depreciating even more quickly than usual. The reason given for this is that as new cars become even cheaper, there is an oversupply of used cars from people trading them in. This may make the strategy of purchasing a two or three year old car rather than a new car even more attractive from a financial perspective.

If, over a 30 year period, you were to invest the $\$ 48$ a week you saved by driving a 3 year old car rather than a brand new car, and you earned an investment return of $6 \%$ after any investment fees and taxes, you would have just over $\$ 183,000$ of additional wealth.....so perhaps the wealthy person is the second hand car driver, a theme that we delved further into in the chapter on spending less than you earn.

This comparison has been focused on comparing a new and three year old small car of the same make. It might be worth extending this to see what the difference in cost is between a luxury 4WD, for example, and a second hand small car. The extra fuel, insurance, registration, depreciation and maintenance costs associated with a new 4WD could get in the way of a persons plans to become financially independent.

For the simple comparison here I have assumed that the maintenance costs of a new and three year old used car are similar. If the costs are higher in the slightly older car, then this will eat into some of the financial benefit of owning the second hand car.

The following is a Courier Mail article of mine that revisits many of the thoughts from this chapter.

## Savings to be had for canny drivers

Article from: Coutrier MIMail

By: Scott Francis
August 27, 2007 12:00am

## DEPRECIATION sounds like an impressive accounting term, however it is the biggest cost of owning a car.

It is the amount that your car falls in value over time.
Unlike petrol, insurance, repairs and registration, we don't notice the impact of depreciation - it just eats away at the value of the car week after week.

Just look at the classic Australian family car - the Holden Commodore Executive.

Based on RACQ calculations, a new car depreciates in value by $\$ 105$ a week - about half of its total running costs (registration, fuel, tyres, repairs, interest on the loan plus insurance).

Have a think about what that $\$ 105$ means.

It means that every week the average person earning $\$ 15$ an hour after tax has to work about seven hours just to pay for the extent to which a new Commodore has fallen in value.

It doesn't matter whether your new car is leased, bought through a loan or purchased in cash, the depreciation is unavoidable and significant.

If, rather than purchase a new Commodore a consumer purchased a three to four-year-old one that was half the price then the rate of depreciation would be roughly halved.

Even if you doubled the RACQ estimate of service and repair costs for the older Commodore, you will still be ahead by about $\$ 50$ a week purchasing the second-hand model.

Think about this on a cash basis. What if you had two cars in your garage - a new Holden Commodore and another three or four-year-old car.

To use the new car for the week you had to put $\$ 105$ into the ignition to get it started, and to use the older car you only had to put in $\$ 55$ to get it started.

My strong suspicion is that most people would happily choose the slightly older car and start the week with an extra $\$ 50$ (or three hours of work) in their pocket.

Here is the real clincher. If a person buys a new Commodore every five years and - given the rate of depreciation of $\$ 105.12$ calculated by the RACQ - if they buy their first car at age 20 and their last at
age 70, they could have invested the depreciation of $\$ 105.12$ a week at the rate of 6 per cent a year after fees, taxes and inflation and would have had $\$ 2.28$ million in today's dollars by the age of 75 .

If they either bought a second-hand car, or a cheaper smaller car, that depreciation at the rate of $\$ 52$ a week, they would have been $\$ 1.14$ million better off by the age of 75 . That is an extraordinary figure, and is before any other financial benefits of cheaper registration or fuel costs if you had chosen a smaller car.

Further, this is only for one vehicle, with many families running two cars.
Suddenly you can see why many millionaires prefer second-hand or relatively low-cost vehicles. Perhaps part of the reason they are millionaires is because they drive second-hand or lower-cost vehicles.

How you spend has a great deal of impact on your ability to be successful financially.
The cars you buy over time will prove to be the biggest purchase that depreciates in value and being thoughtful about your decisions could be worth a cool million dollars or two!

## Chapter 9 - Your Major Consumer Purchase - a House

Being Business Like: This is the really bit purchase (or couple of purchases) that you are likely to make in your life. It is important to think carefully about how you do this.

There are complete books devoted to the topic of purchasing real estate. Clearly we don't have the space to go into such detail here, so in this chapter I want to make four key points:

1/ Renting can be a financially rewarding alternative to buying a property
2/ Buying and selling property in a short period of time is a highly speculative activity, as property prices go both up and down
3/ Over committing in the purchase of a home may hurt your overall financial position
4/ For all the home loans available on the market, the only way to get ahead with your mortgage is to make extra repayments

Before addressing the four points, I want to go back to my definition that, for the purposes of planning your financial future, an asset is anything that will help you fund your retirement once your are no longer earning an income.

A home, as such, will not help you fund your retirement, although it will mean that you don't have to pay rent, and will therefore reduce your cost of living.

Historically, when a person worked to age 65 and then retired on an aged pension, a home would round out a person's financial future nicely. However, if we assume that in the future we will not be able to rely on the government for a retirement income, clearly we are going to need more than just a home when we come to the point of retirement. So, we need to challenge the thinking that the family home is the only financial priority we have. Over our working life we need to balance the goal of owning a home with the importance of building the assets that we will need to fund our retirement.

Lets move on to the four points that I want to make within this chapter.

## 1/ Renting can be a financially rewarding alternative to buying a property

You will read from time to time the analysis showing that renting a home is financially superior to purchasing one, which can be true. From a purely financial perspective it is easy to calculate the difference between renting and buying.

As an example, let us consider the property that I own. It is a two bedroom unit in Brisbane. I only recently purchased it, and had an independent valuation of both the unit and the rental potential of the unit.

I was told that the unit could be rented for $\$ 260$ a week. I know that the body corporate fees are $\$ 1,600$ a year and that the rates are also $\$ 1,600$ a year. The price of the property was around $\$ 240,000$, which means that I have mortgage repayments of around $\$ 350$ a week over a 25 year period.

Based on these figures alone it costs me $\$ 21,400$ a year to own the property. This includes the loan repayments plus the rates plus the body corporate fees.

It would cost me $\$ 260$ a week, or $\$ 13,520$ a year to rent the property. As a tenant I don't have to pay the rates or body corporate expenses on the property, and I am not responsible for the ongoing maintenance of the property (eg such as repairing plumbing, repainting the property)

So, I end up ahead by at least $\$ 7,880$ a year by renting rather than owning the property.

Now, if I invest this \$7,880 a year surplus into an investment returning 6\% a year after fees, inflation and taxes, I will have $\$ 432,000$ in today's dollars by the time I would have finished paying off the mortgage ( 25 years).

That said if I spend the $\$ 7,880$ of annual savings on holidays and beer I will have $\$ 0$ in today's dollars by the time I would have finished paying off the mortgage. This is one of the advantages of having a mortgage, it can be a form of 'forced saving', that ensures you get ahead.

Neil Jenman, an Australian real estate educator, makes the point in his book 'Real Estate Mistakes' (Rowley Publications, 2000) that 'despite what accountants say about renting verses buying.....there is one fact that they rarely mention - the feeling of owning your home'. It is important to think beyond just the financial in deciding whether to buy or rent a property.

It is worth noting that one advantage of owning your own home is that there is no capital gains tax when it is sold. So, if down the track you come to sell the property and 'downsize' into a less expensive property, you will be able to use the profit from the sale for investment purposes.

## 2/ Buying and selling property in a short period of time is a highly speculative activity, as property prices go both up and down

In this section I want to highlight the pitfalls of buying and then selling property within a short space of time.
Let us assume that you purchase and then want to resell a property under the following circumstances:

- You purchase the property on a $5 \%$ deposit for $\$ 300,000$
- Buying and selling costs are each $5 \%$ of the property price (such costs as bank fees, solicitor's fees, agent fees, pest and building inspections, stamp duty, mortgage insurance and the like)
- After 12 months your circumstances change and you need to sell the property
- Property prices fall by $10 \%$ over the 12 month period during which you own the property (Neil Jenman in his book 'Real Estate Mistakes' states that one of the myths is that real estate always goes up in price. He points out that 'it often goes down')

In the situation described above it is assumed that you had saved $\$ 30,000$ to purchase the property, $\$ 15,000$ of which you used for the deposit and the other $\$ 15,000$ that you used for the costs of buying the property.

When you come to sell 12 months later you are only able to sell your property for $\$ 270,000$ as prices have fallen by $10 \%$. After your $5 \%$ selling costs (such as legal fees, agent fees, bank fees related to the mortgage etc) you will be left with around $\$ 256,500$. While you will have made 12 months of loan repayments on your mortgage, these repayments will primarily have been paying the interest on the loan. So, your loan will be only slightly less than its starting balance of $\$ 285,000$. Let's say that you made a few additional repayments and got the loan balance down to $\$ 280,000$. You will still be out of pocked by $\$ 23,500$ after owning the property for 12 months.

That is, having spent $\$ 30,000$ to buy the property, after selling it 12 months later you would still owe a further $\$ 23,500$ that you would have to pay back! Your total loss on the transaction would be around $\$ 53,500$.

The high transaction costs involved in purchasing property, coupled with the ability of property to rise or fall in the short term, makes short term property ownership a highly speculative and potentially financially damaging activity. In this case the use of a very small deposit, only $5 \%$ of the purchase price, exacerbated the shortfall from the hurried sale of the property.

All this assumes that you can actually find a buyer for your property. 'Liquidity' is a term that deals with the ability for an asset to be redeemed for cash, and property is considered an illiquid investment. As a comparison, if you own shares in any of Australia's reasonably big companies you can sell them on any day that the
stockmarket is open, and you will have the cash within a week. With a property the marketing and settlement time has the potential to stretch into many months.

## 3/ Over committing in the purchase of a home may hurt your overall financial position

I worked with a financial planner for a period of time that did a lot of work with people planning to purchase their first home. He often remarked that a mistake they made was to try and purchase an expensive property, equal to what their parents owned, rather than starting with a simpler, cheaper property and then progressing from there.

Neil Jenman, in 'Real Estate Mistakes' says that the 'worst mistake' made by people purchasing a home is 'too much debt'.

The reality is that the more of your income that you commit to a home loan, the greater the financial pressure. This may become particularly apparent if your situation changes, such as being unemployed for a period of time.

If nothing else, the analysis earlier in this chapter looking at renting or buying should reassure people who are worried about overcommiting themselves by purchasing a property to save a deposit for a while longer and look patiently for a property within their price range. Keep in mind that property prices go down as well as up, so being patient may pay dividends through a lower purchase price for the property.

## 4/ For all the home loans available on the market, the only way to get ahead in your mortgage is to make extra repayments

In the August 2005 edition of 'Money Magazine' Effie Zahos wrote an article on repaying your mortgage quickly. Within the article she pointed out that the most important thing to know about a home loan is that in most cases the interest is calculated daily and then charged to the loan account monthly in arrears.

This means that the only way to get ahead on home loan repayments is to make repayments as soon as possible, so that they start reducing the interest charged on the loan straight away.

A simple example of a strategy to do this is to halve your monthly repayments, and then make this repayment every fortnight, so you are effectively making 26 fortnightly repayments a year. To illustrate the effectiveness of this, using the calculator on the infochoice website (www.inforchoice.com.au), monthly repayments on a $\$ 100,000$ loan with an interest rate of $7.5 \%$ over a 25 year term will be $\$ 740$. If you make repayments of $\$ 370$ a fortnight you end up reducing the term of the loan by nearly 5 years and saving just over $\$ 27,000$ in interest.

## Chapter 10 - Reducing Consumer Debt

Being Business Like: Businesses are very careful about their 'cost of debt' - the interest rate that they are paying to borrow money. Consumer debt is the most expensive debt that you can have. Not only that, there is no tax deduction for the interest, unlike the borrowed money businesses would use.

If businesses found that they had non tax deductible, high interest debt their first step would be to get rid of it. This is what people should do in their own situation.

## The vicious cycle of debt (diagram 1)



The helpful cycle of investment (diagram 2)


The first diagram on this page is a simple representation of why debt can be a tough cycle of having to make debt repayments, struggling to meet living costs, borrowing more money and then ending up further in debt. The second diagram shows what can be if you can get beyond debt, start investing, increase your income through building investment income streams and having surplus income that you can use to purchase more investments.

In the first section of this book we looked at how to calculate net wealth and the way that we could increase a person's net wealth either through increasing their level of assets, or decreasing their level of debt.

The number one priority for an increase in net wealth should be the reduction of any high interest non tax-deductible debt, such as credit card debt or personal loans. Let me explain this further.

Non tax-deductible debt refers to debt that does not allow you to claim the interest on the debt as a tax deduction. You can only claim a tax deduction for the interest paid on a loan if the loan is specifically used to purchase an income-producing asset, such as a mortgage for an investment property or a loan used to purchase an investment portfolio, such as a margin loan used to purchase a portfolio of shares.

The mathematics behind making the reduction of non tax-deductible debt a financial planning priority are fairly simple. Let us assume that you have a credit card debt with an interest rate of $16 \%$ and an outstanding balance of $\$ 10,000$. You also have $\$ 10,000$ cash that you can either invest or use to pay off the debt.

Over a year the $\$ 10,000$ debt will incur interest of $\$ 1,600$. If you were to use the $\$ 10,000$ cash to pay off the credit card debt you will save yourself $\$ 1,600$.

If you chose to invest the money it would need to earn more than $16 \%$ to perform better that just strategy of paying off the debt. Regardless of what people promoting some investment scams would say, there are no investments that will consistently earn more than $16 \%$ a year. This suggests that the best use of the money will be to pay off the credit card debt and save $\$ 1,600$ of interest.

We can take this analysis one step further and consider the tax implications of either paying off the credit card debt or investing the $\$ 10,000$. If you use the $\$ 10,000$ to save the $\$ 1,600$ interest, there is no tax payable on the $\$ 1,600$ saving. If you use the $\$ 10,000$ to invest, you will have to pay tax on either the income from the investment or, eventually, the capital gains from the investment. So, to be equal with the strategy of using the $\$ 10,000$ to pay off the credit card debt, you need to earn an after tax return of $16 \%$ from investing the $\$ 10,000$.

So, the strategy of paying off non tax-deductible debt makes a lot of sense.
There are two key approaches to tackling debt:
Strategy 1 - either paying off existing debts and,
Strategy 2 - trying to consolidate the debts into a one loan and paying that off.
I will initially look at the strategy of paying off all the debts, and then discuss the strategy of consolidating debts.

It is crucial to note that neither of these approaches addresses the real cause of the debt problem in the first place. Debt only occurs when you spend more than you earn. If this is not addressed through changing your spending habits, then there is every chance that you will have further problems with debt down the track.

## Strategy 1 - Prioritizing and Paying Off Existing Debt

The first strategy is to pay off existing debts. There are three key decisions to be made in setting out a plan:

- Firstly deciding the order in which to tackle the debts,
- Secondly looking at how much money you have available to pay towards the debts off and,
- Thirdly, working out the timeframe for eliminating the debt.

It is always best to tackle the highest costing debt first. In evaluating this check on three factors:

- The interest rates
- Any fees or charges
- Penalties for early repayments

Let's have a look at an example to see how this might work.
Let's consider a person who has three key debts, a personal loan, a credit card debt and a loan on some furniture, with the details of the loans in the following table.

| Loan | Loan <br> Balance | Interest Rate | Additional <br> Fees | Minimum <br> Monthly <br> Repayment |
| :--- | :---: | :---: | :---: | :---: |
| Personal Loan | $\$ 12,000$ | $11.5 \%$ | $\$ 5$ a month | $\$ 300$ |
| Credit Card | $\$ 10,000$ | $16 \%$ | $\$ 50$ a year | $\$ 300$ |
| Furniture <br> Loan | $\$ 6,000$ | $24 \%$ | $\$ 5$ a month | $\$ 200$ |

Step 1 - Prioritizing the Debts
Each debt has similar fees and no penalties for early repayments, so we can move to compare the interest rates to see which should be tackled first. Paying off the furniture loan makes the most sense because of the $24 \%$ interest rate. After that tackling the credit card makes sense, as at $16 \%$ it has the second highest rate of interest. Then the personal loan can be paid off.

Of course, you still need to make the minimum repayments on the remaining debts while you are concentrating on making additional repayments on the one that you have targeted.

## Step 2 - Allocating Available Cashflow to Reducing Debts

The second step requires you to have a good understanding of your cashflow and to work out how much of this you are prepared to commit to eliminate your debt. Let us assume that the person involved earns around $\$ 36,000$ a year after tax, or $\$ 3,000$ a month. As an aside, this means that with debts of $\$ 28,000$ the total debt is equivalent to almost 10 months of salary. The monthly repayments represent more than $25 \%$ of the person's after tax income. I make these points because I think it is vital to recognize the seriousness of such a financial situation and the need to deal with it with some urgency.

Let us assume that after considering their situation, the person decides that they can pay $\$ 1,300$ a month of their salary towards reducing their debt. This allows them to make the minimum repayment on each debt, $\$ 800$, plus an extra $\$ 500$ a month to get rid of the target debt quickly.

Step 3 - Planning a Timeframe
The third step involves setting some goals regarding the timeframe.
So, while we are still making the minimum repayments on the personal loan and credit card debts, we are going to add the additional $\$ 500$ a month to the $\$ 200$ a month we are paying on the furniture loan to make repayments of $\$ 700$ a month to this loan. If we add a full year of interest to the $\$ 6,000$ it will be roughly another $\$ 1,500$ or so $(\$ 6,000 @ 24 \%)$. We can see that to pay the $\$ 7,500$, being the $\$ 6,000$ loan and $\$ 1,500$ interest, at a rate of $\$ 700$ a month we will need around 11 months.

At that stage we can turn our attention to the $\$ 10,000$ credit card debt. We will have been making minimum repayments on the debt for the 11 months since putting the debt reduction plan into strategy, so the debt will have decreased a little. However, for the purposes of our estimation we can say that it will not have decreased enough to make a significant difference. So, after paying off the furniture loan we will now have the $\$ 700$ a month that we had been paying to the furniture loan to add to the $\$ 300$ minimum repayments to make total monthly repayments of $\$ 1,000$. With a starting balance of $\$ 10,000$ and annual interest of approximately $\$ 1,600$ (being $\$ 10,000 @ 16 \%$ ) we can see that the total of $\$ 11,600$ will be paid off within a further 12 months.

Finally, we are left with the personal loan of $\$ 12,000$. Again, this will have reduced while minimum monthly repayments will have been paid over the previous 2 years.

However it won't hurt to use the $\$ 12,000$ starting balance as an estimate. At an interest rate of $11.5 \%$ the annual interest charge will be around $\$ 1,380(11.5 \% \times$ $\$ 12,000$ ) giving a total annual estimate of loan repayments of $\$ 13,380$. Now, all of the $\$ 1,300$ a month is available to repay this last remaining debt and you can see that we should be able to do this in around 10 months.

So, the summary of the timeframe would be:

- Furniture Loan to be paid out in 11 months from now
- Credit Card to then take a further 12 months
- Personal Loan to take a further 10 months

Because of the way that we have overestimated the likely interest paid, and overestimated the starting balances of the second and third loans at the time when we come to pay them off as the number one priority, we should find that this timetable is slightly generous.

If no extra repayments had been made the credit card would have taken 3 years and 10 months to pay off, based on paying $\$ 300$ each month. The $\$ 300$ a month payments on the $\$ 12,000$ personal loan would have seen it paid off in 4 years and 4 month and the $\$ 200$ a month repayments for the $\$ 6,000$ furniture loan would have seen that paid off in 4 years and 1 month.

If you want to estimate the timeframe taken to pay off loans with greater accuracy there are some very good calculators online at the ASIC 'fido' website at www.fido.asic.gov.au. You could use this to better estimate the exact time to pay off each loan, and the exact starting loan balance as you come to pay each loan. As an aside, there are a number of good calculators on this website that deal with loans, investments and superannuation.

## Strategy 2: Consolidating Debts

There is often much discussion about the strategy of consolidating debts to help manage them. This strategy is often promoted by finance firms who are in the business of offering these consolidation loans to people. Consolidating debts, either into an existing facility such as a mortgage, or into a new loan, may be a useful strategy but it should not be considered without careful understanding of the potential pitfalls involved.

I would suggest that there are three key pitfalls to be considered:

- You run the risk of turning short term debt into long term debt and as a result you end up paying more interest in total
- You may consolidate your debt to make it easier to handle, and end up taking on even more debt
- In consolidating your debt you may fall behind in other financial goals. A good example is the consolidation of your debts onto a home loan. This may get in the way of your goal to own your own home within a set time frame.

Consolidation works by taking a few high interest loans, and rolling them into one lower interest loan that may be more manageable. To look at a simple example let us consider a person with only one high interest loan, a $\$ 10,000$ personal loan at an interest rate of $10.5 \%$. This loan has monthly repayments of around $\$ 430$ over a 5 year term. Assuming that this person has a mortgage, and a bank that allows them, they could have this loan added to their mortgage. With an average mortgage interest rate of $7 \%$ the repayments would now be $\$ 130$ a month.

Now let's compare these two situations. The 5 year personal loan which has an interest rate of $10.5 \%$ results in a total interest repayment of approximately $\$ 5,800$. By adding the debt to the mortgage the total interest paid over 30 years is $\$ 27,900$. It is important to see that by changing short-term debt into long-term debt, the final interest payment is much larger.

One more vital step and you have the key strategy for successful debt consolidation. Consider consolidating the debt into the home loan and maintaining the discipline to keep paying the $\$ 430$ a month as extra repayments to the home loan. Doing this you end up ahead. You have benefited from the lower interest rate while still paying the debt off quickly. You have effectively converted a short-term high interest rate loan to a short-term low interest rate loan.

Two other problems may be caused if you add the debt to the home loan. The first is that you may then be able to use more consumer debt, say a credit card, to get yourself into further debt. This is something that must be avoided. Secondly, most people would have the goal of paying off their mortgage and owning their house debt free, so consolidating debt onto the home loan takes you further away from this goal.

It is worth looking at how debt consolidation might work in the example we used earlier of the person with a $\$ 6,000$ furniture loan, $\$ 12,000$ personal loan and $\$ 10,000$ credit card. Let us assume that their bank has given approval for them to consolidate all this debt into a $\$ 28,000$ personal loan over a five-year period with an interest rate of $10.5 \%$.

The repayments on this new loan work out to be $\$ 602$ a month. As in the previous example the person has worked out their budget, and is prepared to commit $\$ 1,300$ a month to reducing their debt. To make this plan work, and to get out of debt as quickly as possible while paying as little interest as possible, the $\$ 1,300$ a month should be repaid to the personal loan. The loan will then be paid off well before the
five-year term, in fact in a little over two years. The total repayments made will be around $\$ 31,200$. This is much better than the 4 years and 4 months it would have taken to be debt free had the minimum repayments just been made, and the $\$ 39,500$ in total repayments made.

When consolidating loans you should be fully aware of what bank fees and charges are involved in paying out the existing debt and those involved in paying off the new loan ahead of time.

Of course, if you find yourself in trouble with debt, it might be hard to find a financial institution willing to help you consolidate your debts, so your only option may be to tackle the debts one at a time.

## Why Additional Repayments are Effective in Reducing Debt

Additional repayments on any debt are powerful in reducing the debt and in increasing the effectiveness of every subsequent loan repayment. To look at how this might work, let us consider a $\$ 10,000$ credit card debt with an interest rate of $19 \%$. The minimum repayment on the card is $\$ 300$ ( $3 \%$ of the balance). About $\$ 160$ of the $\$ 300$ repayment is interest, and does not reduce the balance of the debt at all. So, from the $\$ 300$ you pay the $\$ 10,000$ debt reduces by only $\$ 140$. However, if you were to put in an extra $\$ 140$ with the $\$ 300$ repayment, $100 \%$ of this would go towards reducing the debt. So, the debt would be reduced by twice as much by increasing the repayments from $\$ 300$ to $\$ 440$. In percentage terms the debt is reduced by $100 \%$ more even though the actual repayment is only increased by around $46 \%$.

From there, because the balance of the debt is reduced by an extra $\$ 140$, when you come to make every subsequent repayment, the interest charged is also reduced. This works out to be around $\$ 2.20$ a month, and so this $\$ 2.20$ a month that would usually have been interest now goes to reduce the loan balance. Not a huge amount, however you can see how extra repayments have a combined effect of immediately reducing the balance of the loan as well as reducing the interest owing on every future payment and increasing the amount of the actual loan balance paid on every future payment.

## Important Rules to Follow with a Debt Reduction Plan

- Use any lump sums you receive to help get further ahead. For example, if you get a tax return, putting it straight toward the debt. That will help you get on top of the debt faster.
- Do not take on any other debt.
- As a consumer, pay cash. This habit will ensure that you do not get into trouble with any further debt.
- Once you have finished paying the debts, use the money you have been putting toward debt reduction to continue to improve your net wealth by investing. Rather than having to put some of your income each week to paying off your debt, you can start to invest money. This will increase your income as you build a stream of investment earnings.
- Use any pay rises or tax cuts wisely. When they come along you will not miss them if you immediately dedicate them to increasing your loan repayments.


## How to Proceed From Here

Your challenge - identify the 'vicious cycle' of debt and turn it into the 'helpful cycle' of investment.

The key practical steps that you need to take are outlined in the chapter. The best thing to do is to work back through the chapter using your own situations to map out a plan for yourself.

If you find that you are not getting on top of your situation even with this planning you should seek professional help. Lifeline offers a debt counseling service and would be a good point of contact to start working face to face with someone to deal with your situation.

If you are concerned that in the course of struggling with debt you may have harmed your credit rating, I have provided a form on the next page that you can photocopy, complete and post to the address given to receive a free copy of your credit history within about two weeks.

## To: Veda Advantage Public Access

PO Box 964
North Sydney NSW 2059

## Dear Sir/Madam,

I am writing to request a copy of My Credit File.

Name:

Date of Birth:

Drivers License:

Residential Address:

Previous Residential Address:

Current Employer:

Organisation last applied to for credit:
Daytime Telephone Number:

## Signature

## Chapter 11 - Building a Cash Reserve

Being Business Like: You often hear the financial media talk about the cash position of a company. They might comment that a company has too much cash at hand and needs to either make an acquisition of another company, or return it to shareholders. Alternately they might comment that a company is 'burning' through their cash at an alarming rate, and do not seem to have adequate cash reserves. This is what we are interested in at a personal finance level - ensuring that there is adequate cash to meet needs.

A cash reserve is an important part of a financial plan, providing a financial safety net.

Building a cash reserve is as simple as it sounds, putting aside a reasonable amount of cash that can be accessed quickly, should the need arise.

A cash reserve can then be accessed for:

- Medical emergencies
- Unexpected travel
- If you are suddenly unemployed
- If you need emergency repairs for your house or car

Even if you have substantial assets, having a cash reserve may save you from having to sell your investments at what might be an inopportune time.

It is worth considering the appropriate level of your cash reserve along with other factors, such as your personal insurances. For example, if you have income protection insurance that provides a replacement income after thirty days of illness or injury, and then makes this payment at the end of each month, you will need around 2 months of cash to get by until the first payment is made.

A cash reserve also allows you to manage a potentially difficult financial situation without having to immediately resort to using credit.

For example, if you were suddenly unemployed you could live off your cash reserve while you organise yourself financially, rather than having to put your living costs onto a high interest credit card. Using a credit card is only going to make your financial situation more difficult, as not only have you lost your income you are building up higher levels of debt as well.

A cash reserve is all about putting some money aside for 'a rainy day', and should be part of any well thought out financial plan.

## Chapter 12 - Making Additional Mortgage Repayments

Being Business like: The third chapter in this section dealt with getting rid of high interest debt, which should be done as a high priority. The second priority to consider is getting rid of your mortgage by making additional loan repayments for much the same 'businesslike' reasons - you don't get any tax advantages on a mortgage and the

The mathematics of this strategy is not complicated. As I write this the interest rate for an average mortgage are around $8.5 \%$. When you make additional repayments to your mortgage, you save yourself the $8.5 \%$ interest on the additional repayments, and this saving is tax-free.

As an example to illustrate this further, let's assume that a person who has a mortgage receives a prize of $\$ 10,000$ cash. The person is unsure what to do with the prize - either to use it to pay off the mortgage or to invest it.

If it is used to pay off the mortgage, as an additional repayment, the $\$ 10,000$ will save $\$ 850$ of interest each year (assuming that the loan interest rate stays at $8.5 \%$ ). Of course, there is no tax payable on the $\$ 700$ saving.

If the $\$ 10,000$ is invested into an opportunity paying an $8.5 \%$ investment return, the $\$ 10,000$ would earn $\$ 850$ a year. However, this investment earning will still have to be taxed. Assuming that the person has a tax rate of $30 \%$, then after tax the $\$ 850$ investment earnings will be worth just under $\$ 600$.

When you are considering making additional repayments to your mortgage it is important to keep in mind that the power of making additional repayments comes not only from the additional repayment. It comes from the fact that once the extra repayment has been made, the amount of interest charged to the loan every day from there on is reduced.

Let us take the scenario with the $\$ 10,000$ prize a bit further. The person makes the repayment of $\$ 10,000$ to the loan and saves $\$ 850$ of interest each year, while still keeping the same level of monthly repayments. Because there is $\$ 70$ less interest each month each future repayment pays an additional $\$ 70$ off the loan balance. So, not only has the $\$ 10,000$ reduced the balance of the loan, it has made every future loan repayment more effective in reducing the loan balance!

When you start paying off your mortgage almost $100 \%$ of the loan repayments are interest repayments. For example, early repayments on my own mortgage were around $\$ 1,300$ a month, of which around $\$ 1,150$ were interest repayments. So, with each monthly repayment I was only reducing the loan balance by around $\$ 150$. If I increased my loan repayments by $\$ 150$ a month, or just over $10 \%$, I actually end up
doubling the amount I pay off my mortgage with each repayment - from $\$ 150$ to $\$ 300$. This is another way of considering the advantages of making additional mortgage repayments. $100 \%$ of additional repayments go to reducing the loan balance, while regular repayments are not as efficient because a large part, especially early on in the life of a loan, go towards paying off the interest.

## The 'Evil' Contrary Strategy to Making Additional Repayments

I hope that by now you are enthusiastic about the financial benefit of making extra repayments and can't wait to add a little to the home loan repayments as soon as possible, whether it be the $\$ 20$ extra you have in loose change on the kitchen table or the $\$ 2,000$ tax refund.

However, in this day and age of loans with redraw facilities, and with banks falling over themselves to revalue your house and lend you more money, it is easy to fall into the trap of actually going backwards with your home loan. This is really working against the financial aim of most people to own their own home. By drawing money against the value of your home, whether through a redraw facility or an increase in your loan facility, you are actually getting further from owning your own home. You are committing more and more of your future loan payments to paying interest on the loan - and getting further away from the time when you no longer have to make loan repayments at all!

Always keep in mind that real estate prices go up and down. If you have borrowed more money against your house as real estate prices increase, this can really hurt if prices fall and you have to sell. You will have increased your loan to a price based on the top of the market and may be unable to sell your property for enough money to cover your loan.

## The Practicality of Making Additional Repayments

One of the most common strategies for increasing loan repayments is to take the monthly repayment, divide it by two, and then make this repayment every fortnight. In this way you are effectively making two additional fortnightly repayments each year because there are 26 fortnightly repayments where there were only 12 monthly repayments.

To illustrate the effectiveness of this, using the calculator on the infochoice website (www.inforchoice.com.au), monthly repayments on a $\$ 100,000$ loan with an interest rate of $7.5 \%$ over a 25 year term will be $\$ 740$. If you make repayments of $\$ 370$ a fortnight you end up reducing the term of the loan by nearly 5 years, from 25 years to just over 20 years, and save just over $\$ 27,000$ in interest payments. In the end, the two extra repayments that come about through making 26 fortnightly payments rather than 12 monthly payments makes a difference.

In the chapter on buying your own home in the previous section of this book I referred to a Money magazine article by Effie Zahos on paying your mortgage out quickly.

As well as making fortnightly repayments as mentioned above, she also recommends:

- Hitting the principal hard early through any extra repayments, as we have discussed earlier in this chapter
- Ensuring that you have a low interest loan that also permits you to make extra repayments. Effie notes that some of the really low interest loans don't allow any additional repayments at all, which does not suit the strategy of paying off your mortgage quickly.
- Understanding how your mortgage works. Most loans calculate the interest based on daily loan balances and then charge the interest at the end of every month. Based on that style of loan any extra or early repayment, as soon as it can be made, will immediately start to reduce the interest being charged.

There is plenty of good quality information in the media, books and online about paying your mortgage off quickly. It makes good financial planning sense, and doing it quickly puts you in great shape to keep improving your personal financial situation by using the money you were paying on your mortgage for investing.

## How to Proceed From Here

1/ Take the time to understand the details of how your loan works, particularly how interest is calculated and whether there are any additional fees payable.

2/ Decide what extra repayments you are going to make. For example, you might decide to halve the monthly repayment and pay it fortnightly as well as adding your annual tax return to the loan.

3/ In the early stages of the loan, particularly the first 5 years, make it a strong priority to make additional repayments. Tax cuts, pay rises and any bonuses can be added to your loan repayments to keep you getting further ahead.

4/ Regardless of all the slick advertising by banks and mortgage brokers, be strong in resisting the temptation to redraw or increase your mortgage! (When the adds of TV offer you 'equity mate', you are better of saying 'I'd rather ownership mate'.

## Chapter 13 - The Miracle of Compound Interest and the Power of Investing Regularly Over Time

Being Business Like: If we turn to the business universe, what is a great example of a business story that focused on accumulating assets regularly over time? Non other than Warren Buffet, recently named the world's richest man by Forbes magazine with a wealth in excess of $\$ 60$ billion. His focus as he ran his investment company, Berkshire Hathaway, was to invest regularly in good assets over time.

When I was a university student one of the lecturers had a sign on his door that read - 'Compound Interest - The Eighth Wonder of the World'.

If someone as dour as a university lecturer can get excited about compound interest, then everyday folks like ourselves should understand what it is and how it might work for us.

Compound interest is the effect that you get when you re-invest investment earnings and start to have the investment earnings generating additional earnings themselves. For example, let us assume that you have a bank account that has a balance of $\$ 10,000$ and earns $5.5 \%$ interest. In the first year the interest earned is $\$ 550$ (ignoring tax) and at the end of the year the balance of your account is $\$ 10,550$. So, the next year the $5.5 \%$ interest is based on a starting account balance of $\$ 10,550$ and the interest earned is $\$ 580$. At the end of this year the account balance is $\$ 11,130$ and the interest earned in the following year is $\$ 612$. So, as the interest earned is then earning further interest you can see the ever-increasing stream of earnings. After 10 years the income stream will have increased to $\$ 890$ a year and the $\$ 10,000$ investment to $\$ 17,080$, after 20 years the income stream will have increased to $\$ 1,521$ and the investment to $\$ 29,200$, after 30 years the income stream will have increased to $\$ 2,600$ and the investment to $\$ 49,840$ and after 40 years the income stream will have increased to $\$ 4,430$ and the investment to $\$ 85,150$.

This may not seem miraculous in itself. However, we have chosen to use the example of $\$ 10,000$ invested in a cash account, earning a fairly modest investment return. What if we had invested the funds into a share based investment earning the average return of around $12 \%$ a year? (Since 1971 the Australian Sharemarket has returned an average of $13 \%$ a year to $30^{\text {th }}$ of June 2005 - so this is a reasonable value to use.)

After 10 years the value of the investment would have increased to $\$ 31,000$, after 20 years to $\$ 96,500$, after 30 years to $\$ 300,000$ and after 40 years to $\$ 930,000$. In fact, given a return of $12 \%$ a year it would have taken 40 and a half years to turn the $\$ 10,000$ into $\$ 1,000,000$.

This is the power of compound interest - where investment earnings are reinvested and increase the future earnings of an investment or investment portfolio.

## Investing Regularly Over Time Plus the Power of Compound Interest

Like any great offer - 'but wait there's more'. The power of compound interest, added to the habit of investing regularly makes a potent wealth creation strategy.

Investing regularly over time is sometimes given the 'Flash Harry' name of dollar cost averaging. It is called this because if you keep adding investment amounts regularly you buy more of an investment if prices go down and less if prices go up tending to average out your entry price over time.

In the first chapter of 'A Clear Direction - Your Personal Finance Guide' I indicated that I felt there was a bias towards the use of the phrase 'It's time in the market, not market timing that counts' within the financial services industry. I feel that this bias comes about because promoting the idea that provided you leave an investment in the market for three to five years you will make a reasonable return, means that there is never a bad time to invest. For commission based financial planners who earn their money through distributing financial products, and for fund managers who charge a fee based on the percentage value of assets that they are managing, the fact that it is always a great time to invest means it is always a great time to take clients' money - which is great for their own profits.

The reality is quite different. For example, if you had invested a sum of money in the stockmarket in July 1970, it would have taken until July 1985 for you to receive a positive return above the rate of inflation. Even without considering inflation it would have taken eight years to have the investment return to its purchase value again.

If you had invested $\$ 10,000$ into Australian Shares in July 1970 by July 1985 that portfolio would be worth $\$ 27,454$. This sounds impressive. However because of inflation by July $1985 \$ 27,454$ would only buy you the same amount as $\$ 10,000$ would in July 1970 - all in all a disappointing investment return.

If, rather than invest the $\$ 10,000$ all at once, you had invested $\$ 1,000$ a year for each of the first ten years by July 1985 your investment portfolio would have been worth $\$ 30,245$, an investment return nearly $\$ 3,000$ stronger.

This is a demonstration that in times of volatile markets, such as during the early 1970's, the strategy of regularly investing smaller amounts of money can be an effective one - more effective that just assuming any time is a great time to invest and blindly investing money. Of course there are periods of strong investment returns where it would be better to simply invest the $\$ 10,000$ up front. Just as the
strategy of investing small amounts regularly helps smooth volatility that will protect against losing capital in less attractive markets, it will reduce your investment returns in more attractive investment markets.

It is also practical to assume that most people will set their investment goals and invest periodically. For example, they may decide to save and invest $\$ 5,000$ a year, so the practicality is that they will be investing regularly over time, which we have seen is a prudent way to enter investment markets, allowing them to use any downturn in investment prices as a buying opportunity, and smoothing market volatility.

Let's assume that a person decides to invest $\$ 1,000$ at three different times into an Australian share, called share X. At the first point of investment the price of the share was $\$ 1$, so she purchased 1,000 shares. At the second point of time the price of share X was 50 cents, so she bought 2,000 shares. At the third point of time the price of share $X$ was $\$ 2$, so she bought 500 shares. The share price then fell back down to $\$ 1$. At this point in time she had 3,500 shares, worth $\$ 3,500$. So, even though the price of these shares is the same as when she first bought them, dollar cost averaging means that her $\$ 3,000$ investment now has a value of $\$ 3,500$.

To look at a realistic example of regular investing over a period of time I put together a model based on the time between July 1970 and July 2005, a 35 year period. I assumed that a person worked and earned the average weekly wage for each of these years, as per the Australian Bureau of Statistics (ABS) figures for each year. Each year they contributed 5\% of their income. This means that in 1970 they contributed around $\$ 185$ through to 2005 where they invested nearly $\$ 2,000$. I have assumed that they invested all their money in Australian Shares, and reinvested all dividends. I used the actual returns from the sharemarket over this period. If they did this, by July 2005 they would have an investment portfolio valued at $\$ 288,000$. The effect of compound interest is that they would have only contributed $\$ 36,410$ over the 35 years. The remaining value of the portfolio is made up of investment returns. While this example has not taken into account tax, the final balance is significant.

The graph on the next page illustrates the growth in the portfolio over time. It is important to note that it does not take into account the tax paid on the portfolio. Needless to say, strong long term returns require careful tax planning, such as investing in the name of a spouse with a lower tax rate or using the low tax environment of superannuation.

## Growth of Portfolio of Australian Shares Funded From

Contributions Equal to 5\% of the Average Annual
Wage Each Year 1970-2005


If the person in the example were 25 in 1970 they would be 60 in 2005. And, if over the period of the example they had also bought and paid off a house, and accumulated some superannuation, one would imagine that they would be in pretty good financial shape by age 60 !

## How to Proceed From Here

This strategy, combining the effect of compounding interest with regular investments to smooth some market volatility, requires the discipline to start investing as soon as possible and to regularly allocate funds to your investment portfolio.

It is a two step process which involves:
1/ Identifying how much you can put towards long term investments on a regular basis and;

2/ Deciding how you are going to actually invest, using either index funds, actively managed funds or choosing investments directly (or a combination of all three). To do this you should read the chapter that compares index funds with managed investments and with direct investments and proceed from there. If you choose a managed investment then you should establish a regular investment facility to keep building your investment over time. If you choose to invest directly yourself, you should open a high interest investment bank account where you can regularly build your savings until you are ready to choose the next investment.

## Chapter 14 - Borrowing to Invest

Being Business Like: Companies borrow to invest. A lot. Indeed, companies that don't have much borrowing at all can be accused of having a 'lazy balance sheet' that is not using debt to grow their firm. At the personal finance level borrowing to invest might be a good strategy - although there is a downside to understand as well.

A key argument that I have made over time is that the financial services industry has a bias toward getting people to borrow to invest. The observations that I use to support this is that for a financial planning firm that makes their money out of commissions, encouraging clients to borrow to invest allowed the financial planning firm to receive a greater commission.

Let me give you an example to show how this might work. A client walks into a financial planning firm saying that he has $\$ 20,000$ to invest and would like to invest in Australian Shares. The financial planner he sees suggests a managed fund that he can invest in. The managed fund pays the planner a $2 \%$ upfront commission and a $0.5 \%$ commission every year that the client keeps the investment. So, the financial planning firm will receive commission of $\$ 400$ upfront and then $\$ 100$ every year if the investment remains in place.

But let us say that the financial planner says to the client one of the ways to increase the return on your investment might be to borrow some money using a margin loan, and thus increase your investment in the managed fund. The financial planner might suggest what is considered a conservative amount of lending, usually a loan to value ratio of $50 \%$, so the client borrows $\$ 20,000$ to add to the $\$ 20,000$ he already has and makes a total investment of $\$ 40,000$.

Under this scenario the commission based financial planning firm is now receiving $\$ 800$ of upfront fees on the investment and then $\$ 200$ every year if the investment remains in place. But wait there's more! A commission based financial planner will almost certainly also be receiving commission from the borrowing facility for the margin loan, probably equal to $0.5 \%$ a year - another $\$ 100$ a year in commission.

Whether or not gearing is the right thing for the investor remains to be seen. However it does seem to work out rather well for commission based financial planners!!

If you find yourself locked into paying trailing commissions to a financial advisor that you are not happy with, changing your advisor to a 'discount broker' may see up to $50 \%$ of these trailing commissions rebated. Some fee based financial planners will place these investments for a fee, and then rebate all trailing commissions to
you. You may also be able to negotiate a lower margin loan interest rate by dealing directly with the margin loan provider.

## The Basics of Borrowing to Invest

Despite the previous comments, the strategy of borrowing to invest may still be worth considering for your own situation.

When you consider borrowing to invest, the borrowed money generally comes from one of three sources:
a margin loan, which is a specially designed loan for borrowing to invest in shares and managed funds
borrowing against the equity in your own home
of, if you are borrowing to purchase an investment property, then as a mortgage against the property.

Generally people borrow to invest either in investment properties or in shares. In both cases people are hoping that investing using borrowed money will increase their overall investment returns.

The generic warning that comes with most borrowing to invest products is that 'as well as magnifying positive returns, borrowing to invest will also magnify losses'. That is, if the investment performs poorly you will lose even more money than if you had not borrowed to invest.

This is the crux of borrowing to invest. On average it increases your investment returns while increasing the volatility of your investment portfolio.

To illustrate both the good and bad of borrowing to invest let us use examples from actual investment returns over time, as sourced from Vanguard Investments. While the example used is an investment in the Australian Share Market, the same principals apply to an investment property.

Usually you can borrow an average of around $65 \%$ of the value of shares, and up to $75 \%$. So, if you had a portfolio of stocks worth around $\$ 100,000$ then $\$ 65,000$ of this could be financed by a loan. I often hear from financial planning commentators that a loan to value ratio of $50 \%$ is a 'conservative' level of borrowing. (I think a conservative loan to value ratio is about $33 \%$. This is effectively a debt (loan value) to equity (own money) ratio of $50 \%$ - similar to the level of borrowing that many companies target. I also hesitate to use the term 'conservative' with borrowing. The very nature of borrowing to invest means that it is not a conservative strategy).

For this example let us assume a loan to value ratio of $50 \%$ and put together a geared portfolio of Australian shares starting in July 1970. We will start with $\$ 50,000$ cash and borrow $\$ 50,000$ against some property that we own.

We will assume that the interest rate on the loan is $1.5 \%$ above the cash rate for each year. So, in 1971 the cash rate was $5.7 \%$. We will assume that the rate we could borrow at was $7.2 \%$. This $1.5 \%$ borrowing premium approximates what the banks are currently charging.

So, in July 1970 we started with a $\$ 100,000$ share investment. The interest rate was $7.2 \%$ so, on the $\$ 50,000$ loan we paid $\$ 3,600$ in interest. The sharemarket return for the year to June 1971 was $-13.5 \%$ so our investment lost $\$ 13,500$. At the end of the year our investment was worth $\$ 82,900$, that is $\$ 100,000$ after paying $\$ 3,600$ in interest and losing $\$ 13,500$ in value. If we sold our investment right then and paid out our investment loan our ending balance, or what I have called our equity, would be $\$ 32,900$. If we had just invested the $\$ 50,000$ cash, the value of the investment would have fallen by $13.5 \%$, or $\$ 6,250$, and we would have been left with $\$ 43,750$. Clearly borrowing to invest has magnified our losses.

There were a few rocky years from there. The year to June 1972 provided a close to average return of $12.1 \%$, with the year to June 1973 providing a disappointing return of $-9.1 \%$ and the year to June 1974 a return of $-27.3 \%$. They year to June 1975 saw the start of a recovery and provided a return of $8.4 \%$.

So how did our portfolio stand up to this rocky period? By June 1975 our \$100,000 investment had decreased to $\$ 51,600$. So, after paying off our $\$ 50,000$ loan we would be left with $\$ 1,600$. That is, our original $\$ 50,000$ of 'equity' was now worth $\$ 1,600$. If we had not borrowed any money, and just invested the $\$ 50,000$ in Australian Shares then the we would have been left with $\$ 34,731$. We have significantly magnified our losses.

I extended this model all the way through to June 2005 and at no point in time was the geared investment portfolio worth more than the straight $\$ 50,000$ sharemarket investment. By 2005 the equity in the geared portfolio was worth $\$ 842,775$ and the portfolio where $\$ 50,000$ was invested without any borrowed money was worth $\$ 2.048$ million. The first five years of poor investment returns in the period we looked at destroyed so much value in the geared portfolio that it simply never recovered, even over a 35 year period which included some tremendous years of strong sharemarket returns.

Now, to show a better example let us assume that we started in July 1975 with $\$ 50,000$. Just as in the example above let us assume that there are two scenario's, one in which we borrow $\$ 50,000$ to put with the $\$ 50,000$ and build a $\$ 100,000$ investment portfolio, and the other where we invest the $\$ 50,000$ straight into the Australian Sharemarket.

In the first year the return on Australian Shares was a strong 32.2\%. In the portfolio using borrowed money the investment return was $\$ 32,200$ with interest on the loan being $\$ 5,150$. So, by the end of the year the portfolio was worth $\$ 127,050$ and our equity in the portfolio, if we subtract the $\$ 50,000$ loan, is $\$ 77,050$. The $\$ 50,000$ portfolio had increased by $\$ 16,100$ to $\$ 66,100$. So, the strategy to borrow money had increased our financial position by $\$ 10,050$ in one year.

The next 4 years of returns on the Australian Sharemarket were $1.5 \%, 6.7 \%, 26 \%$ and $74.3 \%$. After this period of time the portfolio using borrowed money had increased in value to $\$ 258,338$. So, after deducting the $\$ 50,000$ loan our equity is worth $\$ 208,338$. The value of the portfolio of the $\$ 50,000$ invested in the Australian Sharemarket had increased in value to $\$ 157,217$. So, over 5 years the strategy of borrowing to invest was worth a little over $\$ 51,000$.

In 2005, 30 years after starting these 2 portfolios, the value of the $\$ 100,000$ portfolio that used borrowed money was $\$ 3.7$ million (after subtracting the $\$ 50,000$ loan) and the portfolio started with the $\$ 50,000$ was $\$ 2.95$ million. In this case the strategy of using borrowed money to invest seemed to pay off.

As an aside, it is interesting to note that both the portfolios started in July 1975 were worth considerable more than both portfolios which commenced in July 1970, even given that the 1970 portfolios had more 'time in the market'. Evidence that the simplistic mantra that 'its time in the market, not market timing, that counts', is flawed.

If you started a geared portfolio in either 1987 or 1988 (even after the sharemarket crash in 1987), using a geared investment strategy as described above, you would be worse off even today than if you had simply invested your money without borrowing any money.

For a masters thesis I used historical sharemarket data stretching back to 1900. Each year I compared the results of investing a portion of a person's income into the share market each year while borrowing a similar amount of money to invest. The portfolios were built over a 40 year period. Even with such a long period of time in the market, in $20 \%$ of the cases borrowing money resulted with a decreased ending portfolio balance compared with simply investing money with no borrowing.

While it seems that I may have gone out of my way to show that borrowing to invest does not always pay off, I hope that stands as a counterpoint to the common idea that borrowing to invest over the long term is a certain strategy to increase your wealth.

## The Added Problem of a Margin Call

In the examples I have discussed previously, I have assumed that the borrowings were secured against real estate. However, in a lot of cases a margin loan is used.

A margin loan allows borrowing against shares, up to a maximum limit. That limit is expressed as a ratio of the loan to the value of the shares. For example, if a share has a loan to value ratio of $70 \%$, the margin loan will allow you to borrow $\$ 70,000$ of a total holding of $\$ 100,000$.

Of course, if the value of the investments falls, the loan to value ratio will increase. Once the loan to value ratio increases above the allowable level the investor has to either sell some assets, add some cash to the portfolio or put forward additional assets as security for the loan.

The problem is that if you are forced to sell some assets because of a margin call it is usually at the worse time to do so, when markets have fallen sharply.

In our example, even a 'conservatively' geared portfolio would have faced margin calls in the period in the early 1970's and late 1980's. In fact, in the early 1970's you would have expected to have had to sell your entire investment portfolio at significant losses.

Once you have paid off your home loan, redrawing against that may be a better option as there is no chance of a margin call and interest rates are often lower than for margin loans.

## Do You Need to Gear?

The fact that borrowing to invest increases both the riskiness and return of a portfolio paradoxically makes it unsuitable to help the people who need it most. That is, if you are ten years away from retirement and well behind in your retirement goals, it might be very tempting to borrow some money to try to increase the returns you get from your portfolio. However, if returns were poor it would put you in such a difficult situation financially that the extra risk inherent in the strategy does not make it worthwhile.

For people further from retirement it is worth considering whether you even need to borrow to invest to meet your financial goals. You can assess this using investment calculators such as those found on the FIDO section of the ASIC website (www.asic.gov.au). If you can reach your financial goals without borrowing to invest, it is worth considering whether you want to take on that additional risk.

## The Tax Advantages of Gearing

There is a tax benefit in 'negative gearing'. Negative gearing refers to the situation where the income from the investment is less than the expenses of the investments. In this case the loss can be used to reduce a person's taxable income.

For example, if you owned an investment property that produced income of $\$ 10,000$ with costs of $\$ 15,000$ in interest payments, $\$ 2,500$ in body corporate fees and $\$ 1,500$ in rates, the property would give you an annual loss of $\$ 9,000$. This loss can be used to reduce your taxable income and therefore the tax you have to pay.

## Another Option

There are some managed funds available that do the borrowing for you. These are often called 'geared share funds', and there are a number that are available. These geared share funds are a way of accessing borrowed money in superannuation.

## Taking a Cautious Approach

As well as using a conservative loan to value ratio, a number of other precautions you can take will decrease the risk of gearing. These strategies include:

- having suitable income protection insurance, so that if you become ill or disabled and unable to work you have a replacement income that will means you will be able to maintain your geared investment, without having to sell it suddenly
- paying the interest on the loan from your salary, so that the value of the loan does not keep increasing though having the interest added to it
- having a strategy to pay off the loan at some stage.


## The 'Double Whammy' of an Interest Rate Rise

If interest rates rise, an investor who has borrowed money is hit by two negative effects. The first is that their loan repayments will increase. The second is that as interest rates rise, asset prices, either property or shares tend to decrease. Whether it is a share portfolio or an investment property, an interest rate rise will be unwelcome for an investor who has borrowed to invest. The chapter in section four of this book looks further at the effect of interest rate changes on asset prices.

## How to Proceed From Here

If you want to proceed with a strategy that uses borrowed money, the first step will be to find a source for the loan. Most banks provide margin loans and investments loans.

If the loan is for shares and you use a online broker it is wise to see which loans they work with, as this will make buying and selling somewhat easier.

## Chapter 15 - Contingency Planning - Insurances and Estate Planning

Being Business Like: Contingency planning is a phase directly from the business world. It assumes that not everything is going to go as planned, and that alternate plans should be in mind. At a personal finance level that makes sense as well.

As already noted the term 'Contingency Planning' might seem to be more applicable as a corporate buzzword rather than as part of your personal financial planning. However, just as contingency planning is an important part of most business operations, so it should be a part of your financial strategy.

I am going to deal with the two most serious financial situations that a person can face, firstly being unable to earn an income for a period of time and secondly death. We will discuss the financial arrangements that can be put in place to help you and your family cope with these situations as well as possible.

## Being Unable to Earn Income Due to Illness or Injury

This is a key financial risk that income earners face, and is often one of our biggest financial risks. Income protection or salary continuance insurance provides a replacement income if we are unable to work due to sickness, injury or disability. As such, it is a crucial insurance policy for most people in the income earning stage of their life. To assess whether you need this insurance, you should consider how you would cope, if for some reason, you were unable to earn an income for an extended period of time.

Most income protection policies only replace $75 \%$ of the annual income. For example, a person earning $\$ 60,000$ will receive a replacement income of $\$ 45,000$ through their income protection insurance. Two reasons are usually given for this. Firstly, it is said that people's cost of living diminishes when they are not working for example they may not spend as much on transport and buying lunches. Secondly, it leaves an incentive for the person who is sick or injured to recover and get back to earning the higher level of income.

There is usually a waiting period with income protection insurance. The waiting period refers to the length of time that a person has to be unable to work before they receive benefit payments. This period can range from two weeks to two years, depending on the policy chosen. The shorter the waiting period, the higher the premiums tend to be.

The benefit period refers to the maximum length of time that benefits can be paid from the end of the waiting period. Benefit periods tend to range from one year through to providing a benefit until the insured is aged 65 , which could be a period of 40 years or more. The longer the benefit period the higher the premium tends to be.

It is my opinion that is important to have a benefit period through to age 65. That way, if a serious illness or injury occurs and someone is unable to work again they will receive a replacement income through to their normal retirement age.

A risk for most people is that they often have income protection insurance as part of their super fund, and they assume that they are well covered by this insurance. However, in almost all cases this insurance only has a benefit period of two years, which will not cover them if the injury or illness stretches beyond this time. To increase protection beyond this people could then take out a second income protection policy with a waiting period of two years and a benefit period through to age 65 .

There are two other insurances that you may want to investigate along with income protection insurance. They are total and permanent disability insurance (TPD insurance) and trauma insurance. TPD insurance will pay a lump sum in the event that you become total and permanently disabled. This lump sum can then be used to assist with medical costs, to make any modifications that may be needed around the house and to pay outstanding debt. Trauma insurance also pays a lump sum in the event of a person suffering a pre-agreed medical condition, such as a heart attack, stroke or cancer. This lump sum can help people cope during the time of their illness from a financial point of view. Both of these insurances can be combined with income protection insurance to give even more comprehensive cover.

## Coping With Death

The basic component of life insurance is death cover, which pays a lump sum benefit on your death. It can be put in place either through a superannuation fund or as an individual.

Life insurance, which provides a benefit on your death, is all about catering for your dependents were you to pass away. To consider what level of life insurance cover you might need it is worth considering the scenario of your death.

For a couple without children, the key aspect to address through life insurance is common debts. For example, if a couple had a house with a $\$ 300,000$ mortgage, the surviving member of the couple might struggle to pay the house off on one income. So, life insurance policies that pay a benefit of $\$ 300,000$ for each would mean that if one person were to pass away, the other would not have the financial struggle of having to continue to pay the mortgage out of one income.

Once a couple has children, the financial needs of the children have to be taken into account. So, as well as having enough life insurance to pay off the mortgage the couple should also increase their life insurance to be able to have enough of a lump sum to replace the income of the deceased partner. For example, a person earning $\$ 52,000$ a year might have death insurance for around $\$ 900,000$ on top of the $\$ 300,000$ to pay out the mortgage, a total of $\$ 1.2$ million. This way the surviving partner can pay out the mortgage and invest the $\$ 900,000$ to earn an income stream that helps support the family. At an earning rate of around $6 \%$, the $\$ 900,000$ lump sum would earn and annual income of around $\$ 54,000$.

I mentioned in the first chapter of this book that I thought the financial services industry had a bias towards recommending life insurances because of the attractive commissions. As an example I downloaded the Financial Services Guide of an online financial services organization. The commissions that the organization received included an upfront commission of between $50 \%$ and $120 \%$ of the first year's premiums and then an annual trailing commission of $5 \%$ to $35 \%$ per annum. So, if a financial planner were to recommend a policy to a couple valued at around $\$ 2,000$ a year they could earn up front commission of up to $\$ 2,400$ a year and then trailing commission of up to $\$ 700$ a year. It is worth being clear in your own mind that you need the insurance cover being recommended by a financial planner.

Once you reach a stage where you have paid off all your debts, and have built up sufficient assets to fund your lifestyle, consideration should be given to canceling your life insurance policies. The money from the premiums can be used to further increase your investment assets.

## Estate Planning

There are two key documents that each person should have, a will and an enduring power of attorney.

Your will directs how you wish your assets to be distributed on your death, who will be in charge of the administration of your estate as well as dealing with the important issue of guardianship of any children who are minors. A carefully thought out will can ensure that you assets end up where you want them, in the most tax advantageous manner.

It is important to remember that a will is really all about the beneficiaries of the will. The fact that they are the beneficiaries of your will means they are the people you care about most, and the people who you would want to look after through the provisions of your will.

A key strategy often used in the creation of a will is a testamentary trust. A testamentary trust offers potential tax advantages and asset protection advantages for the beneficiaries of your will. Particularly, a testamentary trust allows income from your estate to be distributed and taxed at adult tax rates to dependents, even when they are under the age of 18 .

As an example let us consider a person with a wife and 3 young children who has a $\$ 300,000$ life insurance policy. His wife earns an income of $\$ 50,000$. For this example lets assume that the $\$ 300,000$ earns annual income of $\$ 18,000$.

If the $\$ 300,000$ were left to his wife she could invest the money in her name. The $\$ 18,000$ would be taxed at her marginal tax rate, $30 \%$ plus $1.5 \%$ medicare, and after tax $\$ 12,330$ would be left.

If the $\$ 300,000$ were left in a testamentary trust the wife could choose to distribute the income to the children, $\$ 6,000$ each. There would be no tax payable on this level of income, a tax saving of \$5,670 a year.

Similarly a child allocated pension, which can be paid from superannuation asset, is also taxed at adult tax rates and can be a useful estate planning tool.

An enduring power of attorney allows for someone to deal with your affairs if you are unable to tend to them, perhaps because of sickness or if you are out of the country. Putting these arrangements in place ensures that you have a person you trust taking charge of your affairs in a period where you cannot.

## How to Proceed From Here

1/ Have a look at what insurance you currently have. It is likely you will have some, although probably not enough, in superannuation. If you are not sure - get in touch with your superannuation provider and find out.

2/ Using the examples in the chapter as a guide, think about the scenarios in which you need life insurance and which cover you need. You may seek the assistance of an advisor to determine this - although remember they may be biased because of the generous commission paid. Don't be talked into something you don't think you need.

3/ When you look around at the options for the insurance you need, include:
Dealing directly with an insurance company

## Banks

Through your existing superannuation policy (this is often a good, inexpensive option)
If you have choice of superannuation fund at your place of work, then you may choose to move your superannuation to a fund with a better choice of life insurances.

4/ It is likely that you will be required by the insurance company to undergo some medical tests to assess your suitability for the insurance.

5/ Find a lawyer who specializes in estate planning to put in place estate planning arrangements.

## Chapter 16 - Understanding Superannuation

Being Business Like: There is really no equivalent to superannuation in the corporate environment. Why? Because it is actually so good. The big advantage of superannuation is its low tax rates - with a maximum tax rate of $15 \%$ on a regulated superannuation fund. Companies pay tax at a rate of $30 \%$, although if they could pay tax at $15 \%$ they certainly would take advantage of it.......................

If there is one thing that people could do to start to understand and control their financial situation more, it would be take more ownership of their superannuation. There are a number of reasons why people might hesitate to become more involved. It might be because of the complexities of superannuation rules. It might be because compulsory superannuation contributions have been around for 15 years. Or it might be because employers sometimes have more say than employees over where their money is invested. Whatever it is, people don't seem to have grasped the potential of what superannuation can mean for them. It is a crucial element in your personal financial situation and now, with choice of superannuation, you can start to take more control over your superannuation situation.

In this chapter I aim to explain what superannuation is, and why it is a key source of wealth for most people. In the following two chapters I will introduce you to two key strategies that people may choose to increase their superannuation wealth.

To help develop an understanding of superannuation I have addressed the following topics in this chapter:

- What is superannuation?
- The key benefit of superannuation
- The key disadvantage of superannuation
- Making contributions to superannuation
- Consolidating your superannuation
- Insurance in superannuation
- Investing your superannuation appropriately
- The trend is your friend

If you need further information the ATO has a great deal of information on superannuation rules. This can be accessed through their website at www.ato.gov.au/super/ or through their Superannuation Infoline on 1310 20. As well as this you can get in touch directly with your own superannuation fund with any questions that you have about your super, how it is invested and the insurances that are available. My experience is that most super funds have helpful call centres.

- What is superannuation?

Superannuation was introduced in the early 1990's as a low tax compulsory saving scheme for employees. Each employer was required to pay into an approved superannuation fund a percentage of an employee's wage as a contribution. Currently this contribution is $9 \%$ of an employee's wage.

This money is preserved until the employee reaches a certain age and retires from full time employment. Originally this age was 55 . However it is now being slowly increased to age 60. At this time the employer can either take their superannuation as a lump sum or as an income stream (pension). There are particular tax advantages for taking superannuation as an income stream.

Standard superannuation accounts are 'accumulation' accounts. In this type of superannuation account the $9 \%$ contributions are put into a managed portfolio of investments. If the value of the investments rises, the balance of the person's superannuation increases and vice versa. In addition, every time a contribution is made on behalf of the person the balance of their superannuation increases.

Less common are 'defined benefit' type accounts. These accounts have a final balance that is a multiple of the employee's final salary. The multiple increases for every year of service. For example, after four years of work a person might have a multiple of 0.5 times their final salary of $\$ 50,000$, a total superannuation balance of $\$ 25,000$. After eight years of work their multiple of their salary might have increased to 1 times their salary, while their salary might have increased to $\$ 55,000$, giving a total superannuation balance of $\$ 55,000$.

The key difference is that, with an accumulation account, a person's superannuation balance will increase or decrease based on investment returns. With a defined benefit account, only a person's ending salary and length of service influence the ending balance.

- The key benefit of superannuation

Superannuation has the benefit of contributing to 'forced savings', as employee contributions are mandatory. More important than this is the fact that this investment occurs in a very low tax environment.

The $9 \%$ contribution from employers is taxed at a rate of $15 \%$, much less that the top marginal tax rate of $46.5 \%$ or the most common tax rate of $31.5 \%$. Furthermore, investment earnings in the superannuation fund are taxed at a top rate of $15 \%$. For most people this is less than the tax they would pay if they held investments in their own name.

- The key disadvantage of superannuation

For people born after June 301964 superannuation benefits cannot be withdrawn until you have retired from employment and reached the age of 60 . There are conditions under which your benefits can be paid prior to then. These include permanently incapacitated, severe hardship or death. However, the general terms of release are that you must have reached the age of 60 and retired. For those people born prior to the $30^{\text {th }}$ of June 1964 the preservation age will be between 55 and 60 depending on your age.

The key disadvantage of superannuation is that you cannot access the money at will. This is particularly important if you are young and can't really anticipate when you will need the funds in the future. On that basis you need to be sure that, prior to making any additional contributions to superannuation, you are comfortable with not being able to access this money until you reach your preservation age and retire. This explains why people tend to focus on building their superannuation balance through additional contributions closer to retirement, when they know that they will be able to access it sooner.

- Making contributions to superannuation

The most common contribution that is made to superannuation is the $9 \%$ employer contributions. In 2003/2004 employer contributions accounted for $\$ 38.7$ billion of the $\$ 63.7$ billion contributed to superannuation. If you are between the ages of 18 and 70 , employed and earning more than $\$ 450$ per month you generally should be receiving employer contributions.

Other common contributions include Government co contributions and salary sacrifice contributions, both of which are discussed in the following chapters.

A spouse contribution can be made for a spouse earning less than $\$ 13,800$ a year. In this case the spouse making the superannuation contribution may be able to claim an $18 \%$ tax offset for a superannuation contribution made on behalf of the low earning spouse. The maximum level of the contribution is $\$ 3,000$ and the maximum tax rebate is $\$ 540$. More information on this contribution is available at the superannuation section of the ATO website (www.ato.gov.au/super/)

Any person is able to make 'personal' contributions to superannuation at any time, up to the age of 65 . The contributions, made out of a person's own resources and where no tax deduction is claimed, are capped at $\$ 150,000$ a year, although in most cases three years worth of contributions can be made ( $\$ 450,000$ ), although this then means that you cannot make further contributions until after the three year period.

You can even make contributions on behalf of a child - up to $\$ 3,000$ per child for every three year period. Of course, it will be a very long time before the child can access this investment!

- Consolidating your Superannuation

By consolidating your superannuation, I mean putting it all into the one place so that it is easy for you to track it and watch it grow in size. By putting all your superannuation into the one place you may cut down on the level of fees you are paying, particularly if you find yourself with a number of small superannuation balances.

One important point to remember when you are considering putting your superannuation into the one place is to consider your insurance situation. With superannuation funds potentially being important to you in providing life insurance, you should check that you are not rolling out of a fund that offers good life insurance. Also check if there are any fees involved in rolling out of a fund. I recently came across a MLC fund that had an $18 \%$ exit fee.

The best way to roll out of a fund is to contact the fund itself, and ask for a form to roll over to another superannuation fund. It is likely that they will require you to complete the form and send it back with some form of ID, as well as details of the fund you are rolling over into.

If you have a choice of super options where you work, you can evaluate the various funds by considering the following factors:

- Total fees
- Life insurance availability
- Investment options
- Performance
- Insurance in Superannuation

Most superannuation funds provide you with access to death insurance and income protection or salary continuance insurance that will pay a benefit for a period of two years in the event of sickness. Often this insurance is quite reasonably priced.

Life insurances are discussed in full in an earlier chapter. If you are unhappy with the insurance options available in your superannuation fund, and you have choice of superannuation where you work, then it is worth researching other funds to see which may offer you better coverage in this regard.

- Investing Your Superannuation Appropriately

Most superannuation funds have a variety of investment options available for you. These options have different asset allocations and sometimes even different investment managers. Usually the default fund is a 'balanced' fund. Early on in your working life a more aggressive fund, with greater exposure to Australian and international shares, may suit you better. It is worth checking where your superannuation assets are invested and considering if this is the most suitable option.

Choice of super may be available to you. If so, it provides you with greater options to choose exactly where and how your superannuation is invested.

- The Trend is Your Friend

One aspect of superannuation that seems to concern people is that the rules governing superannuation seem to keep changing. While I would agree that this is the case, it seems to me that recent changes have all favoured investors. This makes sense to me, as the Government has a vested interest in seeing superannuation succeed and people fund their own retirement - rather than relying on a Government pension.

Recent changes that support this include:

- The introduction of superannuation splitting rules that will allow a couple to benefit from splitting contributions between themselves.
- The abolishment of the superannuation surcharge, which was an additional tax on contributions for high income earners.
- Allowing people to take benefits in the form of an income stream, under some circumstances, prior to retirement.
- The introduction of the Government Co contribution, that provides additional superannuation contributions for low income earners making personal superannuation contributions.
- The introduction of rules that made all superannuation withdrawals, whether as a pension or a lump sum, tax free after the age of 60 .


## Chapter 17 - The Government Co Contribution

Being Business Like: Occassionally the Government provides grants and incentives to encourage business investment in a certain area - for example in the development of environmentally friendly power. This is similar to the Government Co Contribution. The Government wants to encourage people to invest in their own financial security and, for those people eligible, they have provided a massive bonus!

I have included the government co contribution as a separate chapter because I want to highlight it as the most attractive investment opportunity that there is- provided you are eligible for it.

Under the superannuation co contribution the Government makes a $\$ 1.50$ contribution to superannuation for every $\$ 1.00$ a person contributes - under certain circumstances and up to a set limit. So, for the $\$ 1.00$ you invest, your superannuation balance grows by a total of $\$ 2.50$ - a risk free return of $150 \%$ !

To be eligible for the government co contribution there are certain requirements.

- your income needs to be less than about $\$ 59,000$ (this threshold increases every year)
- you need to be under 71 years of age.
- you need to earn more than $10 \%$ of your income as an employee.
- you need to make a personal contribution to you super fund.

A personal contribution refers to a contribution made by yourself to your fund in 'after tax' dollars.

If you earn less than about $\$ 29,000$ you can make a personal contribution of $\$ 1,000$ and the Government will make a co contribution of $\$ 1,500$. So your superannuation balance will increase by $\$ 2,500$ based on your contribution of $\$ 1,000$.

If you earn $\$ 40,000$ you can make a personal contribution of $\$ 600$ and the Government will make a co contribution of $\$ 900$. So your superannuation balance will increase by $\$ 1,500$ based on your contribution of $\$ 600$.

If you earn $\$ 50,000$ you can make a personal contribution of $\$ 267$ and the government will make a co contribution of $\$ 400$. So your superannuation balance will increase by $\$ 667$ based on your contribution of $\$ 267$.

The next chapter on salary sacrifice contributions explores an extension of the above material. In this we look at reducing taxable income by making a salary sacrifice contribution to superannuation. If this brings your income below the $\$ 59,000$ threshold, you would be able to access the government co contribution scheme.

For example if your income was $\$ 60,000$ you could not make a co contribution to superannuation. However, if you were to salary sacrifice $\$ 15,000$ to super your taxable income would fall to $\$ 45,000$, allowing you to make a personal contribution to super and receive the government co contribution.

## How to Proceed From Here:

You should contact your superannuation fund and ask them how you can make a personal contribution to your account, letting them know that this is a contribution that will make you eligible for the government co contribution.

After you have lodged your tax return the ATO will calculate the superannuation co contribution to be paid and then send you a letter after this amount has been deposited into your account.

For further information about the Government Co contribution go to the ATO website at www.ato.gov.au/super or phone 131020.

As well as this Government co contribution, quite often employers provide mechanisms whereby additional employee contributions are matched with additional employer contributions. For example, many Queensland Government employees are able to able to contribute an additional $5 \%$ of their salary to superannuation and receive additional contributions from their employer. You should ask your employer whether these opportunities exist.

## Chapter 18 - Salary Sacrificing to Superannuation

Being Business Like: Salary sacrificing is a great opportunity to reduce your overall tax situation. No business would pay more tax than they need to, and neither should you.

Making additional salary sacrifice contributions to superannuation is a popular and tax effective financial strategy.

It works through sacrificing some of your pre tax income to superannuation, so that rather than being taxed as income it is only taxed at the $15 \%$ superannuation contributions tax rate.

At a basic level what happens is that you ask your employer to pay $\$ 10,000$ of your income to superannuation as a 'salary sacrifice', which effectively reduces your taxable income by $\$ 10,000$.

An example will illustrate this. Let's assume that you earn \$50,000 in a year and have decided that you can salary sacrifice $\$ 10,000$ of this to superannuation. This will reduce your taxable income to $\$ 40,000$. Usually this $\$ 10,000$ of income would be taxed at a rate of $30 \%$ plus $1.5 \%$ medicare levy, making total tax payable of \$3,150.

If the $\$ 10,000$ is salary sacrificed to superannuation the only tax you have to pay is the $15 \%$ superannuation contributions tax, a total of \$1,500.

This is a saving of $\$ 1,650$ of tax.

Now - another more advanced scenario presents itself here. Having reduced your income to $\$ 40,000$ you can now utilise a reasonably sizeable government co contribution as well. In fact, you can contribute about another $\$ 600$ to superannuation as a personal contribution, and receive a further $\$ 900$ from the Government as a co contribution - that is your superannuation balance will grow by $\$ 1,500$ by your personal contribution of $\$ 600$. (See the previous chapter for further details on the Superannuation Co Contribution - these thresholds for how much you can contribute change each year, so check them out at the time you want to make the contribution.)

## Employee Situation

When working out your salary sacrifice contributions you should bear in mind that the maximum contributions that you can make for a year, that is the total of employer contributions and salary sacrifice contributions, is dictated by your age based limit. In the 2005/2006 financial year the limit is $\$ 14,603$ for a person under age $35, \$ 40,560$ for a person between age 35 and 49 and $\$ 100,587$ for a person aged 50 and over.

## Self Employed Situation

If you are self employed you can claim your own tax deduction for any contributions made to superannuation. From the 2008 financial year these contributions are $100 \%$ tax deductible. You make a personal contribution to superannuation, and can claim a full deduction for it up to the limit of $\$ 50,000$ a year. (If you are over 50 up until 2012 there is a transitional limit of $\$ 100,000$ a year).

For a self employed person the cash flow benefits of contributing to superannuation are much the same as for a employee making a salary sacrifice contribution to superannuation. Taxable income is decreased and tax is saved because the superannuation contribution is taxed at $15 \%$.

Important Facts about Salary Sacrificing to Superannuation
1/ There is no fringe benefits tax involved in making a salary sacrifice to your own superannuation account. While a lot of other salary sacrifices may incur fringe benefits tax, salary sacrificing to superannuation does not.

2/ The superannuation contributions surcharge no longer exists from 1 July 2005. This was a further surcharge on superannuation contributions for high income earners. So, this strategy becomes even more attractive for high income earners, as they can salary sacrifice income that would have been taxed at $48.5 \%$ to superannuation where it will be taxed at a rate of $15 \%$.

The Downside of Additional Superannuation Contributions
As I have mentioned in other sections, the downside of making additional contributions is that you cannot access them until later in life. So, you need to be comfortable that contributions you make to superannuation will not be needed prior to that time. Of course, given the tax savings involved in superannuation there is also the risk that not contributing to super can decrease your wealth, as illustrated by the following example.

I want to provide a simple case study to outline the scenario of being very conservative in making additional superannuation contributions. Assume that a couple have done their budget and considered their financial planning strategies. The have decided that they have $\$ 5,000$ a year that they want to use to make additional repayments on their mortgage plus another $\$ 10,000$ of before tax income that they need to make a choice about.

For the purpose of this example let us say that they have two choices, to take the $\$ 10,000$ as income and invest it or to salary sacrifice the $\$ 10,000$ to superannuation. Assuming that they have a marginal tax rate of $31.5 \%$, taking the $\$ 10,000$ as income will mean paying $\$ 3,150$ of income tax. If they choose to salary sacrifice this money then there is a $15 \%$ tax rate on these contributions, or $\$ 1,500$ of tax payable on the $\$ 10,000$ contribution to superannuation. The tax saving is $\$ 1,650$. Plus, the investment earnings of the money in superannuation will be taxed at a maximum tax rate of $15 \%$.

Let's extend the example over a 30 year period, and assume investment earnings of $5 \%$ a year both inside and outside of superannuation. The $\$ 1,650$ a year of tax saved by choosing to put the money into superannuation, and the lower tax on investment earnings will increase their wealth by just over $\$ 109,000$ over the 30 year period, compared with investing the money outside of superannuation.

## The final word is:

If you need the money prior to retirement, avoid superannuation
If you do not need the money before retirement, additional superannuation contributions make good financial sense.

One Warning: You need to check to see if you lose your compulsory employer superannuation contributions on the salary sacrificed portion of your income. When you salary sacrifice part of your income, employers may not pay the $9 \%$ employer contributions on the salary sacrificed component of your income. For example, if you salary sacrificed $\$ 40,000$ of your $\$ 100,000$ income, an employer may only pay the $9 \%$ employer contributions on the remaining $\$ 60,000$ of income. You should check this with your employer and balance this against the tax benefits of the strategy.

## How to Proceed From Here

Your payroll officer should be your first point of contact. They should know how you go about setting up a salary sacrifice arrangement to superannuation.

Keep in mind that this is straightforward for the employer as there are no Fringe Benefits Tax implications.

## Chapter 19 - 'Where' to Build Your Investment Portfolio

When you get to the point of wanting to start building an investment portfolio, one of the first decisions you have to make is 'where' to build the portfolio. By this I mean answering the question should the portfolio be in my name, my partner's name, joint names, within a company structure, within a family trust or within superannuation?

This is an important question to answer as each environment will have a different tax structure, and choosing the most effective tax structure will increase the performance of your investment portfolio.

Right at the start I want to make it clear that this chapter deals only with choosing an investment environment based on financial considerations. It does not try to take into account or comment on the asset protection characteristics of each environment. If you work in a role where you are potentially exposed to the risk of litigation you should seek high quality professional advice to identify the best way to protect your assets from litigation.

For the average couple there are five common investment environments available:
1/ Either partner's name
2/ Joint names
3/ Superannuation
4/ A Company
5/ A Family Trust
Let us look at each environment in turn.

## 1/ Investing in either partner's name

If you are building an investment portfolio you should endeavor to invest in the name of the partner with the lowest level of income. This is because that person will have the lower level of income tax, so the earnings from the investment portfolio will be taxed at a lower level.

As an example, let us consider a couple where the wife works full time and earns $\$ 150,000$ and the husband stays at home to care for the children and does not earn any income. They have $\$ 100,000$ to invest and are not sure if they should invest in her name or his.

Let us assume that the $\$ 100,000$ will be invested into a cash account that will earn interest at the rate of $5.5 \%$, or $\$ 5,500$ a year.

If the money is invested in her name the $\$ 5,500$ will be taxed at her tax rate of $47 \%$ plus $1.5 \%$ medicare levy. So, $\$ 2,667$ of the $\$ 5,500$ will be lost in tax and $\$ 2,833$ will remain after tax.

Investing the money into his name, where the earnings will not even reach his $\$ 6,000$ tax free threshold will mean that there is no tax payable and all $\$ 5,500$ of investment earning will remain after tax.

If you are investing in such a way that the costs associated with an investment are greater than the income earned from an investment, so that you end up making a loss, you will be better off with the investment in the name of the highest income earning partner. This most commonly occurs when you borrow to invest in either an investment property or shares, and the interest paid on the loan is greater than the earnings from the investment property or shares.

## 2/ Investing in Joint Names

When an investment is made in joint names for tax purposes the income is split 50/50 between the couple and then taxed at each person's marginal tax rate.

For example, if an investment that earned income of $\$ 5,500$ was held in joint names then each person would have to pay tax on $\$ 2,750$ of income.

You would most likely use a joint portfolio where both partners earned around the same amount of money and there was no immediate tax benefit in investing in one persons name or another.

A practical example of where a joint portfolio would work well would be a couple approaching retirement who had just sold an asset, say an investment property that they owned, and had $\$ 500,000$ to invest - and they wanted to keep their affairs simple. By investing the $\$ 500,000$ into joint names they will split the income between themselves and take advantage of the fact that each of them has a $\$ 6,000$ tax free threshold, and then a $15 \%$ tax bracket and so on.

## 3/ Investing in Superannuation

Superannuation offers a low tax investment environment with a high level of restriction over how and when you can access your investment. The low tax nature of superannuation makes it a great environment in which to invest. The restriction on accessing your investments in superannuation means that you generally cannot access your funds until you have reached your 'preservation age', which will be at least 55, and for younger people 60 . Your preservation age is the age set by the Government when you can start to access your superannuation benefits.

Because of the lack of accessibility of superannuation investments most people will not make this the primary focus of their investments until around 5 or 10 years prior to retirement. Before this they may choose to make some additional contributions to the low tax environment of superannuation such as taking advantage of the Government co contribution, tax rebates for spouse contributions or the tax efficiency of making some salary sacrifice contributions to superannuation.

As mentioned previously the tax rates in superannuation are attractive, with a $15 \%$ tax on investment earnings and a $10 \%$ capital gains tax rate for investments that have been held for at least 12 months. This remains the great advantage of the superannuation environment.

The next three chapters detail ways of taking advantage of this great low tax environment without necessarily having to make superannuation the number one investment focus.

## 4/ Investing in a Company

The fourth option is to establish a company and use that as the environment in which to build an investment portfolio.

The maximum tax rate in a company is $30 \%$, so anyone whose marginal tax rate is above $30 \%$ may find that investing within a company saves tax. However, there is also a tax downside that comes with investing in a company. There is no discount rate of capital gains tax on investments held for more than 12 months. If you hold an investment in your own names, in a family trust or in a superannuation fund you are able to claim a discount on the capital gains tax paid when an investment is sold provided you have held the asset for 12 months. For example, when you sell an investment in your own name that you have held for 12 months you are entitled to a $50 \%$ reduction in the gain. So, even if your marginal tax rate is $47 \%$ plus $1.5 \%$ medicare levy the effective tax rate after the $50 \%$ discount is only $24.25 \%$. This compares favourably with the $30 \%$ tax rate you have to pay on the capital gain on an investment held in a company.

The other advantage of a company is that when you finally come to draw some money out of the company you may be able to do this by paying yourself a 'fully franked dividend'. This means that not only are you getting a cash dividend from the company you are also getting a tax credit with it, valued at $30 \%$. If when you receive this dividend your income tax rate is less than $30 \%$, you will actually receive this tax credit back as a refund of tax. If your tax rate is in the $30 \%$ bracket it means that effectively no tax will be payable on the dividend and if you tax rate is higher than $30 \%$ the tax credit will reduce the amount of tax that has to be paid.

A key disadvantage of a company structure is there are costs involved with running it. You should check with your accountant, however it is almost certain that the fees will include both a fee from ASIC (Australian Securities and Investment Commission) and a fee from your accountant to set the company up and to prepare and lodge the required annual reports.
From 1 July 2008 only people earning more than $\$ 75,000$ will have a tax rate of greater than $30 \%$. If your personal tax rate is $30 \%$ or less then it probably makes little sense to invest in a company structure.

## 5/ Investing in a Family Trust

A trust is a structure where your investments can be held and the investment income distributed each year to the beneficiaries of the trust.

There is no set formula to how the income has to be distributed, however all the income has to be distributed each year.

There are fairly strict restrictions that limit the tax effective distribution of income to children under the age of 18 to relatively small amounts, under $\$ 1,000$. Distributions above this level to children under the age of 18 are taxed heavily. However, once a child is aged 18 then distributions can be made to them at adult tax rates.

One of the effective uses of a family trust may be where parents are supporting children through tertiary education. Let us assume there is a family trust with assets of $\$ 300,000$ that earned $\$ 18,000$ a year and the family has three children attending university that they wanted to assist. They could make distributions of $\$ 6,000$ to each child and, if these distributions were the only income received by each child they would be within the tax free threshold for each child and no tax would be payable.

As with a company structure there will be professional fees associated with the establishment and running of a family trust.

## A Quick Comment on Estate Planning

There are two other options beside these listed above that should be considered when you are dealing with your estate planning. These are testamentary trusts and child allocated pensions.

If you have dependent children under the age of 18 , both child allocated pensions and testamentary trusts provide very tax effective ways to provide for your family financially should you pass away.

These topics are examined further in the chapter on estate planning and life insurances.

## How to Proceed From Here

The choice of 'where' to build an investment portfolio is an important one - the wrong decision could cost you thousands of dollars in tax every year.

I would suggest that having read this chapter you do some more research on the option that you feel suits yourself, and then check your thinking with an accountant.

## Chapter 20 - Using Diversification and Asset Allocation to Build an Effective Portfolio

Diversification is a strategy to manage investment risk by investing in a variety of assets. In this way, if one of the assets you have invested in performs poorly, the overall effect that this has on your portfolio is moderated by the performance of the other assets.

Put simply, diversification is making sure that all your eggs are not in the one basket.

To understand how diversification works as a strategy, let us consider what happens when an asset that you own falls in value by $50 \%$. While this is not a common occurrence it can happen. High profile examples of assets that have fallen by more than $50 \%$ in recent times would include AMP shares, Flight Centre shares (although both these companies have since recovered), Centro Property shares, ABC Childcare shares, City Pacific Shares or HIH and OneTel shares that collapsed completely.

The effect that a fall in value of an asset by $50 \%$ will have on your overall portfolio will be moderated by how many investments you have in your portfolio. If you only have this one asset in your portfolio, the effect on your portfolio will be a fall in value by the same amount as the asset, which is $50 \%$. If you have 5 equally weighted assets in your portfolio, and one falls by $50 \%$, then the effect on your portfolio will be that it falls in value by $10 \%$. With 10 equally weighted assets the overall portfolio falls by $5 \%$ if one asset falls in value by $50 \%$. By the time you have a portfolio of 20 equally weighted assets the overall portfolio only falls by $2 \%$ when the value of one asset falls by $50 \%$.

The graph on the next page illustrates this for portfolios consisting of one through to one hundred assets.

## Percentage Fall in the Value of a Portfolio if

 One Asset Falls by 50\%

As the graph illustrates most of the benefits of diversification are gained by the time you have 15 to 20 assets in your portfolio. Beyond that the gains from diversification are not significant.

Chris Leithner, in his book 'The Intelligent Australian Investor' (Wright Books, 2005) makes the point that up to the point of 'fifteen to twenty securities or thereabout, diversification is indeed beneficial'.

Warren Buffett, perhaps the greatest investor of all time (and who is the subject of a later chapter in this book), is another who warned against over diversification. Robert Hagstrom, in his Book 'The Essential Buffett' (Wiley and Sons, 2001) described Warren Buffett's investment style as 'focus investing', where he is comfortable holding a smaller portfolio of outstanding investments. The lesson is, 'Best way to outperform the market: Don't load up on hundreds of stocks; wait for the few outstanding opportunities.'

Robert Hagstrom tested the theory that smaller portfolios had greater probability of generating returns that are higher than the market's average rate of return. He used a computer simulation to randomly generate 3,000 portfolios containing different numbers of stocks, from a data set of 1,200 companies.

The largest portfolios contained 250 stocks, and the average 10 year return from the 3,000 portfolios containing 250 stocks ranged between $16.0 \%$ and $11.4 \%$. The smallest portfolios contained 15 stocks and the average 10 year returns from the 3,000 portfolios containing 15 stocks ranged between $6.7 \%$ an $26.6 \%$. This demonstrates that the smaller portfolio has a greater chance of both outperforming and under performing the overall investment market.

This is an important point - the less diversified the portfolio, the greater the risk of underperforming the market by some margin.

My own view is that diversification is a great ally. As you will see in later sections of the book I favour whole of market index style funds for portfolios. The Hagstrom figures given above show that as portfolios become smaller, there is also greater chance of them underperforming the market by greater margins.

So, having looked at both the importance of diversification and the disadvantages that may come with too much diversification we now move on to look at another tool to moderate investment risk, asset allocation.

## Asset Allocation

There are various asset classes that are available for people to invest in. These include:

- Australian shares,
- international shares,
- listed property trusts,
- direct property,
- fixed interest investments,
- cash investments.

All of these individual asset classes are explored in more detail in the next section of the book. Here we are going to look at choosing how much of our portfolio we should allocate to each asset class.

We should start by looking at the question why invest in more than one asset class? Shouldn't we simply invest in whichever asset class has the highest average return and reap the benefits of a high performing portfolio?

The answer to these questions is that we invest in different asset classes to try to reduce the volatility of our portfolio - that is the extent to which the returns of a portfolio fluctuate.

For example, in the financial year ending June 2002 Australian shares returned $4.5 \%$ and then over the following 12 months they returned $-1.1 \%$. A total two year period over which an investor in Australian shares lost money. Over that same period, however, Australian fixed interest investments returned $8.0 \%$ and $12.2 \%$ and listed property trusts produced returns of $15.5 \%$ and $12.1 \%$. So, an investor's total return would have been improved by diversifying between asset classes - so that in that period where Australian shares provided a poor return, this would be offset from the relatively strong returns from fixed interest and listed property trust investments.

The various asset classes are often grouped under two categories, growth assets and defensive assets. Defensive assets include cash investment and fixed interest investments like bank term deposits, government and company bonds. Growth assets include Australian and international shares and listed property trusts.

| Growth Assets <br> (volatile assets) | Defensive Assets <br> (income stream assets) |
| :---: | :---: |
| Australian Shares <br> International Shares <br> Listed Property Trusts | Cash Investments <br> Fixed Interest Investments |

Defensive assets usually provide a known stream of income with little risk of losing capital. An example is a bank account, which has a very high likelihood that you will get your original investment back at the end of the investment period with an agreed rate of interest. A government bond is another example with the 6 monthly interest payments known when you purchase the bond, and at the end of the investment period you will receive your money back. Given that defensive assets generally have a known income stream and limited risk of losing your investment, it might also be appropriate to categorise them as 'income stream assets'. These investments are less risky than growth assets, and also generally have lower average returns.

At this point it is worth mentioning that there are a number of providers of 'fixed interest' investments who deceive investors into thinking that they are offering relatively secure investments when they are not. This is examined further in the chapter on fixed interest investments. However they are not the type of fixed interest investments under discussion here.

Growth assets are those where the income distributions to the investor are not fixed, but rely on the underlying performance of the company or property investment. The prices of these assets are volatile, that is they have the potential to both rise and fall in price, and there is no guarantee that an investor will get their original investment back when they come to sell. These assets are riskier but tend to have a higher average return than defensive assets. The ability of these assets to increase or decrease in capital value means that it is also appropriate to categorise them as 'volatile assets'.

Some organizations characterise listed property trusts as defensive assets because of their strong and generally reliable income streams. However, with the increased use of debt financing by listed property trusts, and the increasing number of trusts involved in construction work, I think it is more appropriate to characterise them as growth assets. This issue is discussed further in the chapter on listed property trusts.

## Choosing an Asset Allocation for Yourself

Alan Kohler, in his book 'Making Money' (Randon House Australia, 2005) emphasises that investment timeframe is important. For long term investments, say saving for retirement from an early age, he suggests that a diversified mix of growth investments may be appropriate. Conversely, if the investment period is short, say you want to invest a lump sum needed to purchase a house in two years, then investing that totally in cash or term deposit investments where there is no chance of a negative investment return is sound.

As well as timeframe, an investor's comfort with volatility is often important in choosing an asset allocation. An investor who is comfortable with the value of their investments going up and down in exchange for a higher long term return is more likely to invest in growth asset classes. An investor who is not at all comfortable with fluctuations in the value of their portfolio is more likely to invest in defensive asset classes.

While different terminology is used, the 'average' asset allocation is often referred to as a 'balanced' portfolio. Portfolios that have more of a bias towards growth assets than the balanced portfolio are often called 'growth' portfolios. Portfolios that have more of a bias towards defensive assets than balanced portfolios are often called 'income' or 'conservative' portfolios.

So what does an average balanced asset allocation look like?
I have put together a summary of the asset allocations of a number of fund managers. These are in the table on the next page. As you can see, there is a degree of variety as to what constitutes a balanced fund. For example, Q Super's balanced fund targets having $75 \%$ of its investments in growth assets, whereas Vanguard has $50 \%$ of its investments in growth assets. This in itself suggests that an investor should look behind the label and ensure they are comfortable with the actual asset allocation of any fund.

| Fund | Aust <br> Shares | Int <br> Shares | Property | Fixed <br> Interest | Cash |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Q-Super Balanced | $35 \%$ | $30 \%$ | $10 \%$ | $20 \%$ | $5 \%$ |
| BT Multi $-\quad$ Manager <br> Balanced | $39.5 \%$ | $34.7 \%$ | $6.9 \%$ | $17.2 \%$ | $1.7 \%$ |
| Vanguard Balanced Fund | $26 \%$ | $18 \%$ | $6 \%$ | $28 \%$ | $22 \%$ |
| Colonial First State | $23.53 \%$ | $19.22 \%$ | $5.02 \%$ | $35.36 \%$ | $16.76 \%$ |
| ING Perpetual Balanced <br> Growth | $45.6 \%$ | $24.7 \%$ | $5.6 \%$ | $20.1 \%$ | $4 \%$ |

As an aside from the topic, I often notice the way the financial services industry charges multiple streams of fees from just one investment. The BT Multi Manager Balanced fund demonstrates this well. Firstly, BT themselves manage the fund, which is really a series of investments in other funds such as 452 Capital and Credit Suisse. BT also advises that the firm Intech Fiduciaries advise on asset allocation, manager selection etc. At some point stockbrokers would be used to purchase the underlying shares of fixed interest investments. Finally, the financial advisor recommending the fund also receives income. Each of these 5 levels will be funded by your investment.

On the next page are two sample 'balanced' asset allocations.

| Example of Indicative Balanced Asset Allocation |  |
| :---: | :---: |
|  | $\square$ Australian Shares International Shares Listed Property Trusts Fixed Interest <br> ■ Cash |



On the previous page are examples of two other balanced asset allocations. The first is one that I have prepared, the second is from Alan Kohler's book 'Making Money' (Random House, 2005), which he describes as being for 'medium investment duration'.

My own asset allocation shows up my bias for asset classes that produce strong income streams. I prefer a higher than usual exposure to listed property trusts, an asset class characterised by strong income streams. Furthermore I would choose a lower than usual exposure to international shares as they tend to have the lowest income streams of any asset class.

To move any of these balanced asset allocations into more 'assertive' or 'growth orientated' asset classes you could increase the exposure in the area of Australian shares, international shares and listed property trusts. Indeed, for very long term investments you may have only minimal exposure to defensive assets.

Conversely, to make any of these balanced asset allocations into more 'income' or 'conservative' asset allocations, increased exposure to fixed interest and cash assets is required.

At the end of the day, as important as asset allocation is, it is not an exact science. As you build your understanding of investments and how they perform no doubt you will build your own preferences for your own asset allocation.

We look at this topic in more detail in the section of the book that looks at investments.

## How To Proceed From Here:

This chapter is primarily theoretical. Having read through this chapter you are now in a position to decide how you are going to put into practice the concepts of diversification and asset allocation.

You should be in a position to decide what level of diversification you feel comfortable with. Certainly you would want to have a portfolio of more than 10 assets, although there is little benefit and indeed some downside in have more than 20 assets in your portfolio.

You should now have a working understanding of what sort of asset allocation you are comfortable with, and you will no doubt build this understanding over time.

## Chapter 21 - Account Based (Retirement) Income Streams

The 'pareto rule' is an interesting rule that I came across during some of my study. It is more commonly known as the $80 / 20$ rule, and says that $20 \%$ of outcomes are responsible for $80 \%$ of results. For example, in business $20 \%$ of your clients might be responsible for $80 \%$ of your revenue.

In retirement planning 'account based' retirement income streams will account for a large majority - I'd guess at least $80 \%$ - of retirement planning strategies. This means that we can devote a short chapter to understanding how they work. Having one income stream that will be commonly used is different from the past where different income streams have had different centrelink and tax treatments, as well as a variety of investment options. However, the 2007 'simpler superannuation' changes really have made superannuation income streams simpler.

Recent legislative changes have left many of the income streams previously used in planning retirement - allocated pensions, term allocated pensions and annuities - as being less likely to be used compared to an account based retirement income stream. As an aside, the account based income stream was most like an allocated pension.

Before going too far, it should be mentioned that account based income streams are also known as account based pensions and fully flexible income streams. (Three names for the one thing - understanding the financial services industry was never meant to be easy!)

## How Does an Account Based Retirement Income Stream Work?

Let us consider the example of someone who is sixty years old and retiring with $\$ 200,000$ of superannuation assets. They have a number of options with this $\$ 200,000$, including withdrawing it tax free from superannuation or starting an account based income stream.

If they decide to start an account based income stream, they are effectively keeping the money in the superannuation environment, as account based income streams are paid from superannuation assets.

They then have to decide how the assets of their account based income stream are invested. They might be invested all in cash, all in shares, or most likely a combination of a number of asset classes.

Each year they have to withdraw a minimum amount for their account based income stream. From the ages of $55-64$ the minimum amount is $4 \%$. From the ages of $64-74$ the minimum about is $5 \%$. From the ages of $75-79$ it is $6 \%$. From $80-84$ the minimum is $7 \%$ and from $85-94$ it is $9 \%$. From $90-94$ it is $11 \%$ a year and beyond that $14 \%$ a year. (For the purpose of calculating the withdrawal amounts each year, your age is the age that you are at the $1^{\text {st }}$ of July each year).

So, a sixty year old with a $\$ 200,000$ account based pension has to withdraw a minimum of $4 \%$ of their balance $-\$ 8,000$ - in their first year.

Let us say that over the first year the investment returns from the account based pension were $\$ 18,000$. So, at the start of the second year the account balance was $\$ 210,000$ (being the starting $\$ 200,000$ less the $\$ 8,000$ account based pension add the $\$ 18,000$ of investment returns). As a 61 year old the minimum withdrawal is $4 \%$, so $\$ 8,400$ is drawn.

Keep in mind that in some years the investment returns are likely to be negative.
You will note that at this stage we have not talked about what is the maximum income that can be taken each year. That is because there is no maximum. If you need to withdraw any amount beyond the minimum, that is possible. This might be particularly handy if you had some 'lump sum' costs at some stage - renovating a property, buying a car or doing some travel.

## A Tax Free World

A key benefit of this arrangement of retirement assets is that:

- The investment earnings of a superannuation fund paying an account based pension are tax free and;
- The pension payments from the account based pension to any individual over the age of 60 are also tax free. Up to the age of 60 some portion of the account based pension income is likely to be taxable, but is paid with a 'pension tax rebate' equal to $15 \%$ of the taxable income.

By using an account based pension you can set up a 'tax free' existence for yourself in retirement.

As a quick example of the advantage the tax free nature of an account based pension fund provides an investor, the 5 year return for the Q Super balanced superannuation fund to the end of May 2007 was $11.63 \%$. The 5 year return for the Q Super balanced account based pension fund over the same period was $13.05 \%$. The key difference - the superannuation fund is taxed at $15 \%$, the account based pension is taxed at $0 \%$.

## Conclusion

Superannuation has never been simple. However an account based pension is starting to be a reasonably simple way to structure retirement. It offers a tax free solution once you are over the age of 60 (and tax advantaged from the age of 55 to 60 ), you can withdraw more money if you need to and you can choose the mix of your investments.

The next chapter - an article originally published in Alan Kohler's Eureka Report looks at how 'quickly' you can withdraw from your assets it retirement. (The answer is at a rate of about $5.5 \%$ a year, with the income increasing each year with inflation).

## Chapter 22 - Drawing on Assets in Retirement

Tap your super, but how much?
By Scott Francis

PORTFOLIO POINT: Two US studies offer a guide to the rate super can be tapped, to maintain an income during retirement.

One of the most profound questions we face in planning our financial future relates to how we turn a lump sum (such as our superannuation balance) into an income stream. For people at, or close to, retirement this is significant because it is how much of their future life will be funded. For people thinking ahead to retirement this is also crucial because it builds a picture of how much is needed for retirement - or for stopping work early and living off their assets.

The Government has been kind to people planning the process - judicious use of superannuation means that most people can ignore tax because at retirement the income stream from a superannuation fund is tax-free (if over 60 and, in practice, for the majority of people over 55).

That means we can ignore tax consequences, but it does not help us calculate the rate at which we withdraw money. The research on withdrawal rates shows that the rate at which we can withdraw money from a lump sum is related to the mix of assets we have: more growth assets (shares and listed property) mean a higher expected return, which allows a slightly higher drawdown rate. (The drawdown rate is the percentage withdrawn from a portfolio each year - a $4 \%$ drawdown on a $\$ 1$ million portfolio is $\$ 40,000$ a year. Throughout this article the drawdown rate also assumes that drawings increase each year with inflation).

Among the best work done in this are is two research papers, both from the United States; they offer very interesting thoughts on the drawdown process. It is
important to consider this issue of drawing from a portfolio in an Australian context, which is subtly different from the American experience, and we finish by looking at this.

The first paper, Asset Allocation and Long Term Returns, by Stephen Coggeshall and Guowei Wu of Morgan Stanley, was published in July 2005 by the Social Science Research Network (www.ssrn.com).

What is the best mix of stocks and bonds to use as an asset allocation for a portfolio that is being drawn from? Bear in mind that Coggeshall and Wu's article is US-based. It uses data from a period of almost 80 years - 1926 to 2004.

It starts by looking at the returns from holding shares for different periods of time, and holding periods started in each year of the study. For example, in looking at the 20 -year returns, it looked at periods starting in 1926, 1927 and so on. It found that although the average annual return from shares was just over $11 \%$ for the period of the study, the period of time shares were held was crucial in managing the volatility of a portfolio.

- Over one year share returns ranged from $-44 \%$ to $61 \%$.
- Over five years, $-14 \%$ to $28 \%$ average annual return per year.
- Over 10 years, $-3 \%$ to $20 \%$ average annual return per year.
- Over 15 years, $0.5 \%$ to $19 \%$ average annual return per year.
- Over 30 years, $8.3 \%$ to $14 \%$ average annual return per year.

The study then looked at the returns from bonds, the proxy for fixed interest investments. It considered only high-quality fixed interest investments, rated AAA and AA.

Bonds had a significantly lower return; $5 \%$ over the period studied. When bond returns were compared to stock returns there was a $90 \%$ probability over any fiveyear period stocks would outperform bonds. Over 10 year periods that increased to $95 \%$. Over 15 years it was $99 \%$ certain that stocks would outperform bonds, based on the author's data. This led them to state, "Bonds are riskier than stocks for holding periods of about 15 years or greater."

It also raised the question of asset allocation: how much of a portfolio in stocks and how much in bonds (high quality fixed interest)? For shorter-term needs - up to 10 years - bonds are favoured. However, for the part of the portfolio that has a timeframe of more than 10 years, where you can be confident at the $90 \%$ level that stocks will outperform bonds, then stocks are favoured. Given that many people are looking at 30,40 and 50 year retirements, then a strong allocation to stocks is implied.

The second article, Guidelines for Withdrawal Rates and Portfolio Safety During Retirement, by John J Spitzer, Jeffrey C Strieter and Sandeep Singh of the State University of New York, appeared in the US Journal of Financial Planning in October 2007.

This paper was similar to that by Coggeshall and Wu in acknowledging that asset allocation - particularly the amount of the portfolio exposed to growth assets was important in determining how long a portfolio could fund retirement.

In this case, a 30 -year retirement was assumed - which is probably reasonable for someone thinking about retiring at age 60 and living to age 90 .

The paper looked at various asset allocations between stocks and bonds (highquality fixed interest investments). It then expressed as a percentage your chances of running out of funds prior to the end of the 30 year period. It found:

## For a portfolio with $\mathbf{3 0 \%}$ exposure to growth assets:

- Almost $0 \%$ chance of running out of assets if you drew on them at $3 \%$ a year.
- $5 \%$ chance of running out of assets at $4 \%$ a year.
- $25 \%$ chance of running out of assets at $5 \%$ a year.
- $40 \%$ chance of running out of assets at $5.5 \%$ a year.

For a portfolio with a $\mathbf{6 0 \%}$ exposure to growth assets:

- Almost $0 \%$ chance of running out of assets at $3 \%$ a year.
- $7.5 \%$ chance of running out of assets at $4 \%$ a year.
- $18 \%$ chance of running out of assets at $5 \%$ a year.
- $27.5 \%$ chance of running out of assets at $5.5 \%$ a year.

For a portfolio with a $90 \%$ exposure to growth assets:

- $3 \%$ chance of running out of assets at $3 \%$ a year.
- $10 \%$ chance of running out of assets at $4 \%$ a year.
- $20 \%$ chance of running out of assets at $5 \%$ a year.
- $25 \%$ chance of running out of assets at $5.5 \%$ a year.

It is interesting to note that there is actually a small increase in the chances of running out of money in portfolios where the withdrawal rate is small when the exposure to growth assets is increased. This is because if you start with a high
exposure to growth assets, and there is a strong collapse in the value of growth assets, this will negatively affect your portfolio value.

## The Australian context and income

I see two practical differences between the Australian and the US markets (where these papers were written). Although the returns from markets have been very similar, the makeup of returns it different. Australia has the benefit of franking credits, which allow the tax-effective payments of dividends. While the yield of the sharemarket is currently $3.6 \%$, add to that franking credits and the gross yield increases to 5\% a year.

We also have a well-developed listed property market segment, which is characterised by the payment of strong income - even if the income is not as strong as it has been historically. Currently the income is $6 \%$ a year.

A portfolio made up of cash (now yielding 6.25\%), fixed interest investments ( $6.75 \%$ ), Australian shares ( $5 \%$ gross) and listed property ( $6 \%$ ) means that the income of the portfolio would allow a drawing rate of about $5.5 \%$ - without having to touch any capital.

The only risk to this income stream would be a decrease in interest rates, and therefore lower interest being received from the cash and fixed interest investments.

An advantage of the Australian situation is the generous access to the age pension. People with less than $\$ 839,500$ can receive some part-age pension under the more generous asset test that came into force in September last year. For many people this many act as a "safety net", were they to receive very poor investment returns for a period (such as a repeat of the 1987 sharemarket crash or a period of very poor returns like the early 1970s). This may encourage people to be more aggressive in their asset allocation in pursuit of higher returns, with the knowledge that there is a safety net under them.

## Conclusion

When thinking about how to draw money from a portfolio, this cannot be done in isolation from the asset allocation of the portfolio. A drawing rate of up to $5.5 \%$, increasing with inflation, seems to be achievable, provided the portfolio value is monitored over time. (Remember, the minimum withdrawal rate from a fund in pension phase is $4 \%$.)

The Australian situation, which is different from the US, may see more people focus on the income from their portfolio as a way of working how much money to draw from their portfolio.

## Chapter 23 - Planning Retirement with a Part Age Pension

The Age Pension is a payment made to people in retirement. Currently the age that people become eligible for the age pension is 65 for men, and 63 and a half for women. The age at which women qualify for the age pension is increasing, so that it will eventually reach 65 .

The following is taken directly from the Centrelink website, and explains this change in the qualifying age:

Depending on their date of birth, women qualify for Age Pension at different ages. By 2014, the minimum qualifying age for women will be 65 years, making it the same for everyone.

## Date of Birth

Before 30 June 1944
1 July 1944 to 31 December 1945
1 January 1946 to 30 June 1947
1 July 1947 to 31 December 1948
1 January 1949 and later

## Qualification Age

6363.5

64
64.5

65

The reality for most people is that they will fund some of their retirement with their own assets (eg superannuation and investments), while topping this up with some part age pension. At the time of writing (July 2008) the assets test for the part age pension allowed couples who owned their own home to have up to $\$ 849,500$ worth of other assets (excluding the value of their home) and receive some part age pension and a single person who owns their own home to have up to $\$ 535,250$ worth of other assets (excluding the value of their home) and receive some part age pension.

For people without a home the thresholds are even higher, with a couple being able to have up to $\$ 970,500$ worth of assets and receive some part age pension and a single person up to $\$ 656,250$ worth of assets and receive some part age pension.

The asset test changes (generally increases) over time, and the current details of it are available from the Centrelink website www.centrelink.gov.au.

Given that the vast majority of people fund their retirement with some income from their own assets, and some income from the age pension, it is important to understand how the two work together.

At this point it is worth quickly making the comment that there are two tests that are used to limit the amount of age pension that a person receives. The first is the income test and the second is the assets test. The income test says that if you earn a certain amount of income your age pension is reduced. A single person can earn up to $\$ 1,519$ a fortnight and receive some part age pension, a couple can earn $\$ 2,538$ a fortnight and still receive some part age pension.

Each of the two tests - the income and assets test - are applied to a person's situation and the test that provides the lowest amount of age pension is used. Once people have stopped earning income I find that it is almost always the asset test that they find most restrictive in calculating their age pension, and I have focused on this in following examples of both a single person and a couple.

## A Single Homeowner with $\$ \mathbf{3 0 0 , 0 0 0}$ of Assets (excluding the value of their home)

Let us consider the case of a single person who has $\$ 300,000$ of assets. Let us assume that $\$ 50,000$ of these assets are lifestyle assets (furniture and their car), they have $\$ 200,000$ in superannuation that they are going to take as a pension and $\$ 50,000$ in investments outside of superannuation.

The full age pension for a single person at the time of writing (July 2008) was $\$ 546.80$ a fortnight (just over $\$ 14,000$ a year). Centrelink tend to calculate rates on a fortnightly basis, and we will stick to that.

A single homeowner can have $\$ 171,750$ of assets before they start to have their income scaled down. For every $\$ 1,000$ of income over $\$ 171,750$ they loose $\$ 1.50$ of income per fortnight. In this case there are assets of $\$ 128,250$ over the limit. They lose $\$ 1.50$ of income per fortnight for every $\$ 1,000$ they have over the limit so they lose $\$ 192.38$ of income a fortnight. They receive annual age pension of $\$ 354.43$ a fortnight, or $\$ 9,215.05$ a year.

The following table sets out those calculations:

| Total Assets | \$ | 300,000 |
| :---: | :---: | :---: |
| Assets Where Pension Starts Reducing | \$ | 171,750 |
| Amount over Reduction | \$ | 128,250 |
| Fortnightly Reduction at \$1.50 / \$1000 assets | \$ | 192.38 |
| Full Fortnightly Age Pension (Single) | \$ | 546.80 |
| Fortnightly Age Pension After Reduction |  | 354.43 |
| Annual Age Pension After Reduction | \$ | 9,215.05 |

So what does life look like for this single retiree? If they are drawing on their $\$ 200,000$ of superannuation at the rate of $5.5 \%$ a year they will be drawing $\$ 11,000$ from their superannuation fund and $\$ 2,750$ from their $\$ 50,000$ of investments outside of superannuation. They would have total income of just under $\$ 23,000$ a year. They would pay no tax because of the senior Australian Tax Offset, which ensures that moderate income earners in retirement pay no tax.

## A Home owning Couple with $\$ 600,000$ of Assets (excluding the value of their home)

Let us consider the case of a couple who has $\$ 300,000$ of assets. Let us assume that $\$ 100,000$ of these assets are lifestyle assets (furniture and cars), they have $\$ 400,000$ in superannuation that they are going to take as a pension and $\$ 100,000$ in investments outside of superannuation.

The full age pension for a couple at the time of writing (July 2008) was $\$ 913.60$ a fortnight (just over \$23,700 a year).

A home owning couple can have $\$ 243,500$ of assets before they start to have their Age Pension scaled down. For every $\$ 1,000$ of income over $\$ 243,500$ they loose $\$ 1.50$ of Age Pension per fortnight. In this case there are assets of $\$ 356,500$ over the limit. They lose $\$ 1.50$ of Age Pension per fortnight for every $\$ 1,000$ they have over the limit - so they lose $\$ 534.75$ of income a fortnight. They receive annual Age Pension payments of $\$ 378.85$ a fortnight, or $\$ 9,850.10$ a year.

The following table sets out those calculations:

| Total Assets |  | 600,000 |
| :---: | :---: | :---: |
| Assets Where Pension Starts Reducing |  | 243,500 |
| Amount over Reduction |  | 356,500 |
| Fortnightly Reduction at \$1.50 / \$1000 assets |  | 534.75 |
| Full Fortnightly Age Pension (Couple) |  | 913.60 |
| Fortnightly Age Pension After Reduction |  | 378.85 |
| Annual Age Pension After Reduction |  | 9,850.10 |

So what does life look like for this retired couple? If they are drawing on their $\$ 400,000$ of superannuation at the rate of $5.5 \%$ a year they will be drawing $\$ 22,000$ from their superannuation fund and $\$ 5,500$ from their $\$ 100,000$ of investments outside of superannuation. They would have total income of $\$ 37,350$ a year. They would pay no tax because of the senior Australian Tax Offset, which ensures that moderate income earners in retirement pay no tax.

Pension Bonus Scheme: While there is not space to go into the details of this scheme here, it is worth noting that the pension bonus scheme makes a lump sum payment to people who work beyond the age pension age and who, at retirement, are eligible for some age pension.

Introduction to the Article: This article deals with the 'Transition to Retirement' rules. These allow people who are working over the age of 55 to start taking some income from their superannuation fund, while contributing more through salary sacrifice to superannuation. Why would anyone do this? Because they can save a lot of tax as their salary sacrifice contributions to superannuation are taxed at a lower rate than if they were taken as income.

## Chapter 24 - Transition to Retirement Income Streams (Eureka Report Article)

Transition to Retirement<br>By Scott Francis

PORTFOLIO POINT: Transition to retirement plans offer significant tax savings, including by drawing on super savings to increase super contributions.

For anyone still working over the age of 55 the new changes to superannuation are particularly lucrative. Although most media attention has focused on retirement strategies, it is the so-called "transition to retirement" plans that now offer one of the best tax-breaks yet seen in Australia.

Many investors are wary of tapping into their superannuation accounts too early but, as you'll see from the examples I quote later in this article, the new superannuation system creates some unlikely opportunities. You just have to know where to find the new tax breaks and design your income streams to fit the new system.

There are certain "must do's" that most people will need to follow to be successful in their personal financial journey. These include:

- You must spend less than you earn.
- You must, over time, invest in growth assets (such as shares and property).
- You must make good use of superannuation, the lowest tax environment that we have in Australia
- You must stick to your investment strategy. Don't constantly change asset classes and investment providers, both of which cost you fees and taxes. Set an asset allocation, choose your investments, and let the power of compounding investment returns work over time.
- You must make sure that you do not pay too much in fees to the financial services industry.
- You must avoid losing large amounts of money in sharetrading "programs", property scams or dishonestly promoted investment schemes such as Westpoint.

If, over a working lifetime, you spend slightly less than you earn, invest in growth assets, make good use of superannuation and avoid paying too much in fees, constantly switching investments or getting caught in scams then you will almost certainly be successful financially.

The proposed superannuation changes have provided another "wealth assisting" opportunity so powerful that the list of six items should now include a seventh:

- You must use a transition-to-retirement income stream if you are working beyond the age of 60 to minimise the amount of tax you are paying. You must also investigate the effectiveness of this if you are working at age 55.

Let's have a look at how this powerful strategy works, with just a quick pause to mention that this is based on the proposed superannuation changes, which are yet to be passed into law, although it seems likely that they will.

## Transition to retirement income stream

Transition to retirement income streams are a recent addition to the superannuation landscape. They allow a person who has reached their "preservation age" to access their superannuation benefits in the form of an income stream, even if they are still working. Your preservation age is as follows:

| Date of birth | Preservation age |
| :--- | :---: |
| Born before July 1, 1960 | 55 |
| July 1, 1960-June 30, 1961 | 56 |
| July 1, 1961-June 30, 1962 | 57 |
| July 1, 1962-June 30, 1963 | 58 |
| July 1, 1963-June 30, 1964 | 59 |
| After June 30, 1964 | 60 |

Under the proposed superannuation changes, transition to retirement income streams will still be able to be used. People will be able to choose to take an annual income between a minimum of $4 \%$ (for someone under age 65) and up to a maximum of $10 \%$ of the balance of their superannuation fund.

When retirement to transition income streams were announced, they were hailed as a strategy to encourage people to continue working part-time while drawing a superannuation income stream. As the following analysis shows, a transition to retirement income stream might make a lot of sense if you are working full time as well.

## Looking at the numbers

Let us consider the case of a 60 year old, earning $\$ 60,000$. Let us assume that they have a superannuation accumulation of $\$ 300,000$. They find that their after-tax income exactly meets their cost of living, meaning their cost of living is $\$ 45,750$ - being the $\$ 60,000$ income less $\$ 14,250$ of tax.

Overall they are paying three lots of tax:

- They pay $\$ 14,250$ of income tax and Medicare levy.
- They will also be receiving the compulsory $9 \%$ superannuation contribution. They pay $15 \%$ contributions tax on this $9 \%$ ( $\$ 5400$ ) employer contributions: $\$ 810$.
- They pay tax on the earnings of the superannuation fund. Let's assume that the fund had taxable earnings (interest, dividends, distributions, realised capital gains) equal to $5 \%$ of the value of the fund. This is taxed at $15 \%$, meaning $\$ 2250$ of tax is paid. The total tax being paid is $\$ 17,310$.

Let's consider the situation where a transition to retirement income stream is used. The person can salary sacrifice $\$ 35,000$ to superannuation. This will give them a taxable income of $\$ 25,000$. The reason we choose to take a taxable income of
$\$ 25,000$ is that this is the top of the bracket at which tax and Medicare levy of $16.5 \%$ is paid. If income is salary sacrificed to superannuation tax is still payable at $15 \%$, providing only a marginal tax benefit over the $16.5 \%$ income in their own name. The total income tax and Medicare levy paid on $\$ 25,000$ of income is $\$ 3,225$ - leaving $\$ 21,775$ after tax income.

The $15 \%$ contributions tax paid on the $\$ 35,000$ salary sacrifice contribution to superannuation and the $\$ 54009 \%$ employer contribution to superannuation will be $\$ 6060$. The total after-tax contribution will be $\$ 34,340$.

If the total balance in the $\$ 300,000$ superannuation accumulation is used to fund a transition to retirement income stream, the earnings on this accumulation are tax free. A $\$ 23,975$ tax-free transition to retirement income stream can be drawn from this balance and, combined with the $\$ 21,775$, will meet the cost of living of $\$ 45,750$. This transition to retirement income stream is completely tax-free.

You will notice that the maximum tax rate faced is now only $16.5 \%$. The total tax being paid is $\$ 9285$.

In both scenarios the only "building of wealth" taking place were the contributions to superannuation. In the first scenario the after-tax contribution to superannuation was $\$ 4590$ (being just the $9 \%$ superannuation contribution). In the transition to retirement scenario the net after-tax contributions to superannuation (after tax contributions of $\$ 34,340$ less income drawings of $\$ 23,975$ ) are $\$ 10,365$. The transition to retirement scenario also has the benefit that the $\$ 300,000$ superannuation accumulation paying the income stream is now tax-free, saving an estimated $\$ 2250$ of tax.

The following graph compares the total tax paid under the scenario where the $\$ 60,000$ is taken as income.

Total Tax Paid - $\mathbf{\$ 6 0 , 0 0 0}$ Income for 60 Year Old - With and Without Transition to Retirement Income Stream


## But aren't superannuation funds being used up?

When transition to retirement strategies are suggested, people often express that they are concerned about starting to draw on their superannuation balance. So is superannuation being consumed in this situation?

The answer is an emphatic no; in fact, entirely the opposite is happening. Even though some superannuation is being drawn ( $\$ 23,975$ ), this is being used to fund increased superannuation contributions of $\$ 34,340$ after tax. The net contributions to superannuation have more than doubled in the transition to retirement scenario!

## What about for people under the age of 60 ?

The benefits for people under the age of 60 are less significant. If there are parts of their superannuation balance that is made up of components that can be withdrawn tax-free, such as undeducted components, the transition to retirement income stream will still result in a tax saving.

Let us consider exactly the same scenario: a person, in this case a male, earning $\$ 60,000-\$ 45,750$ after tax. They have a $\$ 300,000$ superannuation account with $\$ 100,000$ being made up of 'tax free' component. (A tax free component comes from contributions that a person has made directly to their superannuation account from their own money. Check with your superannuation fund as to how much 'tax free' component is in your fund. Most funds will generally be a mix of 'taxable' component and 'tax free' component.

In this case the person can generate an after tax income stream of $\$ 45,750$ by taking $\$ 25,000$ of their income as salary and drawing $\$ 27,950$ as a transition to retirement income stream. Of this, $\$ 27,950, \$ 3846$ will be tax free (because of the undeducted contributions in the fund), and the remainder will include a $15 \%$ pension tax rebate to offset the total tax paid.

The person can use their remaining $\$ 35,000$ of salary to salary sacrifice to superannuation, being $\$ 29,750$ after contribution tax.

The tax benefit in this situation is that $\$ 2250$ is saved because the superannuation fund is tax-exempt. There is also $\$ 1770$ of income tax saved because $\$ 3846$ of the transition to retirement income stream is tax-exempt.

Another way to quantify the benefit of this strategy is that in the situation where $\$ 60,000$ of income was being earned the after tax contributions to superannuation were $\$ 4590$. In the situation where the transition to retirement income stream was being used, the after-tax contributions to superannuation were $\$ 34,340$. Given that there were superannuation drawings of $\$ 27,950$, net contributions were $\$ 6390$, an extra $\$ 1800$ of contributions.

## Chapter 25 - The Basics of Income Planning

Once you are retired, the aim is to replace your 'personal exertion income' (i.e. your income from your job) with your investments - possibly supported by some Centrelink benefits such as the age pension.

A great way to look at this process is using 'income planning'. This involves construction of your investment portfolio with your income needs being a critical part of this process.

The second part of the book looks at this process in much more detail - however it is an important part of retirement planning so it is introduced as a separate concept here.

Let us consider 'income planning' by looking at a case study.
The couple in question are 65 years of age, retired, with $\$ 600,000$ in superannuation and a further $\$ 50,000$ in 'lifestyle assets' that Centrelink assess for the sake of the assets test (things like their furniture and car). They own their own home.

As a couple they are eligible for approximately $\$ 7,500$ of the age pension (based on pension levels at September 2008).

Clearly this is not enough to live on, so they decide to draw on their superannuation portfolio at the rate of approximately $5 \%$ a year, or $\$ 30,000$ a year.

So the couple needs to plan for an income of $\$ 30,000$ a year to be provided from their $\$ 600,000$ superannuation portfolio.

In the investment world there are two key types of investments. The first are often referred to as 'Defensive' investments, such as cash accounts and term deposits - as well as other high quality fixed interest investments like bonds. These offer very reliable short term returns, usually with easy access to the money. Their downside is that they don't offer very good long term returns compared to shares and property (average defensive returns over a period might be $6 \%$ a year; where shares and property might be $12 \%$ a year).

The other investments are 'growth' investments, such as shares and property. In the short term they offer volatile returns - however in the long run ( 7 to 10 years) they offer returns higher than defensive investments.

A reasonable conclusion to draw from this is that defensive investments offer a great short term option, and growth investments offer a great long term option.

This hardly sounds profound, yet sits as the basis for 'income planning'.
The couple in the case study, with $\$ 600,000$ in superannuation and looking to draw on this at the rate of $\$ 30,000$ a year, can plan to keep the money that they need in the short term in defensive investments, with the remainder in growth assets.

They might set aside 5 years $(\$ 150,000)$ in cash and fixed interest investments - to be sure that they have at least 5 years of living costs set aside. This should allow them to sleep soundly at night - they know where their next 5 years of income comes from.

The remainder is invested in growth assets - such as shares and property investments - which benefit from the higher returns that growth assets provide that cash. These assets are volatile (may rise and fall in value) - however the couple don't have to be concerned with that because they know that they have the money to fund their next 5 years of living costs.

Over the 5 years, there will also be interest received from the cash and fixed interest investments, dividends from the shares, distributions from the property and so on. In fact, it is not unreasonable to think that a well put together portfolio of $\$ 600,000$ will pay gross income (including the tax benefits of franking credits) of at least $5 \%$ a year - so there is a further $\$ 30,000$ a year being received by the portfolio. Because some of this income comes from share and property investments, it will grow over time, helping the portfolio provide an income that will keep up with inflation.

Given that 5 years of living costs are set aside in cash and fixed interest investments, and the portfolio is generating a growing income stream of at least $\$ 30,000$ a year, then the couple seem to be in a really strong position to fund their retirement - using defensive investments to provide short term certainty and growth assets (shares and property) to provide the higher long term returns.

## Chapter 26 - Understanding What You Can Invest In. Shares, Property, Cash, Fixed Interest.

There are a number of different investment categories - known as asset classes that investors can use in building their portfolios. This chapter looks at the basics of each of these asset classes, starting with looking at 'cash' investments.

## Cash

Investing in a good quality cash account should serve two purposes. Firstly, cash is a legitimate asset class that most portfolios should include and secondly, your cash account should be the functional centre of your investment portfolio. Let's start by looking at cash as an investment.

Cash investments are interest-earning accounts with financial institutions. Amongst current investment opportunities these would include cash management trusts, accounts with traditional banks, building societies, credit unions and online eaccounts.

Over the past 50 years cash investments have provided a return of $7.7 \%$ a year, $2.6 \%$ higher than the inflation rate. (Source: Vanguard, 2007)
You should not confuse the investments noted above with the heavily promoted 'fixed interest' investments that are currently available, returning $7 \%, 8 \%, 9 \%$ or more. These are risky investments that should not be considered as cash investments. Cash investments refer to deposits with recognised banks and financial institutions.

Cash investments should provide you with some investment return, should be highly 'liquid', i.e. the money is available whenever you need it, and should be almost risk free, i.e. there should be no chance of you losing your capital. The downside of a cash investment is that it is very tax ineffective. An investor on the highest tax rate ( $46.5 \%$ ) will lose roughly half of their return through tax.

You also want your cash account to form the centre of your investment portfolio. Specifically, you want to be able to accumulate any dividends, distributions and income earned into your cash account, as well as making additional portfolio contributions to your cash account. Further, you want to be able to take money from your cash account to pay for investment purchases as you make them. This means that it is often wise to completely separate your investment cash account from your day-to-day savings account. That way you can keep these two accounts separate as they serve different functions.

## Fixed Interest

Traditionally, fixed interest investments are made in either Government, bank or corporate bonds. These bonds entitled the investor to a regular and fixed stream of income and then repayment of the capital on the maturity of the bond.

For a personal investor, fixed interest investments provide an income stream that is slightly more attractive than cash, with less volatility of returns and less chances of losing capital than shares.

Over the past 50 years bonds have provided an average annual return of $7.8 \%$ compared to a cash return of 7.7 (Source: Vanguard, 2007).

For most investors they would understand a fixed interest investment to be a term deposit, and that is a reasonable understanding as most fixed interest investments (bonds) are structured in a similar way.

To further understand bonds we need to look at their important characteristics.
In general, a bond would be issued with three characteristics;

- a yield, i.e. the income paid
- a 'face value' which is the amount that the bond is sold for and the amount paid back at the maturity of the bond and
- the date that the bond matures

As an example let us consider a bond with a $8 \%$ yield, $\$ 100$ face value and maturity date of the $1^{\text {st }}$ of September 2010.

The $8 \%$ yield means that the income paid on the bond is $8 \%$ a year. Traditionally bonds would pay this income, also known as a coupon, twice a year (semiannually). So a $8 \%$ bond would pay coupons of $4 \%$ every six months, with the last coupon being paid as the bond matures on the $1^{\text {st }}$ of September 2010.

The $\$ 100$ face value means that the bond was originally issued for $\$ 100$ and, when the bond matures, the owner of the bond (the investor) will be paid back their original $\$ 100$ by the bond issuer (the company or Government).

The $1^{\text {st }}$ of September 2010 is the maturity date, at which time the owner of the bond will get back the 'face value' of the bond, plus the remaining interest.

Like a cash investment, fixed interest investments are not tax effective, with all of the income paid from the investment being taxable.

Cash and fixed interest investments are the lowest risk, or least volatile of investments, however they have a lower long term return that share and property investments.

## Share Investments

Investing in shares is investing in businesses. Whether you invest directly in shares yourselves, or through a managed fund or an index fund, the basic of what you are doing when you invest is becoming part owner of the business or portfolio of businesses.

You become part owner of a business by purchasing a portion of the company trading through the Australian Stock Exchange (ASX). To buy or sell shares you have to trade through a stockbroker. You can trade through a 'full service' broker, where you can expect to receive advice on your purchase, or through a discount broker where you form you own opinion of the trade and the broker simply transacts it for you.

Most people would have exposure to Australian shares through superannuation funds or managed funds, where a fund manager goes through the process of identifying and purchasing shares on behalf of the investor. In 'balanced' superannuation funds some of the investments will be in Australian shares.

Over the past 36 years Australian shares have returned an average of $13.8 \%$ a year, and over 50 years the returns have been $12.8 \%$ a year (Source: Vanguard, 2007).

## Understanding the Fundamentals of Sharemarket Returns.

The company whose shares an investor owns produces earnings each year. These earnings can either be reinvested in the company or distributed to the shareholder as dividends.

These earnings and dividends, and their growth over time, are the drivers of share investments. This makes sense, because as a part owner of a company you would expect the company to increase in value if dividends and earnings increased, and the company to decrease in value if dividends and earning decreased.

In his book 'The Essential Buffet' (Wiley and Sons, 2001), Robert Harstrom analysed 1,200 companies over an 18 year period to see how much the change in price of a share was explained by variances in earnings. Over a one year period between $13 \%$ and $36 \%$ of the change in price of a share was explained by changes in company earnings. Over a ten year period between $59.3 \%$ and $69.5 \%$ of the change in share price was explained by changes in earnings and over 18 years $68.6 \%$ of the change in share price was explained by changes in earnings.

So, while in the short term changes in share price were not well explained by changes in earnings, over the long term most of the changes in share price earnings were explained by changes in company earnings. This supports the earnings of shares as being the fundamental driver of long term performance and the importance of a long term horizon for share based investments.

Australian shares include a tax credit with their dividends, paying franking credits. Franking credits are able to offset tax for an investor.

## Global Shares

As well as Australian shares, investors can also invest in global sharemarkets. This can be done though a managed fund, index fund or directly - although this is often more expensive than investing directly in Australian shares.

The basis for using some global shares in a portfolio is diversification - if Australian shares are performing poorly, then global shares might provide better portfolio returns. Over the past 36 years global shares have produced returns of $13.6 \%$ a year - very similar to Australian shares (Vanguard, 2007).

## 'Direct' Residential Property

The first point to make in this section is that I am in no way a residential property expert. While research and study I have done has provided me with knowledge related to all the other asset classes discussed, very rarely did this touch on residential property. Further, while I have had investments in all the other property classes for periods of ten years or more, this is not the case with direct residential property. I have owned three properties over various time periods.

When I discuss direct residential property as an investment, I am not referring to a property that you purchase to live in. I am referring to a property that you purchase purely as an investment.

In each other chapter I have started by quoting performance figures for each asset class. Each year the ASX publishes an investments report. The report that concluded its survey period in December 2002 showed that the best performing asset class over the previous 20 years had been residential property, with a return of $13.8 \%$ a year. The report also looked at after tax returns, where Australian shares and listed property trusts had superior returns. The most recent ASX investments report was for the period to December 2004. The 20 year performance of direct residential property was $12.9 \%$, only slightly lower than the 20 year performance of Australian shares (13.2\%). After tax at the highest marginal tax rate, the 20 year return on residential property was $10.2 \%$, compared to $11.6 \%$ for Australian shares and $9.5 \%$ for listed property trusts. These reports are available on the ASX website
(www.asx.com.au). The 2004 report was prepared by the research group Russell Investments Group. The 2002 report was prepared by Towers Perrin.

## What are the Fundamental Drivers of Property Investment Returns?

As for the returns on many investments, the returns from property investments can be divided into two components, yield and growth. The rental yield can be easily calculated, or at least estimated, as the rental income less any costs. As an example, I have recently purchased a property that I am living in. Prior to purchasing the property I considered the rental yield, should I want to rent it in the future. I calculated it as follows:

## Gross Rental Income (after agents fees): \$12,500 a year LESS EXPENSES <br> Body Corporate Fees <br> \$1,400 a year <br> Rates: <br> \$1,300 a year <br> Vacancy (@4\%): $\$ 500$ <br> Repairs (estimate) $\$ 500$ <br> TOTAL EXPENSES <br> \$3,700

Net Income (gross income less costs) \$8,800
I purchased the property for $\$ 240,000$, therefore the net yield is $\$ 8,800 / 240,000$, or 3.67\%.

Having calculated the rental yield, the next question is how to estimate the growth? In an ANZ economic update entitled 'Revisiting the Fundamental Value of House Prices', and dated the $26^{\text {th }}$ of June 2003, growth in rental income is linked to increases in inflation. The assumption is that inflation will increase by $2.5 \%$ a year, and therefore the growth in residential yields will do the same. This is consistent with comments by Dr Shane Oliver, chief economist with AMP, who made the same link in 'Oliver's Insights' in March 2005.

Some people may ask why, over the long term, property grows at the rate of inflation, whereas share investments grow at a rate about $1.5 \%$ above inflation. A difference is that most companies reinvest some of their earnings each year, into new projects and investments. This contributes to the higher long-term growth.

This proxy of growth equaling inflation seems to make sense intuitively. It means that people, over the long run, will pay about proportionally the same amount for rent as they will for other goods and services. If rental yields were to increase at above the rate of inflation, then people, over time, would pay proportionally more for rent that for other goods and services. You will notice that this is exactly the
same for listed property investments, where growth at around the rate of inflation is expected.

Having been through a strong period of house price growth, it seems somewhat naïve for someone to argue that the long term growth for property should approximate inflation.

In this context, it is important to have an understanding of what constitutes an investment bubble, regardless of what asset class is being discussed. Noble Prize winning economist Joseph Stiglitz defined a bubble as:
"If the reason the price is high today is only because investors believe that the selling price will be high tomorrow-when "fundamental" factors do not seem to justify such a price-then a bubble exists."

In essence, he is suggesting that if the only reason that people are buying an asset is because they expect it to go up in price, rather than considering the rental income stream and expected long term increase in rent, then there is a problem. In the case of a share investment a bubble would exist when people were buying shares only because they expected them to go up in price, not for an expectation of earnings and dividends that would grow over time. A recent example of this would be the speculation on 'dot com' internet companies that had not produced any earnings.

## Listed Property Trusts

A listed property trust is an investment that trades on the Australian Stock Exchange. The key asset of the trust is some property asset or assets. These assets are usually commercial buildings, office space, industrial buildings or shopping centers. As you invest in the trust you become part owner of the asset/s. As part owner you receive a regular stream of income from the rent that the asset/s earn in the form of distributions. Over time it is expected that the rent will slowly increase, probably at about the rate of inflation, and that the value of the asset/s will slowly increase. Most of the investment returns from listed property trusts come in the form of the distributions that you receive.

Let us look at a specific example of this. Most of us have seen the Westfield shopping complexes around us. These shopping centers are part of the Westfield group and trade on the Australian Stock Exchange under the code WDC.

So how have the returns from listed property trusts been? The answer is that listed property trusts have outperformed Australian Shares over the past 25 years. It is not possible to get data dating back further than that, given that listed property trusts only date back to the 1970's. Since 1981 through to 2007 they have returned 15.3\% a year in capital growth and income. Importantly, there have only been two years
where returns have been negative, in 1988 and 1989 and the returns for those years were $-2.8 \%$ and $-1.1 \%$, although the 2008 year will also provide a sharply negative return. However, a warning about these figures. Listed property trusts are investments that will tend to do well when interest rates fall and tend to perform poorly when interest rates rise. As such, we should note that on average interest rates have fallen over the 25 year period between 1981 and now, which would have contributed to the strong performance of listed property trusts over this period.

## Tax Deferred Income

Most distributions paid by listed property trusts have a tax deferred component. This component is not included in your annual income. Instead, when, or if, you come to sell your units in the listed property trust, the tax deferred amount is subtracted from the cost base of your investment. The effect of this is to increase your capital gain should you sell the investment.

The benefits of tax deferred income are two fold. Firstly, the way tax deferred income works means that it is taxed as a capital gain and not income. Provided you have owned the asset for 12 months when you come to sell it, you can use the $50 \%$ discount rule to halve the effective tax paid. Secondly, you only have to pay the tax if you sell the asset. So, at the least you defer the tax until somewhat later on. And perhaps you never sell the investment, so never have to pay the tax.

## Chapter 27 - Realities of How Investment Markets Work

This chapter is a key chapter in putting together an investment approach - providing you with the information to understand the reality of how investment markets work.

## Reality 1 - Growth Assets Such as Share Investments and Property Investments are Volatile

There are two groups of investments used in portfolios. The first are 'defensive' investment assets which include cash and high quality fixed interest investments such as Australian government bonds. The second group are generally referred to as 'growth' investment assets such as property and shares (both Australian and international). The returns from these asset classes are volatile. In the last 30 years:

- Annual Australian Share Returns have ranged between -29\% (1982) and 74.3\% (1980)
- Annual Global Share Returns have ranged between -23.5\% (2002) and 72.7\% (1983)
- Annual Listed Property Returns (Aust.) between -2.8\% (1988) and 41.3\% (1987)
(Year to 30 June 2007, Vanguard Investments)


## Reality 2 - Growth Assets Have a Higher Long Term Expected Return

Given that a good cash account provides a rate of return of above $6 \%$ in the current environment, why would you invest in growth assets at all? The answer to this is that growth assets have a significantly higher expected return than a cash or fixed interest investment.

- Average Australian Sharemarket Return since 1971 13.8\% a year
- Average Global Sharemarket Return since 1971 13.6\% a year
- Average Listed Property Return since 1980 15.3\% a year
- Average Cash Rate of Return since 1971
9.5\% a year
(Year to 30 June 2007, Vanguard Investments)


## Reality 3 - Volatility CANNOT be Avoided

Wouldn't it be great if we could avoid the down times of investing in shares and property, and only invest in them when they are increasing in value? Well it would be good, however it does not happen. As an example, let's look at the biggest crash in recent Australian investment history, the 1987 sharemarket collapse where shares fell in value by more than $30 \%$. Just prior to the 1987 collapse, more money that ever before was invested in the Australian sharemarket. The collective wisdom was that this was a better place than ever before to invest money. The collective wisdom was absolutely wrong, as the sharemarket fall showed.

Dalbar, a US financial services firm looks at the actual return investors in the US received from their managed fund investments. Over the 20 years to the start of 2006 they found that US managed fund investors received a return of just under 4\%, against a market average return ( $\mathrm{S} \& \mathrm{P} 500$ ) of $11.9 \%$. Why did managed fund investors receive such a terrible return? Because they were trying to pick and choose when to invest and therefore avoid volatility - which seriously damaged their ending investment returns.

## Reality 4 - Growth Assets CAN Have Negative Periods of 5 Year Returns

The collective wisdom in the financial services industry is that if you hold a growth investment for 5 years then you will get a positive investment return. This is easy to disprove - currently most global share investments (currency unhedged) are showing negative 7 year returns. Growth assets can have periods of negative returns for period $s$ longer than 5 years.

Reality 5-Asset Allocation and Careful Income Planning is your Key Tool in Managing Volatility

Using a mix of growth assets in a portfolio, including Australian shares, global shares, listed property trusts, global listed property trusts and emerging market funds, smoothes - but does not eliminate - the volatility from growth assets. Setting aside a number of years worth of cash needs in fixed interest and cash investments means that you will not have to sell growth assets in a market downturn.

Cash and fixed interest investments, which do not rise and fall along with the general market, also dampen the volatility of an overall portfolio. The cash and fixed interest investments are replenished by the growing stream of dividends and distributions from the growth assets - eliminating much of the need to sell growth assets at any time.

## Chapter 28 - Income versus Growth

The total return from an investment is made up of income and growth.
Growth, or capital growth, is the increase in price of an investment. With real estate, if you purchased a property for $\$ 100,000$ and sold if for $\$ 200,000$, then the capital growth in the investment would be $\$ 100,000$. With shares, if you bought a parcel of shares for $\$ 100,000$ and then sold them for $\$ 200,000$, the capital growth in the investment would be $\$ 100,000$.

Income refers to the rent, interest or dividends paid from an investment. In the case of the property, if it was rented out to a tenant who paid $\$ 150$ a week, that is the income from the investment. In the case of shares, if the parcel of shares provided dividends of $\$ 4,500$ a year, then that is the income return from that investment.

I think that growth can be overemphasised because it appears more dramatic. For example, it is far more impressive to talk about an investment property that has doubled in value, than one that has increased its rental stream by $4 \%$ a year over an extended period of time. Equally, the fact that Wesfarmers, to use a real example, had a share price in 1995 of $\$ 7.00$ that has increased more than 5 fold to $\$ 37.00$ at the time of writing is likely to receive more attention than the fact that the income stream from Wesfarmers shares has grown from 48 cents a year to $\$ 1.80$ a year. At dinner parties, in the media and at investment seminars, the focus often seems to be on the movement of an asset in price, rather than the underlying income stream.

In the remainder of this chapter I am going to make a four-part argument for income being an important part of any portfolio.

## 1/ Investment income is suited to replacing our personal exertion income.

Almost all people want to retire or scale down their work commitments at some time. At that point in time they will have to rely on a combination of their investment wealth, plus any Government benefit, to provide for their retirement.

Investment income provides a mechanism to meet this aim. By investing in a variety of assets that pay you strong dividends, rent and income, you can use these payments to replace or supplement your earned income. This way, you don't have to sell assets to have access to money. Provided you invest in some assets with growing income streams, your investment income should grow over time to keep pace with inflation. For example, the rent you receive on an investment property or the dividends you receive on a share investment should steadily increase over time.

## 2/ Investment income allows us to purchase other investment assets over time.

There is a lot of advice that suggests people early on in their life should focus on accumulating growth assets, particularly Australian and international shares, and not worry as much about investment income. Part of this is that over very long time frames these investments perform well, and, with the rules that give a $50 \%$ discount on capital gains, growth is taxed somewhat more favourably than income. (That said, income from Australian shares often have tax credits attached and income from listed property trusts often have a tax deferred component - these issues are discussed in the chapters related to each specific asset class.)

My view is that while it makes sense to bias your portfolio towards growth assets while your investment timeframe is particularly long, I still think you should place some emphasis on building a portfolio that generates a reasonable investment income.

My key reason for this is that if you re-invest this income into new assets, you are continually building your portfolio over time. By adding extra money to your portfolio over time, you are ensuring that, if investment prices fall, you are buying more assets at cheaper prices. The power of investing regularly over time is a powerful strategy to help build wealth.

As an aside to this, there may be times where you need some emergency finances. Having a portfolio that produces a strong income stream means that you may be able to use that to help, rather than having to sell some investments to raise extra funds.

## 3/ Investment income provides a rough valuation measure.

The income received from investments is important as it allows some comparison between investments in different asset classes. For example, if the net return on an investment property is $3 \%$, and the average yield on a share investment is $4 \%$, and an online cash account is providing income of $5.5 \%$, we can start to make decisions about where we would like to invest our funds.

We can see that, income only considered the cash return is the most attractive. However it has no chance of capital growth. The $4 \%$ return on the share portfolio then looks the next most attractive, with the opportunity for some growth, or loss, over time. The least attractive, on an income basis, is the real estate investment.

The strategies an investor might choose would include keeping the money in a cash account while waiting for better value investments, or looking for higher yield property or share based investments. If, for example, property prices fell and rents increased to provide a $6 \%$ rental return on the property, it may be a more prudent time to invest.
4/ Investment income is less volatile than investment growth.

Towards the end of 2003 the National Australia Bank announced that there had been a trading scandal, and that rogue traders had been involved in deals that had cost millions of dollars. The price of National Bank shares fell from a high of around $\$ 34$ some months earlier, to a low of just over $\$ 26$. This was a fall of nearly $25 \%$ from the high, and was no doubt disappointing for investors.

However, the income paid by the bank did not decrease. In 2004 it paid $\$ 1.66$ in dividends, and this was matched in 2005. In 2006, forecasts are for the dividend income to start to grow again.
So, even where the share price has been volatile, the return from dividends was less affected.

James Bond, in an article on the treasury department website (www.treasury.gov.au) made mention of the fact that the Australian share market declined by over $40 \%$ in October 1987. I looked back to see what had happened to the dividends of listed companies between 1987 and 1988. Please note that this is not a scientific sample. I simply looked for companies that I knew were trading then and still trading now as I only had access to data for currently trading shares.

| Company Name | 1987 Dividend | 1988 Dividend |
| :---: | :---: | :---: |
| National Aust. Bank | 24.75 cents | 32 cents |
| BHP | 35 cents | 34 cents |
| Rio* | 15 cents | 36 cents |
| Westpac | 28 cents | 29.5 cents |
| Lend Lease** | 45 cents | $\$ 1.00$ |
| News Corp | 7 cents | 9 cents |
| ANZ Bank | 26 cents | 34.5 cents |

* It appears that Rio may have paid a special dividend, probably of 4 cents, which is included in the 1988 dividend. Even without the 4 cents the Rio dividend grew sharply.
** It appears that Lend Lease may have paid a special dividend, probably of 50 cents, which is included in the 1988 dividend. Even without the 50 cent dividend the Lend Lease dividend still rose by $10 \%$.

From this admittedly unscientific sample, the volatility that occurred in the prices of assets, starting at around the end of 1987, did not seem to translate into volatility in the income streams of investments.

## Section 5 - How We Build Investment Portfolios

This section of the book answers a simple question:
Given all the investment options in the world, how do we, as independent investment advisors, go about building investment portfolios that work?

For us, involved in an independent financial planning firm, this question is profound because it is what we do. We can choose for our clients any investment option in the world - and this book explains which investments we choose and why. Right from the start we want to pre-empt our conclusions by saying that the investments we choose to build portfolios from are:

- Simple
- Inexpensive
- Do not rely on skill for investment returns
- Tax effective

We are not promoting a complex or technical approach towards managing investments. Quite the contrary, our approach is simple, transparent and effective.

We look at the components that we use to build portfolios:

- Index funds - what they are and why they work so well
- Asset allocation - the KEY decision that you need to make in managing your assets
- Investing in 'small' and 'value' companies to increase your expected return
- Tax effectiveness, an important part of any approach
- Fixed interest investments - how they can work in a portfolio
- What great investors think about a passive investment approach
- Why high yielding direct investments are worth considering in your portfolio

In short, this book compares an active approach to investment management with a passive approach. An active approach implies having your money managed by someone with the skills and abilities to pick investments that will perform better than the average and who has the ability to pick and time which asset classes are going to perform better than others. It is the more expensive portfolio management approach, as costs are incurred through research and trading. It does not mean that you are a 'trader', rather that you have a portfolio that, through some expectation of skill, you expect your investments to outperform the average return. This also includes self directed investors who choose to manage their own portfolio. A passive approach focuses on building portfolios that reflect the performance of the overall market. They are inexpensive and tax efficient, as very little trading goes
on. Over time they have grown in sophistication allowing investors to target specific characteristics of return within the overall market.

As an investor with only a comparatively small pool of wealth, it is easy to become timid about what you should expect from your investments. You should keep the following in mind:

In the world of capital markets there are four key inputs required by businesses to create wealth. These inputs are:

- Resources (the material inputs involved in business)
- Intellectual Capital (the ideas and innovation behind businesses)
- Human Capital (the people who work in the business)
- Investment Capital (the money provided for use in business)

As an investor, you are providing a key input into this process, the investment capital, and as such you are entitled to a successful investment experience.

Our opinion, our belief and the evidence available leads us to the conclusion that a passive approach to investment management maximises your chances of having this successful investment experience.

## Chapter 29-8 Quick Concepts that will make this Section of the Book Easier to Read

The following short section of the book outlines eight concepts that, if you are somewhat familiar with them, will help you understand the content of the remainder of the book.

## An Active Investment Approach

This title seems to imply that an active investor is one who is regularly and often trading. While this may be the case, it actually refers to any investor who makes specific investments thinking that they will beat the average market return. An active investor may be someone with a portfolio of 20 investments that they have put together. While they don't trade these investments regularly, they are active in the sense that they have specifically chosen a portfolio that they believe will give them above average long term returns.

Pretty much every market participant is an active investor. They all have their portfolios of investments, including managed funds, that they think will provide them with above average market returns.

## An Index

An index is a collection of all the investments in an investment category. It is used to measure the performance of all the investments in that category. For example, the index of the largest 200 companies listed on the Australian stock exchange is known as the ASX200 index. It measures the average performance of the largest 200 companies by value. As we write, the value of the ASX 200 index is around 5,000 points. In any one day the index may go up by 50 points, or $1 \%$, if the average value of the companies in the index rises by $1 \%$. Alternately, if the average value of the companies falls then the index will fall.

Most indices are 'value weighted', which means that larger companies have more importance in the index. In Australia this is true. In the ASX200 index, companies like BHP, the major banks and Telstra have more weight in the index, so the changes in their price will affect the index more than the companies that are ranked 199 and 200 in the index.

## An Index Fund:

Indices were set up as measuring devices. Once research was done looking at the investment performance of active managers, particularly active fund managers, it was noticed that very few active fund managers could 'beat' the index over any extended period. (More evidence of this is included later in the book).

In the early 1970's in the United States the first 'index fund' was developed. All it did was hold all the investments that exist in an index, in the proportion by which they contributed to the index. The return of an index fund is simply the return on the index less costs.

This became a very cheap way of investing, because there is little research or trading cost involved in putting together a portfolio that has exactly the same investments as the index. As well as this, it immediately provides a very well diversified portfolio.

## The 3 Factor Model:

We think that this research is so exciting for investors that we have given it a chapter of its own. In the early 1990's two academics, Gene Fama and Ken French, found that there were other sources of return in investment markets rather than just the index return.

They found that additional investment return could be expected by investing in small companies and in what they called 'value' companies, or companies under some financial pressure.

Importantly, Fama and French did not say that these areas were a source of additional 'risk free return', rather they said that the investor took on additional risk for the additional investment return.

Over the long term, additional average returns in the order of $3-4 \%$ from investing in value companies and $1-1.5 \%$ from investing in small companies have been achieved across many different investment markets. These returns do not show up every year. Indeed there are periods of years where small and value companies can underperform the index. That said, on average, they provide a return premium over the market.

## Passive Funds:

Index funds are the first example of passive funds, in that the fund manager is not trying to actively beat the market. Such funds passively invest in all the stocks in the market and accept the market return.

The 'small company' and 'value company' funds set up to take advantage of the additional areas of potential risk and return identified by Professors Fama and French are also described as 'passive' funds. That is because they are not actively researching and selecting stocks for their funds, rather they passively select stocks based on their characteristics.

Dimensional Fund Advisors have set up passive managed funds that specifically invest in small and value companies. For example, their Australian small company trust invests in stocks outside of the top 100 companies by size, and the Australian value trust invests in the $30 \%$ of the market with the lowest book to market ratio. There are also other screens that companies are run through prior to investing, to ensure that they are suitable. The point is that these funds invest entirely in the area of suitable small or value companies; they are not seeking to actively pick and choose which companies sit in their portfolio.

## Capital Gains Tax:

Capital Gains Tax is the tax that you have to pay when you sell an asset that has gone up in value. Having to pay some capital gains tax is not the worst problem in the world; at least your investments have gone up in value.

Capital gains tax is only payable once you have sold an investment. It becomes a big issue for those people who are trading investments regularly, or for investors who invest in managed funds that are trading regularly.

The capital gain that you make is added to your marginal tax rate. For example, if you buy an asset for $\$ 1,000$ and sell it for $\$ 2,000$, the $\$ 1,000$ capital gain is added to your taxable income. If you pay tax at the rate of $30 \%$ then you will pay $\$ 300$ of tax ( $30 \%$ of $\$ 1,000$ )

In Australia, once an investment is held for 12 months you generally get a $50 \%$ discount on the rate of tax paid. In this case if you make the same $\$ 1,000$ gain and you have owned the asset for more than 12 months, only $\$ 500$ of the gain is added to your taxable income, so at a tax rate of $30 \%$ the tax paid is $\$ 150$.

This does not apply to companies. They are not entitled to any capital gains tax discount.

The rate of tax paid on a discounted capital gain in superannuation is $10 \%$, rather than the full rate of $15 \%$ applied to superannuation earnings.

This basic understanding of capital gains tax is important because many active approaches to investment management create high levels of capital gains tax that has to be paid by investors.

## Management Expense Ratio (MER):

A management expense ratio is the total cost of a managed fund. The average managed fund cost in Australia is $1.8-2 \%$, although it will be smaller for larger investment amounts. This is important in investing, as it represents a large slice of your expected returns. If we say that the average expected returns from Australian shares is $12 \%$ a year, then a $2 \%$ fee translates to $17 \%$ of your expected returns.

## Shares/Stock

When companies list on a stock exchange, such as the Australian stock exchange, they issue shares for investors to buy. Buying the shares makes you part owner of the company.

If you invest in a managed fund, they will buy those shares on your behalf. That is, they put together a portfolio of shares that you then invest in. If the shares they have chosen go up, then the value of your investment goes up, and vice versa.

The terms shares and stock can be used interchangeably. You can say 'I want to buy some shares in that company', or 'I want to buy some stock of that company'. Stock tends to be used more in the United States than here in Australia.

## Chapter 30 - Indices and Index Investing - Simple, Low Cost, Diversified, Proven and Effective

This section of the book takes a thorough look at how we build investment portfolios.

Before we go too far, and before the reading becomes too complex, I want to present a simple idea that guarantees above average investment returns for an investor.

That idea is index funds.

An index is the collection of all the investments in a particular investment universe. The ASX 200 index, for example, is the collection of the largest 200 companies listed on the Australian Stock Exchange (ASX). We most often come into contact with 'the index' when we are listening to the news reports about financial markets. The reports will say that 'the index' is up by $1 \%$ for the day, or down by $1 \%$ for the day. That means that the average return from the top 200 companies is up or down $1 \%$ for the day. Companies importance in the index vary with size - the larger the company the bigger their importance in the index.

An index fund simply invests in all of the assets in an index, in the same proportion that they sit in the index.

The returns that you get from an index fund are simply the returns from the whole index, less the costs of managing the index fund. This is important, because the costs of an index fund are relatively low. All the fund manager is doing is investing in all of the companies in the index - there is not a great deal of expensive research or trading that needs to support that.

Over the past 37 years (to the end of July, 2007) the average return from the Australian share index has been $13.8 \%$ a year. The return from investing in an index fund is this return, less some costs. This is a good investment result.

In the second section of this chapter index funds are said to 'guarantee above average investment returns'. This seems to be a strange comment to make given that index funds just mirror the average market return.

The reason for making this comment is that around $15 \%$ of the market is invested using index funds. That leaves $85 \%$ using an 'active' approach - whether it be active fund managers, building their own share portfolio and so on. If the average return from the market is $13.8 \%$ a year, this has to be the average return that all index fund investors receive, and all 'active' investors. However, because active investors pay more in research, tax and trading costs (e.g. managed fund investors
often pay up to $2 \%$ in fees), the average index investor is guaranteed an investment return above the average active investors return.

While we are going to talk in a lot more detail about index funds, and in particularly some sophisticated index funds that invest in small and value companies, it is worth going over the basic advantages of index funds here.

1/ They are low cost funds. Often their costs are less than $1 / 3$ of the costs associated with following an active investment strategy.

2/ They are tax effective. There is much less trading with an index strategy compared to an active strategy, and therefore less capital gains tax because of trading. Many managed funds make taxable distributions more than 3 times the average income from the overall market - these distributions make these funds tax ineffective.

3/ Index funds are very well diversified. For example, the ASX200 index fund has 200 companies in the fund. This means that if any one company collapses, and companies do collapse from time to time (for example HIH, One Tel, Parmalat, Enron and World Com), the overall portfolio is not disproportionally damaged.

4/ Even though an index fund is relatively cheap, it could be considered to be the 'best researched investment portfolio' that there is. How can we say that? Think about the company BHP. There are thousands of managed funds, individual investors, stockbrokers and private research companies examining BHP every day. If they think that the price of BHP is too cheap, they buy some more. If they think that the price of BHP is too high, they will sell some. Effectively all of their research on BHP is reflected in the BHP share price. An index investor benefits from this by simply buying BHP at their current price, knowing that the share price reflects this huge body of research. This does not just happen for BHP, it happens for all the companies in the index.

In an article in Fortune Magazine (a well regarded USA investment magazine), Nicholas Varchaver interviews possibly the world's greatest investor, Warren Buffett, during a time when investment markets were particularly volatile in early 2008. Buffett says:
'Well, if they're not going to be an active investor - and very few should try to do that - then they should just stay with index funds. Any low-cost index fund. And they should buy it over time. They're not going to be able to pick the right price and the right time. What they want to do is avoid the wrong price and wrong stock. You just make sure you own a piece of American (Australian) business, and you don't buy all at one time.'

Keep in mind this last piece of mathematics. Well over $90 \%$ of the market is managed 'actively'. That will be through online trading accounts, stockbrokers, managed funds and industry and government superannuation funds. All of these funds will spend around 1.5 to $2 \%$ in total costs (trading costs, research and management costs) a year to beat the average market return. And yet, on average, their return will be $1.5 \%$ to $2 \%$ below the market return. On average, simple mathematics says that these investors will underperform the market return by $1.5 \%$ to $2 \%$ a year. And yet, all of these investors expect that they will beat the market, or they would simply manage their money using an index fund. Most will be disappointed.

## Chapter 31 - 'It's Time to Stop Believing in the Tooth Fairy'

"Santa Claus and the Easter Bunny should take a few pointers from the managed fund industry [and it's fund managers]. All three are trying to pull off elaborate hoaxes. But while Santa and the bunny suffer the derision of eight year olds everywhere, actively-managed stock funds still have an ardent following among otherwise clear-thinking adults. This continued loyalty amazes me. Reams of statistics prove that most of the fund industry's stock pickers fail to beat the market. For instance, over the 10 years through 2001, U.S. stock funds returned $12.4 \%$ a year, vs. $12.9 \%$ for the Standard \& Poor's 500 stock index." Jonathan Clements. Only Fools Fall in ... Managed Funds., Wall Street Journal, September 15, 2002

Managed funds are investment vehicles where investors contribute to a pool of assets, and become owners of a number of 'units' in those assets. For example, an investor might invest in an Australian share fund, contributing $\$ 1,000$ to buy 1,000 units priced at $\$ 1$ each. If the value of the underlying assets goes up in price the investors units will increase in value. If the value of the assets fall, so will the investors investment. Traditional managed funds, or 'actively managed funds', look to pick investments or asset classes that will provide above average returns.

The managed fund industry in Australia is a huge industry. According to statistics published on the website of the US managed funds industry site the Investment Company Institute, Australia has the fourth biggest managed fund industry in the world. The size of our managed fund industry ranks us behind the US, France and Luxembourg but ahead of financial heavyweights such as Germany, the UK and Japan. At the end of 2005 the value of the assets invested in Australian managed funds was just over $\$ 800$ billion or, based on a population of 20 million people, $\$ 40,000$ invested in managed funds for every man, women and child in Australia.

The Morningstar website states that it provides research on over 7,500 Australian managed funds. To put this in perspective, on the $31^{\text {st }}$ of December 2005 there were 1,873 listed companies on the Australian stock exchange. Sure, not all the managed funds will be invested in Australian stocks. However, the fact that there are 4 times as many managed funds in Australia as there are listed companies on the ASX is a testament to the size of the industry in Australia.

The total value of investments listed on the Australian stock exchange (ASX) at the end of 2005 was $\$ 1,110$ billion. With $\$ 800$ billion invested through managed funds ( $63 \%$ of the value of ASX investments) you can see how significant this industry is.

Why is this the case? Firstly, Australia's superannuation industry sees $9 \%$ of most people's salary invested almost exclusively into managed funds, providing an ongoing stream of contributions into managed funds. Secondly, and we think sadly,

Australia's financial planning industry is dominated by advisors who generate their cash flow from the commissions paid by managed funds to them. They have an inherent bias toward recommending them.

There remains an intuitive attraction to actively managed funds as investment solutions. They are generally sold on the following claims:

1/ Professional fund managers and researchers provide the expertise that will see your investments funds perform strongly. What they don't mention is that every fund manager in a competitive market place has huge amounts of research and expertise - they can't all perform above the average. They also don't mention that research and expertise are expensive and reduce your expected returns.

2/ These funds provide instant diversification for investment portfolios. What they don't say is that 'index funds', funds that invest in all of the securities of the index, will provide a greater level of diversification at a much lower cost.

3/ They are likely to tell you that the proposed managed fund you are investing in has outperformed the market average over the past 5 years. What they won't tell you is that research has consistently shown that this does not mean that it is likely to outperform over the next 5 year period, and that the outperformance is far more likely to be due to luck rather than skill.

4/ They provide a simple, one stop investment solution. What they don't mention is that a horse and buggy also provides a simple solution, it just doesn't work as well as other alternatives.

What definitely won't be emphasised while you are being encouraged to invest in a managed fund will be:

- What the average managed fund fees of $1.8 \%$ to $2 \%$ will do to reduce your final investment balance. (Average fees from the Age newspaper, September 2004. Article Entitled 'Competition and Fees' written by John Collett.)
- How frequently managed funds trade and the costs of this trading.
- The difficulty that comes with managing a huge pool of money, such as influencing the price of investments that the fund is buying or selling.
- The role that commissions, both upfront and trailing, have on commission based financial advisors recommending them.
- The tax inefficiency of managed funds.
- The complexity of the annual tax statements from managed funds.

When it all boils down to basics, the question must be asked "are actively managed funds the most efficient way for investors to achieve a successful investment experience?"

The simple summary (of the next nine paragraphs) is this: there is a significant body of academic research that consistently reaches the same conclusion - that actively managed funds do not outperform the simple market return (index). That is, actively managed funds do not add value.

There has been a tremendous amount of research done that compares the investment returns from managed funds with the returns from the market index, which measures the average return from an investment environment. The overwhelming reality is that, on average, managed funds do not outperform the index. Let's look at some evidence.

Dr Rich Fortin and Dr Stuart Michelson, both finance professors, authored a paper in the September 2002 Journal of Financial Planning entitled 'Indexing Versus Active Mutual Fund Management'. (A mutual fund is another term for a managed fund). They found that, in both before tax and after tax terms:

- Index funds outperformed managed funds for most share based categories and all fixed interest categories.
- Active management did not add value.

In the summer 2000 edition of the Journal of Portfolio management, Arnott, Berkin and Ye wrote a paper entitled 'How Well Have Taxable Investors Been Served in the 1980's and 1990's?' Within the paper they state that 'There can be no question that indexing, for most categories of taxable investor and most market conditions will outperform conventional active (managed funds)'.

David Gallagher and Elvis Jarnecic, from the University of New South Wales, have authored two papers that look at the performance of Australian managed funds that invest in international assets and fixed interest assets. In the article 'The Performance of Active Australian Bond Funds', published in the December 2002 Australian Journal of Management, they found that there was 'significant underperformance for retail bond funds after fees'. In the article 'International Equity Funds, Performance and Investor Flows: Australian Evidence', published in 2003 in the Journal of Multinational Financial Management it was found that 'active management (ie in managed funds) does not provide investors with superior returns to passive indices'. In reviewing the literature concerning managed funds Gallagher and Jarnecic found that '...the empirical evidence widely documents the inability of active fund managers to outperform market indices', with 'Australian research also supporting this international evidence'.

Two economics professors from the University of Queensland, Michael Drew and Jon Stanford, examined the returns from superannuation investments. In a paper published in the September 2003 edition of the Service Industry Journal, entitled 'Returns from Investing in Australian Equity Superannuation Funds, 1991 - 1999', they found that 'the average superannuation fund, specialising in the management
of domestic share portfolios, underperforms passive market indices by about 2.8 to $4 \%$ per annum. Their overall conclusion was 'Australian superannuation investors would achieve their retirement income objectives more rapidly by engaging a low cost fund manager employing a passive technique (ie indexing)....'. It is interesting to note that most of our superannuation assets are managed in active managed funds.

A number of recent studies have examined the actual ability of fund managers to select investments that perform higher than the average. These studies have included a study by Malcolm Baker (Harvard Business School), Lubomir Litov and Jeffery Wurgler (Stern School of Business) and Jessica Wachter (Wharton School) entitled 'Can Mutual Fund Managers Pick Stocks' and 'An Examination of the Performance of the Trades and Stock Holdings of Fund Managers: Further Evidence' by Matt Pinnuck (published in the Journal of Financial and Quantitative Analysis: December, 20003). Both of these studies found that fund managers had the ability to select stock (share) investments that outperformed, that is, they could select stocks that perform better than average. This would seem to fly in the fact of evidence that actively managed funds underperform passive indexes. However, there is more to this story. In an article entitled 'Mutual Fund Performance: An Empirical Decomposition into Stock Picking Talent, Style, Transaction Costs and Expenses' published in the Journal of Finance, Volume 55: Issue 4, the Author, Russ Wermers found agreement for the evidence that managed funds had the ability to select outperforming stock. In fact, the outperformance of the stocks held in a managed fund amounted, on average, to $1.3 \%$ a year. However, after taking into account transaction costs and expenses of $1.6 \%$, and the underperformance of non stock holdings (such as cash on deposit from new investments and to meet redemptions) of $0.7 \%$, the actual performance of actively managed funds trailed the index by $1 \%$.

Dr Ross Miller, a finance professor from the United States, in his paper 'Measuring the True Cost of Active Management by Mutual Funds', considers the returns from 152 managed funds from January 2002 to December 2004. On an overall basis the 152 mutual funds underperformed the index by an average of $1.5 \%$.

## An Intuitive Explanation

As well as this research, we would like to propose an intuitive explanation of these results.

For an active fund manager to add value they have to find a mispricing of an investment that no one else has found. For example, at the moment Telstra shares are trading at around $\$ 4.70$. For an active fund manager to add value through active management they have to come to an opinion about whether Telstra shares are too expensive, too cheap or about the right price.

This sounds reasonably simple to do, except that every other investor is doing it, and it is expensive to do (because the research process takes time and money). That means that active managers have to do it better than every other investor in the market place and they have to outperform the costs they incur in researching and actively trading.

Telstra's price at the moment reflects a kind of average price of all the expectations and research in the market. Some people are buying Telstra at the current price they expect to get above average returns from their investments. Some people are selling Telstra at the current price - they expect that Telstra will provide a below average return in the future.

That, in a nutshell, is why active management is so difficult. With thousands of researchers, investors, fund managers and advisors combing investment opportunities it becomes difficult to find any investments mispriced to such an extent that the excess return will cover the costs of researching and trading.

The next step in evaluating managed funds as prospective investment solutions is to ask the question "Why do managed funds underperform the index?"

## How Do We Apply This?

The traditional financial planning model uses managed funds as the core of their investment approach. The initial evidence about managed funds as effective investment vehicles and their ability to provide adequate investment returns is not promising.

Given the question mark about the effectiveness of managed funds we are compelled to look at further evidence as to whether they should be used in investment portfolios.

We definitely do not believe in the tooth fairy, we are slowly coming to terms with the fact that there is no Santa Claus and, for all the supposed investment expertise and hype surrounding managed funds, it seems that there is little reason to believe in them either.

## Chapter 32 - "Why Managed Funds Underperform the Index?"

The previous chapter considered a body of research that overwhelmingly found managed funds do not perform above the average market return (the index return). To build a more robust understanding of why managed funds are not effective investment vehicles, we need to understand the reasons for this underperformance of managed funds.

We have identified 5 key factors that end up reducing the performance of managed funds, and they are:

- The high costs associated with managed funds
- The problem of managing large sums of money and cash inflows
- The hidden cost of trading (moving market prices) as a result of the large sums of money that manage funds have to invest.
- Overconfidence and excessive trading
- The problem of managed funds mimicking the index

This chapter considers these five factors, one at a time.

## The high costs associated with managed funds

Average managed funds have fees of $1.8 \%$ to $2 \%$. (From the Age newspaper, September 2004. Article Entitled 'Competition and Fees' written by John Collett.) Wholesale funds, which are funds that have a higher minimum investment generally of $\$ 50,000$ or more, often have lower fees of 0.8 to $1.5 \%$. Investors are often encouraged to use 'platforms' or 'wrap accounts', which are administrative structures that allow investors to invest in managed funds at wholesale prices, although this adds another layer of fees for these 'platform' or 'wrap' accounts.

The effect of fees is simple to understand. If the long term Australian sharemarket return is $12 \%$, paying $1.8 \%$ in fees means that the underlying assets of the fund will have to return $13.8 \%$ for the managed fund to provide you with a return equal to the index return. This sounds easy enough. However keep in mind that the extra $1.8 \%$ return is equal to an extra $15 \%$ return above the market average return of $12 \%$.

These costs are significant. They mean that where the average return on the market is around $12 \%$, the average return that a managed fund investor can expect is the market return less the fees, or $10.2 \%$ rather than the $12 \%$. This is simple mathematics - there will be some active fund managers who will outperform, there will be some who underperform: therefore the average must be the market return less fees.

## The problem of managing large sums of money and cash inflows

There is commentary that the size of managed funds limits their performance. In Australia, Colonial First State states on their website that they manage $\$ 99$ billion worth of funds. AMP on their website state that they manage funds worth $\$ 84$ billion. Even if only a third of this is invested in Australian Equities, these are still massive portfolios that they are trying to manage.

Size limits performance because there are only so many outstanding investment opportunities available, and managing such large sums of money means that you have to look beyond just outstanding opportunities to less favourable ones. For example, lets consider ARC energy, a stock listed in the ASX 200 index. This means that it is one of the largest 200 companies on the stock exchange. At the time of writing, it has a market capitalization of around $\$ 370$ million. So, if the fund managers at AMP thought it a great investment, they could buy all the ARC energy shares on issue, and it would still make up only about $1 \%$ of their Australian Equities portfolio - so there is no real way that they can take a meaningful position in even a company of that size. (Usually fund managers limit the amount of each company that they own, which limits further their ability to take meaningful positions in anything but the largest companies.)

David Gallagher and Elvis Jarnecic, from the University of New South Wales, have authored two papers that look at the performance of Australian managed funds that invest in international assets and fixed interest assets. Both of these papers provide an insight into one of the problems that active fund managers have. For both international funds and fixed interest funds it was found that the inflow of money into managed funds from new investments actually negatively impacted on performance. This makes sense, as investors are more likely to invest new money with a managed fund after it has performed well. However, this period of strong performance may well correlate with a peak in the value of a market. This means that the investment manager has to make more investments when markets have peaked, or has to retain the new money in cash investments until it can be invested in the market. Either approach is likely to detract from the overall performance of the fund.

Christopherson Ding, Greenwood, in their aricle 'The Perils of Success' published in The Journal of Portfolio Management, 2002, put together this theory to conclude that strong investment performance led to inflows of investors money which then led to performance mediocrity, because of the difficulties associated with managing a larger collection of funds.

## The Hidden Costs of Trading - The Hidden Costs of Managed Funds

Chalmers, Edelen and Karlee, in a 2001 paper entitled 'An Analysis of Mutual (Managed) Funds Trading Costs' looked at the costs associated with 132 managed funds during the period from 1984 to 1991 . Their study found that:

- The average trading costs for a managed fund were $0.78 \%$ of the funds assets a year. These trading costs are in addition to the annual management fees paid to the fund manager. (add this to the $1.8 \%$ to $2 \%$ fee you are paying and the total cost of management is over $2.5 \%$ a year)
- The higher the trading costs the lower the returns of the fund (which implies that the more actively the funds assets are managed the lower the actual return)
- In considering trading costs they made the statement that 'a plausible inference from the results is that every dollar that is spent on trading costs results in a dollar less in returns'. They found that where total fund costs were $0.9 \%$ the funds underperformed the expected returns by $0.77 \%$ and where total fund costs were $3.12 \%$, the funds underperformed the expected return by $4.38 \%$.

Even this research may not fully quantify the price impact that trading may have on a managed fund. For example, if you are a large fund manager wanting to take a position in a reasonable sized company, such as Flight Centre, you will have to buy such a large number of shares that your demand will actually increase the price of the shares of the company. Conversely, when you come to sell that holding you will have so many shares that you are selling that you will decrease the price of the shares. In effect, you will be forced to buy higher than you want, and sell lower than you want. This market impact reduces the returns for the managed fund investors.

These costs are hidden. For example, the Q Super balanced fund (a superannuation fund for Queensland Government Employees) has a management fee of $0.58 \%$ per annum. This is a very low management fee. However it does not capture the trading costs associated with the active management of Q Super's assets.

## Overconfidence and Excessive Trading

The hidden costs of trading having been exposed in the previous section. The next question is how often do fund managers trade? Mark Carhart, in his paper entitled 'On Persistence in Mutual Fund Performance' published in The Journal of Finance in 1996 measured the turnover of the investments of actively managed funds at $75 \%$ of the funds assets each year. That is, $75 \%$ of the portfolio of the average managed fund is bought and sold each year.

Using market figures from the Australian Stock Exchange website (www.asx.com.au) we calculated the total turnover in the 12 months to November 2005 as being $89.4 \%$ - great for the shareholders of the ASX who generate revenue every trade, but perhaps not so great for investors! During the 12 months to November 2005 the average equity trade was $\$ 35,531$. There was an average of 2.044 million trades per month and the average value of the sharemarket over this time was $\$ 974,000,000,000$. This more up to date figure for sharemarket turnover shows the high level of trading across the market.

By definition actively managed funds will be buying and trading shares, looking for investments that will outperform. However, given the high cost of trading, this has a role in decreasing investment returns. If the level of trading of fund managers somewhat approximates the turnover of assets in the Australian stock exchange of nearly $90 \%$, then it is easy to see how excessive trading will reduce managed fund performance.

## The problem of managed funds 'mimicking' the index

Ross Miller, in his paper 'Measuring the True Cost of Active Management by Mutual Funds', sets out to identify how much the returns from mutual funds, a US term for a managed funds, are a result of closet indexing and how much are a result of active management unrelated to the index. He then proportions a reasonable fee for the index fund management based on the Vanguard US S\&P 500 Index Fund $(0.18 \%)$ to find out the true cost of the actively managed portion of the fund. That is, he assumes that the indexing investment management cost $0.18 \%$ for the portion of the fund managed this way, with the remaining management cost being attributed to the actively managed portion of the fund.

The results are very interesting. For the 152 'large company' mutual funds that formed the sample, on average only $15.55 \%$ of the total funds were actively managed. The average management expense ratio (MER), or managed fund fee, for the actively managed portion of the funds was $6.99 \%$. On average more than $96 \%$ of the variance in the returns of the fund was explained by movements in the index. On average the 'value added' by the active management was negative $9 \%$. This is an investment loss of $2 \%$ on top of the fees of $6.99 \%$ apportioned to the actively managed component of the fund, clearly demonstrating that in this sample active management destroyed value. On an overall basis the 152 mutual funds underperformed the index by an average of $1.5 \%$.

Amongst the reasons given for actively managed funds being closet index funds are the 'marketing imperative' and the problems of size.

The 'marketing imperative' suggests that managed funds are reluctant to take large positions away from the index because if they do, and the positions don't work out,
the fund will have underperformed the benchmark significantly. This underperformance will be difficult to explain to existing investors and even more difficult to use to attract new investors. So the safe alternative is to hold a portfolio that is roughly the same as the index, so that the managed fund will get roughly the same return.

The problem of size means that large fund managers have so much money to deploy that they are forced to purchase investments in a large number of companies, just to get all their money invested. For example, Colonial First State boasts on their website that they have $\$ 99$ billion in funds under management. Let us assume that $1 / 3$ of this, $\$ 33$ billion, is invested in Australian shares. The sheer size of this sum of money requires that it is spread over many investments. Particularly, it cannot be focused too much in smaller companies, because they are not big enough for large portions of the $\$ 33$ billion. As such, the fund ends up with a large number of investments, tending to have larger investments in the larger companies, much like the index itself.

The net effect of this copying of the index is that active managed funds are so closely aligned to the index that their return will only ever be that of the index, less their fees. There is extremely limited opportunity for them to add value over the index return. Being an active manager there will be attempts to generate value through making trades that in reality will increase the hidden costs of the managed funds.

## Conclusion

Our discussion in this chapter looks at some of the key answers to the 'why?' question - why do active managed funds underperform the average index return? The answer we have proposed, arrived at through a review of high quality investment research, is fivefold:

- The high costs associated with managed funds
- The problem of managing large sums of money and cash inflows
- The hidden cost of trading (moving market prices)
- Overconfidence and excessive trading
- The problem of managed funds mimicking the index

The next chapter is the last that looks specifically at the evidence that surrounds managed funds. It looks at the naïve approach that is often used by financial planners recommending (selling) managed funds, who focus on simplified research and past performance to try to identify managed funds that will outperform in the future.

## How Do We Apply This?

The previous chapter presented the results that suggest managed funds were ineffective investment vehicles, and this chapter looked further into the evidence why.

For us the evidence is building a compelling story that using active managed funds as investment vehicles is not the best solution for building effective investment portfolios.

## Chapter 33 - How the Financial Services Industry Assesses Managed Funds

In this chapter we look beyond managed funds to the role of financial advisors, and the process that lies behind the recommendation of managed funds to investors. The question we are looking at is how do investors and advisors assess the myriad of managed funds available to them, and how successful is this process?

In answering this questions there are three particular themes that we will consider:

- How well do the 'managed fund research companies' perform in rating funds?
- How useful is past performance as an indicator of future performance?
- How do we differentiate between luck and skill in a fund manager?

We start with a paper written by Julia Sawicki, a financial academic and Kevin Thomson, a financial planner, which examined two key inputs into the process of the selection of managed funds; research company ratings and the past performance of managed funds. Their paper, entitled 'An Investigation into the Performance of Recommended Funds: Do Managed Funds 'Approved' by Research Companies Outperform the Non Gratea (non approved)?’, studied these two key approaches to choosing funds.
Sawicki and Thomson had access to the ratings from a research company for the six year period from 1989 to 1995 . They found that there was no evidence that funds that were 'approved' outperformed the funds that were not approved. In fact, they set up two hypothetical portfolios where $\$ 1,000$ was invested into each of the 14 category of funds (eg capital stable funds, equity funds, international funds) and received the average return for either the approved funds or the average return from the non approved funds. At the end of the six year period the approved fund portfolio was valued at $\$ 21,027$ and the non approved fund category was valued at \$21,540.

The conclusion by Sawicki and Thomson was clear, 'The results generally reveal no significant difference between the performance of approved and non approved funds on a group as well as an individual basis, suggesting that the classic return-maximising investor would not be aided by the research company's recommendations.'

The period that was studied was some time ago, 1989 to 1995, so it is worth looking at the present ratings system to see what value it may add to an investor. Arguably the best known ratings company is Morningstar, who use a star rating system to rate managed funds from one star through to five stars. An article by Phillip Gray found on the Morningstar website provides some information on the methodology behind the star rating system. Funds are rated using a combination of three and five year returns data, with the results being adjusted for the volatility of returns. A fund
with a similar level of returns to another, but with greater volatility of returns, will receive a lower rating. Volatility is measured on the basis of monthly returns.

Funds are then allocated a rating between 5 stars and 1 star based on their historical return, adjusted for volatility. A 5 start fund is in the best $10 \%$ of funds of that type, a 4 star fund the best $22.5 \%, 3$ stars the middle $35 \%, 2$ stars the next $22.5 \%$ and a 1 star fund the worste $10 \%$.

This process of rating funds from 1 star to 5 stars is a completely quantitative process, and does not capture the value that may be added by the qualitative process that a researcher like Morningstar will do. That said, the 5 star system is a powerful and simple way of branding managed funds for investors. Clearly this system is based heavily on historical returns, which was investigated in the second part of the study by Sawicki and Thomson, who concluded that historical returns are not a predictor of future returns.

A more recent paper from the United States, entitled 'The Kiss of Death: A 5-Star Morningstar Mutual Fund Rating', written by Matthew Morey and published in the Journal of Investment Management in 2005, found that fund performance dropped off significantly after receiving a 5 star rating. This was important because with the 5 star rating came a significant inflow of investors money, $53 \%$ above the normal. However, the three year performance of the managed funds after they received a 5 star rating then fell below the expected return for a fund with that level of risk. The 5 star rating from Morningstar was not able to predict better performing managed funds. Furthermore, those funds that had performed well previously to receive their 5 star rating were not able to maintain this strong performance.

In looking at the ability of historical returns to predict future returns, Sawicki and Thomson also found that there was no evidence of 'persistence' of returns. That is, there was no evidence that choosing a managed fund that had outperformed in the past would provide above average returns.

This conclusion is one that has been reached by many researchers. Mark Carhart, in his paper 'On Persistence in Mutual Fund Performance' published in the Journal of Finance in 1997 found that there was no evidence of persistence in the performance of managed funds.

Michael Drew and Jon Stanford, academics and economists, wrote the paper 'Returns from Investing in Australian Equity Superannuation Funds, 1991 - 1999' that was published in the Services Industry Journal in 2003. They found that there was 'no evidence that active fund management adds value' and 'the market for equities in Australia appears to be remarkably efficient'. These conclusions oppose the idea that a fund manager can consistently outperform the market. In fact, Drew and Stanford found that on average fund managers underperformed passive index
returns by $2.80 \%$ to $4.00 \%$. The conclusions reached by Carhart, Sawicki and Thomson, Drew and Standford are important as they question any link between historical returns and future returns, which is a key element in the rating of managed funds.

Is any outperformance a result of skill or luck? When we come across an advertisement for a managed fund that has performed above the index average for each year over the past 5 years we have an immediate bias to categorise this as an example of investment skill. However there are over 9,000 managed funds in the Australian market place. Simple maths and random chance suggests that each year 4,500 are going to perform better than the average fund, and 4,500 worse. Over time some funds, simply due to chance, will put together a co-incidental run of wins and look to have outstanding performance.

The often cited example of this is to have a coin tossing competition. 200 people each have a $\$ 1$ coin and flip it. Those people who flip a heads win. Of the 200 people on average 100 will have heads and 100 tails. The 100 winners take the $\$ 1$ coins of the losers and flip again. There will be 50 winners who each now have $\$ 4$. The next round will see, on average 25 winners with $\$ 8$. With such a run of success we might mistakenly think that the 25 winners who have increased their initial $\$ 1$ by $800 \%$ have some skill, although we can see by the $50: 50$ split of winners and losers it is nothing more than luck.

If there is really skill in investment management then we would expect it to come through in the form of some level of persistence in managed fund returns. That is an outstanding fund manager over one period would be an outstanding manager over the next, and we would expect that well resourced managed fund rating companies would be able to identify this skill. We have already made the case in this chapter that there is no sign of persistence in managed fund returns and no sign of managed fund ratings companies being able to identify skilled managers.

We don't want to dismiss completely the idea that there may be skilled investment managers out there. It is just that it will take a very long time to distinguish their investment skill versus luck.

On a practical level this means that if a financial planner is justifying the value that they add to your situation by touting a managed fund selection process that involves using ratings from a research company and the past performance of a fund manager, then they are likely to be adding little value to your financial situation. Of course, if it were as simple as just identifying a fund that had outperformed in the past then we could all choose our own investments with confidence. Moreover, the results that showed managed funds underperforming passive index benchmarks by $2.8 \%$ to $4 \%$ must bring into question whether managed funds are the ideal vehicle to use for
managing your wealth, and whether they deserve such an important place in the Australian investment industry.

This is where our analysis of managed funds, the investment management vehicles so dominant on the Australian landscape ends. Our portfolio management decision is that managed funds are generally not the ideal vehicles for creating wealth. The next chapter looks at the theory of 'market efficiency', introduces 'index funds' and discusses why 'diversification' plays a key role in investment success.

## How Do We Apply This?

This chapter itself looked at further evidence that financial planning using managed funds does not really cut it. That is, using past performance and the recommendations of ratings companies does not work in identifying strong future performance.

The three previous chapters have set the tone that:

* Active fund managers do not add value for investors
* The process of active management, that is a managed fund having this skill to beat the index, has questionable value
* The financial planning and fund management industry's use of past performance and fund ratings to justify investment does not produce the best results for investors

The next chapter starts to build the case that there is a better way to build 'investment portfolios that work'.

## Chapter 34 - The Start of A Better Investment Approach: Nobel Prize Winners, Market Efficiency, Diversification and Index Funds.

We are sure that by this stage of the book you will see that most investment managers are 'active' managers, looking to beat the market through market timing and investment selection. You will also have seen that the ability of even professional investors to beat the market consistently, using skill, is very low.

So where to from here?
What if we started with the great thinkers in the area of Financial Economics, three Nobel Prize Winners such as William Sharpe, Harry Markowitz and Merton Miller, and consider how they would manage an investment portfolio.

## William Sharpe (1990 Nobel Prize in Economic Sciences)

William Sharpe's contribution to financial economics revolved around his work which showed that investors get rewarded for taking on a level of risk in their portfolios. That risk comes in the form of the fluctuation of returns of a portfolio (ie volatility). A 'risky' portfolio will have a higher fluctuation of returns, or volatility of returns. A lower risk portfolio will have less volatility of returns - and a lower expected return.

William Sharpe proposed a model that said your expected investment returns came from your decision to allocate your investment capital somewhere between a zero risk investment, which we could best conceptualise today as a high interest cash account, and a higher risk investment in the stock market. The cash account will provide you with a known return, and effectively no risk of any drop in the value of your investment. A key risk in investing in long cash assets is that the investment return is so low that the purchasing power of the cash investment is eroded over time due to inflation. The stock market investment provides you with a higher expected return, with much greater fluctuation of returns or volatility.

This higher expected return from investing in the stock market is often referred to as the 'equity risk premium'. Sharpe's model says that to get a return above the 'risk free' rate of return, you should expose a portion of your investment capital to the market to benefit from the higher return you receive through the equity risk premium. This model does not say that you should be trying to time your investment to your market, or pick outperforming securities - it says that exposure to the equity risk premium over time will provide you with a return above the risk free rate of return you could get.

## Harry Markowitz (1990 Nobel Prize in Economic Sciences)

Markowitz's contribution to portfolio management came in his consideration of the concept of diversification, and treating all of the individual investments in a portfolio as a whole, not on an individual basis. At its most basic level diversification means that rather than have a portfolio of one or two securities, you have a portfolio made up of many securities. Let us assume that there are a large group of investments which all have an expected investment return of $12 \%$. You could choose to invest all your money in one investment and hope that nothing bad happens to your investment. Your expected return is $12 \%$. However if something happens to that investment that does not happen to any other investment you could lose all of your money. The alternate course of action is to put some of your money into all of the investments with an expected return of $12 \%$. Your expected return is still $12 \%$. However you have now diversified away any chance that a one off event that just affects one investment will have a significant effect on your portfolio. This is the crux of diversification. It means that portfolios of securities can be built that have a similar expected return to an individual investment. That return comes from the 'equity risk premium', the premium you get from investing in shares. Holding a well diversified portfolio leads to an overall lower volatility of returns. Markowitz's proposition was that investors would use diversification to reduce the risk (volatility) of their portfolio for their chosen level of return.

## Merton Miller (1990 Nobel Prize in Economic Sciences)

Miller's work revolved significantly around the 'cost of capital', that is the rate of return that a company would have to offer to an investor or borrower to entice them to invest in a project. This concept of 'cost of capital' becomes a significant component behind the idea of risk and reward. If a company is a risky company, then they will only be able to borrow money at a higher rate of interest or, if they are issuing shares they will have to issue shares that offer a higher potential rate of return.

As investors, this link between the risk and reward of an investment is a fundamental that leads to the clear purpose of an investor. As an investor you invest your money into enterprises, either through lending money to these enterprises (fixed interest investments) or owning these enterprises (shares), and you are entitled to receive an investment return equal to the risk associated with the investment.

The link between risk and reward means a company's cost of capital is linked to its risk. This goes against the idea of trying to find investments that will somehow provide a higher level of return for a lower level of risk. The link between risk and reward means that companies who wish to lower their 'cost of capital' will offer no higher return than they need to for any given level of risk.

## The Conclusion from These Three Nobel Prize Winning Financial Economists:

To receive a higher rate of return than that which you can receive in a 'risk free' cash investment you need to expose some proportion of your investment wealth to 'risky' investments, eg the share market, where you will receive a higher rate of return to compensate you for the higher risk that you take on. That is, you will be able to capture the 'equity risk premium' that compensates you for the higher risk that you take on through investing in equity markets. In seeking this higher rate of return you should be well diversified to reduce the volatility of your portfolio. Risk and reward are linked, so the only way of receiving a higher investment return is to take on a higher level of risk.

At a practical level this means:

- Invest some of your assets in the sharemarket if you want to capture the 'equity risk premium'.
- Hold a well diversified portfolio
- Accept that there is 'no free lunch' in investment - risk and reward are linked

All of this points to investing in a market fund, whose composition would replicate the composition of the underlying investment market.

## Index Funds

Index funds are low cost investment funds that, rather than try and find some way of beating the average market return through active management, simply own all the assets of the market in the same proportion as they exist in the market. They have a lower cost than actively managed funds, as they are not spending money on research. Because their investment objective is simply to match the index, there is very little trading that the fund has to do. As we saw in the previous chapter, trading by managed funds is expensive, and reduces the returns of the fund. This expense is not captured in the 'Management Expense Ratio', the normal measure of the costs of the fund. Trading expenses show up as a reduction in the performance of the fund.

Another advantage of the lack of trading by index funds is that there are low levels of capital gains tax distributed to investors. When investors have either managed fund or index fund investments, they are responsible for paying the capital gains tax when the fund manager chooses to sell investments. Because index fund managers tend to trade much less than active fund managers then there are lower levels of capital gains that are passed onto investors.

Index funds seem like a simple idea. However, as you can see, they are embedded in profound thought. They were first developed in the United States in the 1970's and in Australia in the 1990's. Conceptually, index funds are often thought of as being 'conservative' and 'boring' investment strategies. However they are a more radical and recent financial innovation than active management, derived out of the desire for higher investment returns than active management provides.

The success of index funds is linked to the 'efficient market theory' which states that the market does such an efficient job of pricing each investment that there is no point in spending resources (time and money) trying to find the mispriced investments. You are much better to hold a low cost, diversified investment portfolio and receive the market rate of return for your portfolio.

## Efficient Market Theory

The Efficient Market Theory revolves around the idea that markets are so efficient that all available public information is already included in the price of every market investment. As new information comes to hand at a market level and an investment level, the price of the investments will change. For example, if some financial data is produced that suggests an increasing chance of interest rate rises then the overall value of the stockmarket might react to what is generally considered to be a negative event. For example, at an investment level QANTAS might issue a statement warning that the higher cost of fuel is going to decrease their profits, and the value of QANTAS shares will fall.

The most significant criticism of the efficient market theory is that the market cannot be efficient if bubbles and crashes happen, such as the soaring prices of internet investments during the 'dot com' boom, and the subsequent market 'crash'.

There seems to be a matter of conflict of definitions here. No one has ever said that markets are perfect, just that they are efficient. An efficient market uses all available information to price the investments and will react when new information changes the expectations for investors.

The efficient market theory attracts debate and the value of indexing as an investment approach should not hinge simply on this one debate. The model of an efficient market supports indexing as an effective investment strategy. Much of the evidence that we have discussed in the early chapters of this book also shows that the market is at least efficient enough to make it extremely difficult for highly paid, well resourced fund managers to beat it.

## Do Active Managers Rely on an Efficient Market?

Active investors, whether they be fund managers, stockbrokers or private investors are looking for investments that are mispriced. For example, they might look at Telstra at current prices and say that it is too cheap, and that it, as an investment, will outperform the average market. So they buy it from another investor who holds exactly the opposite view and has come to the conclusion that Telstra is not a good investment to own.

By their actions both the buyer and seller of Telstra are saying that the market has come to the wrong conclusion about the stock. However, having spent resources on researching and trading based on their conclusion, aren't they now relying on the efficiency of the market to somehow come to the right conclusion about the value of the stock? It seems that they are saying that the market is at the very least 'kind of' efficient. They have somehow spotted an inefficiency BUT the market will get the price of Telstra right in the future.

## It's Simple Maths Too

So does indexing rely in an acceptance of the efficient market theory as its only justification? The answer is not at all - indexing is about simple maths as well.

Let us start with the proposition that the average market return over time is $12 \%$. The return that index funds will get is $12 \%$, less the costs of the fund, say $0.35 \%$ for an index fund in Australia. The average return to index fund investors will be $11.65 \%$.

Take away the index investors and the active market participants will also get an average market return of $12 \%$, less their costs. However the costs of the active market participants will be higher, including such things as the cost of trading, the cost of research, the cost of investing in a managed fund, the cost of paying an investment advisor and so on. An educated guess would suggest that these costs would run to at least 1 to $1.5 \%$ a year. So the average return that an active market participant will get is 10.5 to $11 \%$, less than the average return to the index fund investor.

This is why Bill Sharpe, Nobel Prize winner in economics said: "Properly measured, the average actively managed dollar must underperform the average passively managed dollar, net of costs. Empirical analyses that appear to refute this principal are guilty of improper measurement."

Let's call this the first paradox of active management. People expect to outperform the average market return, however the simple maths of active management means that on average active market participants must get a return below the index return and below the returns of an index investor.

## The Overconfidence Problem

In Australian a vast minority of assets are managed by index funds, less than $4 \%$ of the total market. That means that the majority of market participants are active investors, expecting to beat the market even though simple maths means that most of them won't. This is a clear example of the destructive effect of overconfidence amongst market participants.

## How Do We Apply This?

Prior to this chapter we examined much academic research that questioned an active approach to investing. In this chapter we looked at the work of three great financial economists, and how their ideas built to suggest indexing as an investment strategy.

In so many professions nobel prize winners are revered for their outstanding ideas and intellect. No so in financial markets where the majority of participants choose to ignore the ideas of great thinkers like Sharpe, Miller, Markowitz and so many others.

We considered also the efficient market theory, including the paradox that active fund managers rely both on the initial inefficiency of the market to find a mispriced investment, and then later efficiency to properly price the investments.

Most of all we use index funds as part of our investment portfolios. They are low cost, tax efficient investment vehicles that provide an appropriate return for the investment risk that is taken.

Simple maths suggest that index fund investors will get a better return than active market participants, however overconfidence means that people are too quick to think that they will be part of the minority that gets a better investment return.....

However, they form only part of our investment approach. As every good salesperson says: 'but wait, there's more.

## Chapter 35-3 Factor Model Investing

This chapter explores the 3 factor model, an academic model that says that within investment markets not only is the average return a source of returns, 'small' and 'value' companies outperform the average market return.

There are many people for whom the index investing story does not provide a strong enough value proposition to entice them to take action. Somehow it is not compelling enough. The application of the 3 factor model to investment portfolios makes a passive approach to investing more compelling, as it allows investments in small and value companies, which provide a higher expected return for portfolios.

Fama and French, researchers and finance professors from the United States, found that investing in companies with specific attributes could provide an expected return above that of the index. Indexing was the exciting innovation of the 1970's, and Fama and French's research provides the more recent and exciting innovation.

The previous chapters have outlined the benefit of taking index positions, over time. This chapter asks:
$>$ Is there potential to tweak this model to produce slightly higher returns?
$>$ Are there market segments that consistently outperform according to their risk, over time?

Some leading academic research, initiated by Fama and French's research, suggests that there are possible positions that can be taken by investors to achieve premiums above the expected index return.

## Basic Principles

Before delving into the specific research, let's first review some of the important principles surrounding this issue. We clearly subscribe to the view that markets are efficient. This means that we believe that prices of traded assets reflect all known information and in doing so identify the collective beliefs of all investors about future prospects. In short, this implies that it is impossible to consistently outperform the market once it has been adjusted for risk. As shown earlier in this book there is significant evidence that backs up this belief.

We also agree with the basic principles outlined in Sharpe's Single Factor Model as outlined in his 1964 Journal of Finance article. Sharpe suggested that investors are rewarded for the amount of risk they take relative to all other things in which they could have invested. i.e. the entire stock market. This model is also known as the CAPM, Capital Asset Pricing Model. Investing in the stock market entitled the investor to the 'market risk premium', additional return for the risk that they have taken on.

However, later research has shown that the CAPM does not tell the full story. In particular, research carried out by Fama and French, as published in their Journal of Finance article in 1992, determined that there was more than just a simple relationship between stock returns and market returns suggested by the US stockmarket data that existed for the period 1941 to 1990 . The researchers continued on to suggest, supported by the data, that there was instead evidence to suggest that a multi-dimensional approach to explain returns was more appropriate.

## Fama \& French Research

Fama and French, discovered that 3 factors together do the best job explaining expected returns:
> Market beta - a measure of overall market risk
$>$ Firm size -market capitalisation
$>$ The Value Effect - based on book-to-market measurement
As such, Fama and French concluded that all 3 factors were risk factors that markets reward with higher average returns over time.
Intuitively, the market beta factor makes sense. Most investors would acknowledge that investing in the stock market pays a premium over fixed interest securities such as government bonds. Investors are rewarded for the extra risk they take investing in the sharemarket.

Similarly, many would agree that small cap stocks are riskier than large stocks, and therefore have a higher expected return for investors. This relates to Miller's idea that a firm has a 'cost of capital', and the higher the cost of capital the higher the returns that a firm has to offer an investor to invest in that company. Small companies, being perceived as riskier, have to offer higher returns to compensate for this higher risk when they issue shares.

However the third factor, the value effect, where an investor has a higher expected return from value stocks is a little more difficult to understand at face value. Fama and French suggested that a measure of book-to-market gave an indication of an underlying source of risk - the level of financial pressure or distress. High BtM stocks are lower-priced stocks. The market values the book value of the company at a lower level than other stocks. Why? The market judges that the company is in some kind of financial pressure or distress, maybe from poor management, difficult industry conditions or poor historical returns.

Why does this make sense? As investors view a company as distressed they expect a higher level of return for the money that they invest in the company. This expected return is the cost of capital to the business. Investors require greater returns from these distressed companies to entice them to invest in them.

## Anecdotal Support - Michelle Clayman's - In Search of Excellence or Unexcellence

In 1987 Michelle Clayman published a study in the Journal of Finance (Volume 63 May-June) where she looked at a group of 29 "Excellent" companies as identified in a New York Times best-seller written in 1982 by Tom Peters and Bob Waterman In Search of Excellence. Using the same criteria, Clayman identified the 29 worst companies and called these the "Unexcellent" companies. She then compared the investment return of value-weighted portfolios of the Excellent companies versus the Unexcellent companies. From 1981 to 1985 the Unexcellent companies outperformed the S\&P 500 by $12 \%$ while the excellent companies outperformed the S\&P 500 by only $1 \%$.

To be fair though, Clayman conducted a similar study from 1988 to 1992 and in this study the Excellent companies outperformed the Unexcellent companies. She published her results in the May-June volume of the Financial Analysts Journal of 1994. Clayman concluded that combining the two studies, there appears to be a tradeoff between growth and profitability versus valuation ratios. "Good companies do not necessarily make good investments, the market appears to reward profitable companies selling at reasonable multiples."

Clayman's studies support the idea that portfolios with different characteristics perform differently at different periods of time. It also contains a small sample of companies that fit the criteria of a higher value company. To make the optimal position an investor should take a diversified position by investing in most if not all companies that fit the description of a high value company.

## Further Support

Another earlier study looking at value stocks was conducted by Paul Miller. In 1964, Miller compared buying the 10 lowest and 10 highest P/E (price/earnings) stocks of the Dow 30 from July 1936 to June 1964. The P/E ratio is the price of the company divided by the earnings of the company. A lower $\mathrm{P} / \mathrm{E}$ ratio is another definition of a value stock. He found that the 10 lowest P/E stocks greatly outperformed the 10 highest. However the lowest $10 \mathrm{P} / \mathrm{E}$ stocks also had a greater variation in returns. This identified that returns for these stocks were more volatile suggesting that there was a greater risk in holding these shares.

It should be noted that the measurement of value could also be undertaken by using the Price to Earnings ratio (P/E) as used by Miller. This measures how much shareholders are paying for each dollar of earnings of the company. The smaller the $\mathbf{P} / \mathbf{E}$ ratio, the cheaper is each dollar of earnings. A practical problem with using this ratio is that some companies do not have any earnings, they make losses.

A third measure of value is dividend yield. This ratio measures the amount of dividend paid to shareholders divided by the price of the stock. Use of this unit of measurement also has problems as some companies may not issue dividends, or reduce the amount of dividend issued during a period of growth, instead using profits for developing new business ventures. Alternately companies may not be able to issue dividends due to poor performance or distress.

For these reasons Fama and French chose the Book to Market (BtM) ratio as the most consistent financial ratio to identify 'value' companies. Every company has a book value, the net value of its assets and relatively stable from year to year.

What all 3 studies are saying was that investing in bad companies provides a premium to investors. This may be due to the fact that these companies are somehow 'out of favour' with the market (the behavioural explanation) or that these companies are under financial pressure and have therefore been 'sold down' by the market. Good companies, conversely, are expensive relative to their book value.

The cost of capital argument also helps to understand this situation. Bad companies will have to offer high expected returns to entice investors, whereas the good companies will be able to offer lower expected returns and still entice investors. Once a company is trading on the stock exchange, the stock exchange acts as the pricing mechanism through which investors bid the prices that they will be prepared to pay for a company. These prices will be based on the required returns needed, with investors needing higher expected returns to entice them to invest in the poorer companies.

It should be acknowledged that at the time of the research and subsequent publication of findings, Fama and French were criticised for what is referred to as data mining. Basically this suggested that they had a hypothesis and then went looking for the data to back up their position. It should also be noted that a significant number of studies have followed that support the work of Fama and French. These further studies have included studies in many different countries and over many different time periods. There is a strong body of research that now supports the concept that small and value companies outperform over time.

So well accepted is the Fama and French research that almost all academic studies of share market performance now use the 3 factor model as the benchmark for investment returns.

## Practical Implications

By using the findings of Fama and French, long term investment strategies can be developed to harness some of these expected premium returns. Positions could be taken in small companies and / or value companies with high BtM ratios.
$>$ Can we pick which small and value companies we should invest in?
The answer, as before is no. Rather a 'passive' position should be created.
We have previously talked about index funds, where a managed fund holds all the investments in an index in the proportion that they occur in the index. In this case, there is no formal 'small company' index or 'value company' index. However, it is possible to form a sub group of companies that have the common characteristic of being small companies or high BtM companies.

That means we take all the small cap companies in the index or all the high BtM companies or all the small companies that are available for investment. Taking these positions reduce the risk of picking the 'right' or 'wrong' shares. It also saves the cost of researching exactly which companies should be selected, and saves ongoing trading while providing an extremely well diversified portfolio of companies. The approach is a 'passive' one, where an investment universe of small companies or value companies is created for investing.

Of course the approach taken must consider the relevant risk aversion of the individual investor. Investments in small companies and / or value companies will be more volatile reflecting the inherent extra risk. If this risk does not sit well with an investor they should hold investments in less risky assets such as the market indexes, or hold a portion of their portfolio in cash investments.

## Practical Evidence in Australia

Dimensional Fund Advisors have worked with the Fama and French research to build passive managed funds that invest in small and value companies. Indeed, both Professor French and Professor Fama are key people in Dimensional Fund Advisors.

Dimensional Fund Advisors have now been in Australia long enough that there is 5 year historical data from their Australian small and value companies. There is also 5 years of data for the international small and value funds set up for Australian investors. We have compared these returns with the relevant index, the ASX 300 in the case of Australian shares and the MSCI world index (excluding Australia) in the case of international shares. In each case returns are after fees.

5 Year Return to 30 June 2008 - Australian Market


5 Year Return to 30 June 2008 - International Investments (made from Australia)


The previous graph of returns from international shares for Australian investors reminds us that investing must be a long term venture, and that even a 5 year investment period may not produce strong results. Even the investment returns from the Dimensional small company and value company funds, while stronger than the returns of the underlying index, have been poor over this 5 year period.

In the United States, Dimensional Fund Advisors have had funds in place long enough so there are 10 year performance histories available for both their small company and value company funds. The following graph compares the 10 year performance history of their funds with the S\&P 500 index return. The S\&P 500 is a broad based index of US companies.

10 Year Return to 30 June 2008 - US Market


Keep in mind that in each of the 3 graphs presented we have compared an index return to the return of the Dimensional small company and value company strategies. An actual index fund, which we can invest in, will approximate the return from the index, less the costs of the fund.

## How Do We Apply This?

In a nutshell, the three factor model suggests that the only way to outperform or under-perform the investor next to you (and the market) is to invest in companies with more or less size and / or Higher Value (BtM) risk.

The power of this is that investors can now build a passive portfolio that, through exposure to small companies and value companies can outperform the simple index. This method does not require investment skill, expensive research or tax ineffective trading.

## Chapter 36 - Fixed Interest Investments

Fixed interest securities are traditionally loans made by investors to governments or companies. These types of securities represent a loan to the issuer usually in return for periodic fixed interest payments. These payments continue until the security is redeemed by the issuer at maturity or earlier if called. Under law, holders of debt have the first call on the income and assets of a company. Specifically interest payments have priority over any dividend payments to shareholders. As a consequence such investments are generally viewed as less risky than equity investments because holders must be paid first before any returns are paid to shareholders. However, fixed interest securities are not risk-free and may carry many different kinds of risk. As a result these investments are riskier than holding cash.

We would therefore expect, over time, that the expected returns on fixed interest securities would be less than returns to owners of shares in a company but more than simply leaving cash in the bank.

Use of these type of securities sounds simple. However there is much more to the story.

Let's first start with an overview of the basic principles surrounding fixed interest investments.

## Basic Principles

As mentioned previously, fixed interest securities are loans issued by a company or government usually in return for periodic fixed interest payments. Payments to holders of fixed interest securities continue until the security is redeemed by the issuer at a pre-determined maturity date or earlier if called by the issuer. Holders of these securities face a number of major risks that need to be carefully considered. Particularly our focus will be on:
> Default risk
> Interest rate and maturity risk
The default risk of a particular fixed interest security issue is directly related to the riskiness of the venture for which the funds are being raised. If the issuer does not have the cash flow to make the interest payments they are at risk of defaulting. The possible default risk is clearly measured by a range of rating agencies such as Moody's or Standard and Poor's (S\&P). These agencies measure the credit worthiness of the issuers of the bonds and each issue of credit. The agencies clearly identify the perceived ability of the issuer to honour the interest payments and pay back the value of the bond at maturity. These ratings, therefore, directly affect the
necessary reward that the issuer must provide to the holder of the bond, that being the interest rate. The greater the risk, the greater the expected return to holders of the bonds and therefore the higher the level of interest that needs to be offered to attract people to hold these bonds.

To give an example, the highest possible rating by $\mathrm{S} \& \mathrm{P}$ for an issue of fixed interest securities is AAA. The ratings then decrease to AA, A, BBB, BB, B, CCC, CC, C and D with D indicating there has been a payment default. Therefore you would expect to receive a smaller interest rate for a fixed interest security issue with an AAA rating compared to one with a BBB rating, all other things being equal.

A second major risk to be considered by prospective holders of fixed income securities is that of interest rate risk. We all know that interest rates fluctuate over time. On the first Tuesday of every month the board of the Reserve Bank of Australia meets to determine the cash rate target. We will not go in to detail at this time but in simple terms this decision affects all other interest rate products throughout the country, fixed income securities included. The price of fixed income securities move in the opposite direction of these rates, i.e. when rates rise, the price of bonds fall and vice versa. For example, consider a newly issued 15 year government bond with an 8 percent coupon. If over the next year interest rates rise by 3 percent, new 15 year government bonds will be offered with an 11 percent coupon, all other factors remaining equal. Therefore the old 8 percent bonds will be worth less than the new bonds. This in turn will force the price of the old bonds down. As the length of maturity increases, the likelihood of such interest rates movements becomes more likely and creates more volatility. This has the effect of making these types of securities much riskier.

Therefore when considering the use of fixed income securities within a portfolio, clear consideration needs to be given to the length of time until maturity. Bonds have different lengths of time before maturity. Bonds with a maturity date of less than five years are considered short term, between five and twelve years are intermediate and maturities longer than twelve years are long term.

From our previous discussion it would appear that the longer an investor holds a particular fixed income security the greater the risk for doing so. We next need to ask whether holders of these longer term bonds are appropriately rewarded for holding this extra risk. Eugene Fama of the University of Chicago studied the rates of return of long-term bonds in the US from 1964 to 1997. He found that bonds with maturities beyond 5 years did not offer sufficient reward for their higher risk.

Considering the types of risk for fixed interest securities, we start seeing that as default and maturity risks rise the fixed interest security starts to behave more like equity. However investors are not being adequately compensated for holding this
greater risk and would be better advised to invest their money in other asset classes such as shares.

Why then would or should people hold long term fixed interest securities?
The major investors in this market are corporate pension plans and life insurance companies. They hold these securities to help fund long-term obligations and are not concerned with volatility of the value of the security or the effects of inflation because their future payments are fixed in maturity date and amount.

## The Role of fixed interest in a portfolio

There is a place for fixed interest securities in an investment portfolio. Fixed interest securities play an important part of a comprehensive portfolio as they provide less volatility compared to equity investments. They also pay higher rates of returns than holding cash in a bank. Holding these securities within a portfolio provides greater stability and lowers the risk of the overall portfolio. This can be achieved by using short-term fixed income securities with a high rating, say of AA or AAA standard. Fixed interest securities should not be used to obtain high returns via lowly rated issues and / or issues with long maturity dates.

## Diversification

The pricing of fixed interest securities is efficient enough that so that if one company is offering AA rated bonds with a 5 year term and $7 \%$ yield, then another company with an AA rating will be offering almost exactly the same yield.

So, the expected return from holding either companies bonds will be $7 \%$. There is no chance that, if you hold the bonds to maturity, you will get a higher return than the $7 \%$. However you are still exposed to the risk that if either company fails, which is still a small possibility even with AA rated bonds, you will lose your investment.

Clearly holding as many AA rated bonds as possible that offer a $7 \%$ return does not reduce your expected return. However it does decrease the extent to which you are exposed to one company defaulting on their bond repayments. There can be no question that with fixed interest securities diversification is your friend.

## How Do We Apply This?

Investors are wise to use high quality (rated AA or better) fixed interest securities with a short-term maturity date of less than 5 years. Holding such securities will reduce the volatility of an investment portfolio.

The fixed interest asset class of a portfolio is not a place to take high risks. The share and property investments in a portfolio are the place to do this. Fixed interest investments are the portion of your portfolio that, while only providing moderate investment returns, reduces the overall risk (volatility) of the portfolio.

## Chapter 37 - Investor or Speculator?

Many good investment books and investment authors go out of their way to point out that there is a distinction between an investor and a speculator. It is worth articulating this difference, so that you can be sure that if you want to be an investor, you are acting in the appropriate manner.

The risk of not acting like an investor is profound reduction in investment returns. A famous study by Dalbar Incorporated looked at how successful US investors in managed funds had been. The average return from the investment index over the period from 1985 to 2006 has been $11.90 \%$. The actual managed fund investor over this period received an annual return of only $3.90 \%$.

Index Return (S\&P 500) vs Actual Average Return for Managed Fund
Investor (United States) 1985 to 2006 Investor (United States) 1985 to 2006


They say that a picture speaks a thousand words. While not a picture, this graph must be worth a couple of hundred words at least, or thousands of dollars to those people who learn the lesson from it. It points out simply, concisely and clearly the difference between a long term investor who was prepared to simply hold the market portfolio and earn $11.90 \%$ a year and a speculator who tried to time when they bought and sold into the market, and invested in active funds that were expensive to own and incurred trading costs. They received a return of only $3.90 \%$.

The first mistake, trying to time when we buy into the market and when we sell is one that should be avoided. People tend to react counter-intuitively to market movements. When markets fall in price, such as the $25 \%-35 \%$ decline that we saw in October 1987, people tend to be sellers of investments. When markets rise strongly in value, such as between 2003 and 2006, people then start to become more interested in buying investments. In reality, when markets decline sharply the expected long term return from the market actually increases. Conversely, when markets have already increased sharply in value the expected long term return actually decreases.

If you take away nothing else from this book have a look at the preceding graph again, and think about the emotional reactions to price changes that cause such ineffective investment returns.

We have addressed six different dimensions of an investor as opposed to a speculator, and compared the activities of an investor with the activities of a speculator. Let's be very clear from the start, our view is that while there may be a few successful speculators, being an investor is the intelligent and successful approach for the vast majority of people. The dimensions are:

1. Investment Time Frame/holding period
2. Investment Benefit
3. Expectations of Returns
4. Awareness of Fundamentals
5. Understanding the Business and Knowing the Management
6. Reactions to Fluctuation in Price

## 1. Investment Time Frame/holding period

An investor looks to hold investments for the long term, periods of at least five years or more.

Speculators have a shorter horizon for holding an investment. This means that the portfolio of a speculator is characterised by higher levels of trading. This leads to greater transactions costs (brokerage for shares, agents fee etc for real estate) and tax inefficiency.

## 2. Investment Benefit

An investor looks to an investment to provide a strong stream of 'earnings'. More than likely their expectations are that the stream of earnings will increase over time. For example, a share based investment will be used to provide an ever increasing stream of company earnings, which are paid out in the form of increasing dividends to the investor.

A speculator's focus is on selling the asset purchased with a price rise in mind. They are not concerned with the income produced from the asset, just that it goes up in price.

## 3. Expectations of Returns

An investor's aim is to receive a reasonable return on their investment over a period of time.

A speculator is often focused on receiving a very high return on their investment. Given the relationship between risk and return, this implies greater risk for the speculator.

## 4. Awareness of Fundamentals

An investor purchases an asset with an understanding of the underlying fundamentals of the investment - the earnings of the company, the dividends paid, or the rental stream from a property.

A speculator, who has purchased the asset because they believe it will go up in price, is not greatly concerned with the fundamentals of the investment. In fact, with the use of derivatives a speculator might even bet on the price of an investment going down.

## 5. Understanding the Business and Knowing the Management

The attitude of the investor who purchases shares is that they are becoming part owner of a business and therefore they must have some understanding of the business and the quality of the people managing that business.

The speculator is much less concerned with the nature of the business and who is managing it. The aim is to buy shares that will go up in price and provide a quick return, rather than the long term ownership of an outstanding business.

## 6. Reactions to Fluctuation in Price

An investor is less about the day to day fluctuations in the price of the asset they own. Because they are more interested in the long term earnings of the asset, price does not overly concern them. In fact, a drop in price may allow them the opportunity to increase their investment in the asset at a lower price.

The speculator is far more concerned with the price of the asset, as the primary aim is to own an asset that goes up in price.

It is probably worth considering that speculation and investment are not mutually exclusive and people will show characteristics of both. The most profound question, then, is who wins - speculators or investors? Chris Leithner, in his book 'The Intelligent Australian Investor' (Wrightbooks, 2005), concluded that 'Although there are undoubtedly some individual exceptions, speculators as a class are almost certain to lose money. .... Investors tend to make money because their operations conform to certain laws of economics and human actions.'

## Examples of Speculation

Two activities that have the characteristics of speculation include the use of software to trade on the sharemarket and the use of deposit bonds to purchase property prior to construction with the intent to resell the property before it is completed.

Most share trading software is classic speculation. It looks to purchase shares, hold them for a short period while they go up in price, and then sell them at a profit. There is no interest in the underlying business, fundamentals, or management. It seems counter intuitive to me that someone who has found a way to trade and earn excellent returns would then sell that system to other people. What will happen is that, as more people buy at the same time as each other, the price of the stock will go up and, as they all try to sell at the same time, the price of the stock will go down. That will reduce the returns for everyone, including the person who initially developed the profitable trading system. In fact, if we ever find a profitable way to trade like this, the last thing we will be doing is sharing it with everyone else!

ASIC has spent some time warning people about software trading systems. A document on their consumer website, FIDO encourages consumers to:
Be realistic.
No-one has ever found a foolproof system to make money on the stock market. No piece of computer software can make you get rich quickly - so don't believe inflated claims of success. Even the most experienced professional traders and investors make losses. Some of Australia's major investment managers, stockbrokers and institutions have millions of dollars worth of computer power to help them invest. They still make losing trades as well as profitable ones.

## Warning

Beware of promoters of such software who:

1. promise high returns over a short period
2. do not disclose the potential losses and risks of actively trading shares or futures
3. claim the program will make you a successful trader
4. provide examples of large profits made by investors in the past as a result of using the program or
5. overseas promoters/vendors who promote trading software for sale.

An example of speculation in real estate involves the use of deposit bonds to purchase property 'off the plan', with the intent of reselling the property before settlement, at a profit. This fits the definition of speculation, the short term acquisition of an asset with the aim of an increase in price. When a buyer can be found to purchase the property at a profit it works well. If a buyer cannot be found it is a disaster.

An article entitled 'Flat Broke' by John Stensholt and Amanda Gome, published in the Business Review Weekly in July 2003, shows how badly this speculation can turn out. The example they give is of high-rise apartments in Darlinghurst. These apartments were purchased with deposit bonds of $\$ 10,000$. The price of the apartments at the time of purchase was $\$ 1$ million. At the time of the article being written the apartments were being advertised at $\$ 750,000$. Effectively, and assuming that the apartments could even be sold for $\$ 750,000$, investors (speculators) were looking at making a $\$ 250,000$ loss before transaction costs, a negative $2,500 \%$ return on their initial investment of $\$ 10,000$. The article also notes that 'the bonds are secured, usually against family homes, and if a buyer defaults at the time of settlement, the bond issuer will pay out the vendor and pursue the buyer.'

There seems to be much to advocate the approach of the investor over that of the speculator. Perhaps though, the greatest danger of all is to think that you are an investor when you really are a speculator. In that case you are engaged in much riskier behaviour without acknowledging it. We suspect the property speculators in the example would have told you that they were property investors.

Our suspicion is that the media promotes speculation over investment. Most of the media stories we are exposed to are of boom stocks that have gone up, the rise or fall of the sharemarket on a daily basis, and the list of suburbs where property prices are about to boom. It simply isn't a great story to talk about the way Wesfarmers shares have steadily increased their dividends over the past 15 years, or the way a well located property has delivered an ever increasing stream of rent to an owner.

Furthermore, the advertising section of the media must be able to generate higher response rates from share trading software or property development opportunities that promise speculative returns. After all, none of us get too excited by the advertisement that offers a reasonable return for an appropriate rate of risk and with low level of fees. Speculative advertisements seem so much more likely to satisfy our emotional need for great returns and more of everything!

## How Do We Apply This?

We know that acting like an investor is important to a successful investment experience. Our focus is on building a portfolio with increasing investment earnings over time - not on trading to try to exploit short term movements in the price of assets.

We also accept the reality of volatility in a portfolio. That means that we will not panic when investment markets fall, rather we accept this as a reality of investing.

Most of all we don't pretend that we have skill in market timing, switching investments between asset classes to maximise investment returns.

Lastly, we know that much of the 'noise' generated around investment is really about speculative activities. As investors we give ourselves permission to focus on the key aspects of building successful investment portfolios, such as asset allocation, and ignore the noise and hype surrounding us.

## Chapter 38 - Introduction to Asset Allocation

Asset allocation refers to the way an investment portfolio is split between various asset classes. These asset classes include growth assets and defensive assets. Common growth asset classes include:

- Australian shares,
- International shares,
- Listed property investments and
- Direct property investments.

Defensive asset classes include fixed interest and cash investments.
There are also many alternative investments such as agricultural investments, hedge funds and mezzanine debt investments, all of which would be classified as growth assets.

In the Financial Analysts Journal in 1991, Brinson, Singer and Beebower provided an update to their 1986 article 'Determinants of Portfolio Performance'. This study examined 91 US pension funds during the period 1974 to 1983. The study looked at three factors to see which made the biggest difference to portfolio returns. The first factor was the asset allocation. The second factor was security selection, which were the investments within each asset class that the managers actually chose. The third factor was market timing, which was the ability of the portfolio manager to move from underperforming asset classes to better performing ones. That is, choosing the best time to invest in each asset class.

The results were conclusive, with over $90 \%$ of the variation in returns explained by asset allocation. $4.6 \%$ of the variation in returns was explained by security selection and $1.8 \%$ by market timing.

For our purposes we use this study to justify a focus on asset allocation as being the key driver of portfolio performance. We also use it to justify why we are not going to try to use market timing, moving from asset class to asset class, to try to increase performance. The article shows that this is difficult, if not impossible to acheive. So our approach is to build an appropriate long term asset allocation, and then stick with it over time.

More recent studies by Ibbotson and Kaplan (2001) 'Does Asset Allocation Policy Explain 40, 90, 100 Percent of Performance?' published in the Financial Analysts Journal in 2001 and 'Another Look at the Determinants of Portfolio Performance' by Craig French and available at ssrn.com, found that asset allocation policy explains more than 90 per cent of the variation in total portfolio return. This supports the original study of Brinson, Singer and Beebower.

Intuitively it is reasonable to consider that asset allocation is the significant driver of portfolio performance. Regardless of your thoughts on whether active management can increase the returns within an asset class, the expectation is that the majority of reasonably well diversified investors will get an investment return within $2 \%$ of the index return. However, the difference in returns from the underlying asset classes will vary more substantially.

In the financial year ended June 2005, the index return for international shares was $0.1 \%$, the index return for Australian shares was $24.7 \%$ and the index return for listed property trusts was $18.1 \%$. The average return on a cash management trust was $4.5 \%$. Regardless of whether an active manager was able to add an extra $2 \%$ of performance, or underperformed the index by $\mathbf{2 \%}$ because of costs, what would have been far more influential on your portfolio were the asset classes your investments were held in.

Even over the 5 years leading up to June 2005 we see that asset allocation was more important to investment returns than any manager increasing or decreasing returns by $2 \%$. Australian shares returned an average $10.1 \%$ per year over this period. International shares returned negative $5.7 \%$ per year over this period and listed property trusts $15.4 \%$ per year. Clearly the percentage of a portfolio exposed to each asset class is crucial in driving the overall portfolio return.

In considering the asset allocation decision it is worth re-iterating the lack of ability that people have demonstrated in 'timing markets', i.e. in successfully switching between one asset class to the next to maximise investment returns. Rather, our focus is on using asset allocation as a tool to reduce the overall volatility of the portfolio.

There are two reasons why we want to reduce the overall volatility of an investment portfolio. The first is that for a given level of return people would prefer to have less volatility. For example, if an investor had the choice between a $10 \%$ return each year, or an average return of $10 \%$ that was made up by a $30 \%$ return one year and then a $-10 \%$ return the next the choice would be the less volatile return of $10 \%$ a year.

Secondly there is a compounding effect that means a lower standard deviation of returns over time leads to a higher ending investment balance given the same average return. An example of this would be to compare $\$ 10,000$ invested in an international share portfolio that mirrored the index return over the period from July 1970 to June 2005. The portfolio had an average return of $13.58 \%$ a year and grew to $\$ 461,000$ over the period. A diversified portfolio that was invested in $50 \%$ Australian shares and $50 \%$ international shares through to June 1980, and was then invested in $33 \%$ Australian shares, $33 \%$ international shares and $33 \%$ listed property trusts had an average return of $13.37 \%$ a year. Here is the twist. Even
though the average return was lower, this portfolio had a lower level of volatility which lead to a greater compounding of returns over time and the portfolio had an ending balance of $\$ 578,000$.

Volatility is measured by the 'standard deviation' of returns. Standard deviation is a mathematical measure of the 'spread' of returns. The higher the standard deviation, the greater the spread of returns from the average. The international share portfolio had a standard deviation of $22.17 \%$ whereas the diversified portfolio had a standard deviation of $15.73 \%$. There are two benefits from this reduced portfolio volatility:

- There is a greater compounding of returns over time
- Less fluctuation in the value of a portfolio is generally less worrying for an investor

Diversification is the tool that we have available to minimise volatility within a portfolio. Within an asset class, diversification allows exposure to so many companies that if one underperforms there is not a great impact on the overall investment portfolio. There is an argument that diversification can reduce expected returns and that a more focused approach to choosing a portfolio of investments may be prudent. This argument relies on the assumption that there is some level of investment skill that is capable of selecting companies that will outperform the index. We have discussed in previous chapters that this skill is very rare.

Diversification is a key plank of the benefits offered by the index funds, and passive funds that we utilize in building investment portfolios.

In the following three chapters of the book we consider the three key questions associated with building an investment portfolio.

- The first question is how do we allocate the assets of a portfolio between growth and defensive assets?
- The second question is how do we build the investments within the defensive asset allocation?
- The third question is how do we build the investments within the growth asset allocation?


## How Do We Apply This?

Asset allocation is the key driver of investment returns. Therefore we make it the number one decision in the process of building an investment portfolio.

## Chapter 39 - Decision 1 - Growth vs Defensive Asset Allocation

| Growth Assets (ownership <br> assets) | Defensive Assets |
| :--- | :--- |
| Australian Shares <br> International Shares <br> Listed Property Trusts <br> Direct Residential Property <br> 'Alternate Assets' | Cash |

The first decision to be made in building an investment portfolio is what percentage of assets should be exposed to growth assets and what to defensive assets. To do this we need to understand exactly what role growth assets and defensive assets play in a portfolio.

## Growth Assets

Growth assets are those assets that involve the part ownership of an enterprise. For example, Australian share investments involve the part ownership of a company or portfolio of companies. Listed property trust investments involve the part ownership of property assets. Being a part owner of an enterprise you are entitled to an investment return that will be driven by the success of the underlying enterprise or enterprises. This return will be realized through receipt of some income and through the long term growth in the value of the assets you own. This is the good news.

The bad news is that, as the part owner of a portfolio of various enterprises, you are exposed to the down side of these enterprises. This will include times when the profitability of the enterprises fall, when other investors look less favourably on the enterprises you own or when general economic conditions are poor.

The basic summary of the last two paragraphs is that:

- Growth assets provide you with a higher expected return
- Growth assets have a greater degree of volatility and downside risk

This way of looking at the growth assets in your portfolio, that is from the perspective of being a part owner of a portfolio of enterprises, should help in building an intuitive understanding of the role of diversification and longer term investment horizons required in building a portfolio.

Diversification is important. It makes sense that if there is the opportunity to become the part owner of one enterprise, or many enterprises, being part owner of many enterprises reduces the financial impact of any one enterprise failing. Long term investment horizons are realistic. If you were to buy and operate a real
enterprise you would not expect to benefit from that ownership in the short term. You would expect to own the enterprise for some period of time to benefit. Investing is no different - you are becoming the part owner of a portfolio of enterprises and should recognise that it will take time for the value of this investment to be increased.

In his book 'The Essential Buffet' (Wiley and Sons, 2001), Robert Hagstrom analysed 1,200 companies over an 18 year period to see how much the change in price of a share was explained by variances in earnings. Over a one year period, between $13 \%$ and $36 \%$ of the change in price of a share was explained by changes in company earnings. Over a ten year period, between $59.3 \%$ and $69.5 \%$ of the change in share price was explained by changes in earnings and over 18 years, $68.6 \%$ of the change in share price was explained by changes in earnings. This is compelling evidence that investing in growth assets requires a long term investment horizon to be sure that the value of your investment holding will reflect the change in earnings of the underlying investment.

Defensive assets include fixed interest and cash investments. As previously discussed in this book, we see fixed interest investments as being low risk, reasonably short term investments where the aim is to provide a return slightly higher than the return available from cash investments. We do not see this as an area of the portfolio that should be exposed to any great risks.

Perhaps the easiest description of the defensive assets in an investment portfolio is that they are the assets that should let you sleep comfortably at night. They are the assets that let you know that there is:

- enough cash immediately available to you to meet your cost of living plus a 'cash reserve' should an unexpected event arise that needs extra money
- enough funds in this section of your portfolio that, when added to a modest expectation of future income, could fund the next 5-10 years of your income needs

The role of defensive assets in a portfolio is to provide liquidity (ie cash available when you need it) and to reduce the overall volatility of the portfolio.

## Choosing the Split: Defensive vs Growth

While there is a significant weight of research behind how the investment options within each investment class are chosen, the choices of asset allocation are driven by the needs and preferences of each individual investor. This is where the investment process gets personal.

There are three criteria that we consider at this stage including:

The timeframe of the portfolio
The liquidity (potential cash requirements) from the portfolio
The risk tolerance and experience of the investor
Let us look at each of these in turn.

## The Timeframe of the Portfolio

Because of the volatility of growth assets, there should be great reluctance to use them in a portfolio where the investment timeframe is less than 5 years. This is because there is a chance that over that time the value of the portfolio could fall sharply, significantly reducing the end value of the portfolio. Short term investing should be heavily biased toward cash and high quality fixed interest investments, where there is no chance of volatility negatively impacting on the final portfolio balance.

In assessing the timeframe of a portfolio, keep in mind that even if you are at the point of retirement, for example, the investment portfolio could be in place for the next 20,30 or 40 years. Even though you are starting to fund your lifestyle from your investment portfolio, there is still a strong argument to include growth assets to increase the expected returns from your portfolio, so that the portfolio will continue to perform well and be able to meet your longer term income requirements.

## Liquidity - The Need for Cash

A portfolio may be required to provide cash for either regular payments over time, such as pension payments, or payments in an emergency, such as an unforeseen medical situation.

There is no exact level of cash that you should keep on hand. We wish that you could say 'that the correct and exact amount of cash that should be available in a portfolio is enough to cover the needs of 92.6 weeks expenditure'. However this level of prediction is just not possible.

Having enough cash on had to cover payments for at least the next 12 to 18 months makes good sense. For example, a person at retirement with a $\$ 500,000$ portfolio might be taking $\$ 30,000$ a year from their portfolio. Keeping $\$ 30,000$ to $\$ 45,000$ cash in the portfolio provides enough liquidity to meet future payments.

Consideration should also be given to how much income will be drawn in the next 5 years from the portfolio. Given that it is preferable not to invest in growth assets with a time horizon of less than 5 years, this amount of money should be invested in defensive investments. Referring back to the example of the person with $\$ 500,000$
drawing $\$ 30,000$ a year, having $\$ 150,000$ invested in defensive assets will mean that there should be no concerns about making the $\$ 30,000$ a year payments for the next 5 years. You will note that this is only $\$ 150,000$ of the $\$ 500,000$ portfolio, or $30 \%$.

Over the 5 years, income payments will be received from the growth assets and these can be re-invested in defensive assets as the defensive assets are withdrawn from the portfolio. This is important as you cannot simply assume that in 5 years time you will get a positive investment return from growth assets. There have been 5 year periods where growth assets have performed poorly. The combination of having 5 years of living expenses set aside in defensive assets, plus receiving further income from the growth investments, should provide a reasonably base to fund payments from the portfolio beyond the initial 5 years.

Relying on growth assets to fund short term cash needs runs the risk that these assets may fall sharply in value, and you will then be forced to sell them at a time when their value is low.

## Personal Risk Tolerance and Investment Experience

This third criterion relates to a personal preference as to how much volatility can be tolerated by you within your portfolio. Of course, you need to keep in mind that as you reduce the volatility of your portfolio, you also reduce your expected longer term return.

A good way to consider how you might cope with volatility is to look at the worse case scenario. Over the past 30 years the biggest market downturn has been the 1987 sharemarket crash. During this time growth assets fell in value by $30-35 \%$.

The question that you can then ask yourself is, if there was another $35 \%$ market downturn, what magnitude fall in my portfolio could I handle? Of course, we would all prefer a $0 \%$ market downturn. However to achieve that we would have to have $0 \%$ of our investments in growth assets, meaning that our expected portfolio return would only be equal to or just above the the cash return, around $6 \%$.

The following table shows the trade off between asset allocation, the fall in portfolio value in the event of a $35 \%$ market downturn and the expected return of a portfolio.

| Asset Alloc: | Fall in Growth <br> Assets | Fall in Value of <br> Portfolio | Average Expected <br> Return* |
| :--- | :--- | :--- | :--- |
| $0 \%$ Growth | $35 \%$ | $0 \%$ | $5 \%$ |
| $33 \%$ Growth | $35 \%$ | $12 \%$ | $7 \%$ |
| $66 \%$ Growth | $35 \%$ | $25 \%$ | $9 \%$ |
| $100 \%$ Growth | $35 \%$ | $35 \%$ | $11 \%$ |

*Average Expected Return: Growth Return 12\%: Defensive Return 6\%: Fees $1 \%$ :
*Does Not Consider Inflation or Taxes:
*Long Term Return - will be volatile in the short term:
*NB This is a simplistic Calculation
A common response seems to be that downside risk of about $20 \%$ in the event of a 1987 style market crash would be acceptable. That corresponds with an asset allocation that has about $60 \%$ of the investments held in growth assets, $40 \%$ in defensive.

## How Do We Apply This?

If asset allocation matters, and it does, then this first decision of what percentage of assets are invested in growth assets and what percentage are invested in defensive assets is an important one.

While there is no 'magic formula' in choosing an asset allocation, the important aspects that are considered include:
The time frame of the portfolio - a short time frame is not suitable for more volatile growth assets.
The 'liquidity' needs from the portfolio (or the money that has to be taken from the portfolio) - short term needs should be provided for through cash and medium term needs from cash and fixed interest investments.
Personal comfort with volatility - every one reacts differently to their portfolio rising and falling in value. This is taken into account in building portfolios.

## Chapter 40 - Defensive Asset Allocation

Defensive investments consist of cash or fixed interest investments.
Having decided which proportion of your portfolio you want to be allocated to defensive assets, the next step is to allocate those funds between cash investments and fixed interest investments.

At this point we will say that this process is only valid if you subscribe to the view that fixed interest investments should be:
High credit quality
Relatively short duration investments (generally less than 4-6 years)
If you are trying to chase higher returns from your fixed interest investments, such as investing in 'promisory notes', 'debentures', 'mezzanine finance', or 'unsecured notes' then our approach to asset allocation is not appropriate.

It is best to build the approach to choosing the split between fixed interest and cash investments by acknowledging the three key differences between them

1/ Liquidity - cash can immediately be accessed. It will usually take some time (often only days) to redeem a fixed interest investment. In the case of some fixed interest investments such as bank term deposits they may only be redeemed on maturity, which could be a matter of months.

2/ Expected Return - there is a slightly higher expected return from holding fixed interest securities over cash.

3/ Volatility - fixed interest investments, which are not highly volatile, will still provide some volatility. Cash investments will have no capital volatility.

These three points lead us to build an understanding of the two, and how they vary subtlety. Their application within the defensive portfolio should be guided by these differences - cash being used for immediate cash needs, and fixed interest investments for longer term needs where the slightly higher return will benefit the investment portfolio. The volatility of fixed interest investments mean that they are not suitable to meet short term cash needs, on the off chance that the fixed interest investments have fallen in value and have to be redeemed at a low price.

As a rule of thumb keeping 18 months of cash requirements, or potential cash requirements, invested directly in cash investments makes sense. That way there is no risk that fixed interest investments will have to be redeemed during a period of volatility when they have fallen in value.

As a simple example, let us assume that a person had a $\$ 200,000$ investment portfolio. They had decided that $30 \%$ of their portfolio, $\$ 60,000$, should be invested in defensive assets.

They considered that the maximum that they would need to draw from their portfolio is $\$ 20,000$ for a new car in about 12 months time. They also wanted to keep an extra $\$ 10,000$ cash reserve in case they have some unforeseen expense. This would mean that keeping $\$ 30,000$ of their $\$ 60,000$ defensive investments in cash will cover both of these eventualities. The other $\$ 30,000$ can then be invested in high quality fixed interest investments to target a slightly higher investment return.

## Re-investing income in a portfolio

When you start an investment portfolio, or buy a holding of shares, you are often offered the opportunity to 're-invest' the income (dividends or distributions from an investment). This means that rather than the investor receiving cash income, this income is automatically used to buy additional units or shares in the investment. Should a person do this?

There is really no correct answer, and no wrong thing to do. Our preference is to receive the income as cash and then re-invest it. Receiving income as cash allows the cash to be strategically re-invested wherever it is most needed. For example, if a person has drawn some cash out of their portfolio then the income received can simply be left in cash to replace the income drawn. Alternately, if the asset allocation of the portfolio has changed due to the movement in value of the underlying assets, and the portfolio has less exposure to an asset class than the target exposure, the income can be allocated to increase the exposure to this asset class.

You should note that there are no tax differences between receiving income as cash or dividend/distribution re-investing. In both cases the value of the income is taxable. Sometimes, particularly with shares or listed property trust investments, income can be re-invested at a slight discount to the market price of the investment.

The one time that we are inclined to automatically re-invest income is when a person is just starting to build an investment portfolio, and the amounts of income will be particularly small. In this case choosing to re-invest the income is a simple option.

## Choosing Investments

Having decided to allocate portions of your portfolio to cash and high quality fixed interest investments the next question is which investments to use?

Preferred cash investments tend to be cash management trusts that provide some degree of functionality such as cheque books or B-Pay. This allows the cash account to also become somewhat of a 'centre' of the whole investment portfolio, collecting income, paying for new purchases, paying fees and providing income from the portfolio.

It is worth noting that there are now many 'e-accounts' that provide good cash returns provided the user is prepared to operate the bank account online.

We tend to use the Dimensional Five Year Fixed Interest Trust as our primary fixed interest investment. It does not invest in securities that have more than 5 years to maturity, and only invests in AAA and AA rated securities. These are the highest fixed interest ratings available.

## How Do We Apply This?

Allocating defensive assets between fixed interest and cash requires an understanding of the subtle differences between these two asset classes.

The key differences are:
Cash is more liquid (readily available) than fixed interest investments Fixed interest is more volatile with a slightly higher expected return

Therefore our focus is on building defensive asset allocations with enough cash to meet all short term cash requirements, with the remaining defensive investments in fixed interest investments.

## Chapter 41 - Growth Asset Allocation

There are three key growth asset classes that we use in our portfolios. These are:

## - Australian Shares

Australian shares trade on the Australian Stock Exchange. The owner of shares in a company is a part owner of the company. For example, Telstra is a company that trades on the Australian stock exchange and an owner of their shares becomes a part owner of Telstra.

- International Shares

International shares also provide part ownership in a company, in this case companies that are listed overseas.

- Listed Property Trusts

Listed property trusts trade on the Australian Stock Exchange. The owner of units in a listed property trust becomes part owner of the property assets, and receives a share of the income generated by the property assets. For example, the Westfield property trust owns a portfolio of shopping centres. A unit holder in the Westfield property trust becomes a part owner in the shopping centres and receives distributions of the rent generated from these shopping centres.

We do not use direct residential property because most clients have exposure to it through their own home and/or through their own investment properties. It is also difficult to include in the style of investment portfolio we favour because it is difficult to buy in small quantities, and it is usually one asset only, rather than a diversified portfolio that we favour within each asset class.

It is interesting to look at the index fund returns for each asset class.
Over the 37 years to June 30 2007, Australian share funds have returned $13.8 \%$ a year.
Over the 37 years to June 30 2007, International share funds have returned $13.6 \%$ a year.
Over the 27 years to June 30 2007, Australian listed property trusts have returned $15.3 \%$ a year. (Listed property trusts only started to be established in the 1970's, with the index returns starting from 1980, so there is not 37 years of data for the returns).

What does all of this demonstrate?
We might be tempted to draw the conclusion that listed property trusts have the superior investment return and we should invest all of our growth assets in them. That is really putting too much emphasis on the small outperformance over this period of listed property trusts. We use the data to say that all three asset classes have produced attractive long term returns above the return on defensive investments, and therefore we should be exposed to all three asset classes. This will increase the diversification of the investment portfolio so that we will get around the same long term expected investment return with less volatility of returns.

Clearly the average return will not be all that different being exposed to one asset class or all three - it will be somewhere between $13 \%$ and $14.7 \%$. The returns between asset classes are not 'perfectly correlated', that is, at any one time, one asset class might perform well while another performs poorly. This means that being exposed to all three growth asset classes will help to smooth the returns received, reducing portfolio volatility and increasing the long term compounding effect of the portfolio.

This would suggest that one third of growth assets should be invested in Australian shares, one third in international shares and one third in listed property trusts.

We do not proceed in quite such a simple manner as we consider two other factors. The first is the value of franking credits, which are received from Australian shares. The second is that within the international share asset class there is greater opportunity for diversification that with listed property trusts.

Cannavan, Finn and Grey, in an article entitled 'The Value of Dividend Imputation Tax Credits in Australia' published in the Journal of Financial Economics, found that franking (or imputation) credits are not priced into the value of shares. That is, they are effectively an 'additional bonus' of share ownership. Therefore we look to increase portfolio exposure to Australian shares to pick up this bonus.

Franking credits are usually paid as part of the dividends from Australian shares, and are able to be used fully by Australian investors to either reduce their tax or, if their franking credits are greater than their tax owing, to receive a tax refund for the value of the credits. A 'fully franked' dividend valued at $\$ 70$ will include a further $\$ 30$ in value from franking credits. The research notes that international investors often cannot use the franking credits and, as such, they have no value to them. If these investors are the price setting investors, then this explains why franking credits are not priced into the value of shares.

This 'additional bonus' can be significant. Even a share yielding around the market average of $4 \%$ provides an extra $1.7 \%$ of return through franking credits if the
dividend is fully franked. An investment yielding around 6\% (fully franked) provides an extra $2.6 \%$ return through franking credits. There remains work to be done validating this research, and we will be monitoring future research to ensure that these findings are validated over time.

On an anecdotal level, the average annual return from the Australian stockmarket over the 14 years since the introduction of franking credits has been $12.8 \%$ a year. This return does not include franking credits and is remarkably similar to the 35 year average return of $13 \%$. On this basis it might be reasonable to conclude that the introduction of franking credits does not seem to have varied the average return from Australian shares, also suggesting that they are an 'additional bonus' of sharemarket investing. We would emphasise that such simple data over a short period of only 14 years should not be considered conclusive evidence. It is more of an interesting observation that is consistent with the recent research into the value of franking credits.

On this basis we increase the exposure of portfolios to Australian shares beyond simply one third of the growth asset allocation, tending to have around $45 \%$ of the growth assets of a portfolio invested in Australian shares.

The remaining $55 \%$ of the growth assets are split between international shares and listed property trusts.

We bias this part of the portfolio towards international shares, on the basis that there are more sub asset classes available for investment in international shares. These include:

- large international companies
- international value companies
- international small companies
- emerging international markets

While we have discussed the application of value and small companies within portfolios, we have not yet mentioned emerging markets. Emerging markets, or developing markets, are those markets less developed than major international markets.

Whereas there are four 'sub asset' classes in international shares, there are only two in listed property trusts. These are Australian listed property and international listed property. On this basis we favour a slightly higher allocation of international shares over listed property trusts. We would tend to allocate $30 \%$ of the growth portfolio to international shares and $25 \%$ to listed property trusts.

Therefore the growth asset allocation is:
45\% Australian shares
30\% International shares
$25 \%$ Listed property trusts
At this juncture let us pause to make a key point. Not all allocations within portfolios will look exactly like this. We may change the asset allocation depending on the requirements or preferences of any individual investor. Therefore what is suggested within the context of this chapter is the style of portfolio that might be built for an average investor.

Within each asset class, Australian shares, international shares and listed property trusts we have to decide how to allocate between the sub asset classes. Again, there is no set formula for doing this, the following is simply an indication of how we might allocate the portfolio for an average client.

Keep in mind that exposure to small companies, value companies and emerging markets is effectively exposure to riskier investment opportunities. For taking on this risk we will be rewarded over time. Clients who are particularly uncomfortable about taking on additional risk would have a smaller exposure to small companies, value companies and emerging markets. Clients who are more comfortable with risk may have greater exposure to these areas of additional risk and reward.

The following looks at how we allocate the assets within Australian shares, international shares and listed property trusts. This asset allocation would be typical of an 'average' investor; however this will be adjusted to meet the needs of each individual investor.

## Australian Shares

Within Australian shares we allocate $50 \%$ of the Australian share assets to an Australian share index fund. We do this through a simple index fund, usually the Vanguard Australian shares fund. The remaining $50 \%$ is allocated with $30 \%$ invested in Australian value companies and $20 \%$ in Australian small companies. For these investments we use the Dimensional Australian Value Trust and the Dimensional Australian Small Companies Trust. We tend to favour value companies over small companies as the value premium tends to be more regular and slightly higher than the small company premium.

## International Shares

Within international shares we start by allocating $50 \%$ of the assets to the international index fund. We generally use the Vanguard international shares fund. $25 \%$ of the funds are invested in international value funds, through the Dimensional Global Value Trust, $15 \%$ in small companies through the Dimensional Global Small Companies Trust and $10 \%$ in emerging markets through the Dimensional Emerging Markets Trust.

## Listed Property Trusts

Within the listed property trusts we access both international and Australian trusts, favoring Australian trust 2 to 1 for their more reliable delivery of tax advantaged income. We use the Vanguard Property Securities Fund for exposure to Australian listed property trusts and the Vanguard International Property Securities Index Fund (hedged) for international listed property trust exposure.

Using a hedged fund means that currency transactions are put in place to negate any changes in foreign currency exchange rates. We do not worry about this with international shares, as we use the exposure to international currencies to further diversify portfolio returns. However, with listed property investments where a key benefit that we target is regular income, we prefer currency hedging to smooth out volatility in income distributions.

The following table shows the decision making process from left to right. Keep in mind that this might be altered for any particular investor. The final column shows the actual percentage that each portfolio has of each sub asset class. You will notice that the final column has been rounded somewhat. We do this because we don't want to pretend that we have some extremely precise mechanism for allocation of growth assets. Rather we have a process that thoughtfully divides the growth assets of a portfolio between asset classes.

| Decision 1 Asset <br> Allocation |  | Decision 2 - <br> Sub Asset <br> Allocation |  | Overall \% <br> Exposure of Growth Assets |
| :---: | :---: | :---: | :---: | :---: |
| Australian Shares | $\begin{aligned} & 45 \% \text { of the } \\ & \text { growth } \\ & \text { portfolio } \end{aligned}$ | Australian Index Fund | $50 \%$ of the Australian Share allocation | 22.5\% |
|  |  | Australian Value Companies | 30\% | 12.5\% |
|  |  | Australian Small Companies | 20\% | 10\% |
| Listed <br> Property | $25 \%$ of the growth portfolio | Australian Listed Property Trusts | $67 \%$ of the listed property allocation | 16\% |
|  |  | International <br> Listed Property Trusts | 33\% | 9\% |
| International Shares | $30 \%$ of the growth portfolio | International Index Fund | $50 \%$ of the international share allocation | 15\% |
|  |  | International Value <br> Companies | 25\% | 7.5\% |
|  |  | International Small Companies | 15\% | 4\% |
|  |  | Emerging Markets | 10\% | 3.5\% |



One Question: Vanguard and Dimensional funds are used a lot, is this prudent?

This is a good question, and one that has two parts to its answer.
Firstly, Vanguard and Dimensional are both passive fund managers. They are not trying to show investment skill and outperform markets. Rather they build low cost, extremely well diversified portfolios that rely on a clear and transparent investment philosophy, such as building an investment portfolio that mirrors the ASX 200 index, rather than any investment skill for their returns.

Secondly, the Australian funds management industry is well regulated, and requires assets of a fund to be held by a third party, a custodian. The custodian is then responsible for the process of holding the managed fund assets and the reporting.

Beyond this, both Vanguard and Dimensional are companies with a long trading history in the United States who have established excellent corporate reputations.

Both are low cost providers of funds, which most funds charging between $0.25 \%$ and $0.5 \%$ a year, well below the average for a managed fund of $1.8 \%$ to $2 \%$. There are no trailing commissions paid from either Vanguard or Dimensional.

## How Do We Apply This?

This is how we think about the process of building the growth asset allocation within an investment portfolio.

It is a process that can and should be tailored to the individual circumstance of the portfolio.

The process involves two carefully considered stages:
Stage 1 - allocating assets between the three growth asset classes
Stage 2 - allocation assets between the sub-asset classes in each asset class
The biggest part of the 'How Do We Apply This' is this:
Remember, the most important factor is this:
Asset allocation is the most critical driver of investment returns. The asset allocation process in building an investment portfolio has to reflect this importance.

## Chapter 42 - Case Studies - Building Portfolios to Suit Investor Needs

The last four chapters have provided much information about how to build an investment portfolio using index funds and passive funds while focusing on asset allocation. This chapter presents two practical examples of this process in action.

## Investor 1

Let us consider investor 1 , a 30 year old with $\$ 40,000$ to invest along with $\$ 200$ a week of surplus income.

## Decision 1 - Defensive vs Growth Asset Allocation

The investor has a long time frame for their portfolio, planning to use it to help fund their retirement at age 55 .

They feel that they are comfortable with investment risk and, because they understand that it is a long term investment, they are prepared to accept a fall in value of their assets of around $35 \%$ were a 1987 style sharemarket crash to recur.

They have their life insurances and health insurances up to date, so there is little concern that they will need any funds from the portfolio to help meet their cost of living. That said, they also have an adequate cash reserve and mentioned that having a further $\$ 5,000$ to $\$ 10,000$ to meet any unexpected costs made sense to them.

On the basis of this information it would appear that the portfolio could be heavily biased toward growth assets. Keeping $\$ 5,000$, or $12.5 \%$ of the portfolio in defensive investments will allow the investor to access this money if there is an unforeseen need for money. If the ongoing contributions of $\$ 200$ are invested in the same way, with $12.5 \%$ in defensive investments, then this $\$ 5,000$ can be built to $\$ 10,000$ to provide ready access to cash for the investor.

Let's review this decision against the three key drivers of the decision as to how much of the portfolio to allocate to defensive assets and how much to growth assets.

1/ The timeframe of the portfolio. The timeframe is 25 years, a long timeframe, and is suited to investing in growth assets.
2/ The liquidity requirements. Only $\$ 5,000$ to $\$ 10,000$ is required and only for an unexpected event. Allocating $12.5 \%$ of the portfolio to defensive assets provides $\$ 5,000$ if required, plus $12.5 \%$ of the ongoing $\$ 200$ a week portfolio contributions will increase this above the $\$ 5,000$.

3/ The risk tolerance and experience of the investor. The investor has indicated that they are comfortable with their portfolio falling in value by $35 \%$ in the case of a 1987 style stockmarket crash. The $12.5 \%$ of the portfolio invested in defensive assets will mean that a $35 \%$ fall in the value of growth assets will see the portfolio fall in value by about $30 \%$.

All in all allocating $12.5 \%$ of the portfolio to defensive assets and the remainder to growth assets is a reasonable decision.

## Decision 2 - Within the Defensive Asset Allocation

The subtle differences between cash and fixed interest investments need to be considered in building the defensive asset allocation. In this case the defensive asset allocation of the portfolio is only providing a pool of funds in the event of some sort of crisis. On that basis, and given that the investor has some other cash outside of this investment portfolio, it is reasonable to invest this money into fixed interest investments - provided that they are high credit quality bonds without unreasonably long time periods to maturity. At a practical level we would use the Dimensional Five-Year Diversified Fixed Interest Trust to meet this need.

## Decision 3 - Within the Growth Asset Allocation

The first decision that the investor has to make relates to the weighting of Australian shares, international shares and listed property investments within the growth section of their portfolio. In this case the investor was comfortable with the rationale for investing the growth assets:

45\% Australian Shares
30\% International Shares
25\% Listed Property
The investor has read about the higher average returns possible from investing in small and value companies. They also accept that these returns are the result of taking on more investment risk. They feel that given their long investment horizon, they would like above average exposure to these sources of additional risk and reward.

After discussion it is agreed that their portfolio will have a significant exposure to value companies and small companies.

Within the Australian share portion of their portfolio they have chosen to have $40 \%$ of their assets in the index fund, $35 \%$ in value companies and $25 \%$ in small companies.

Let us again be very clear about two factors here -1 / this asset allocation provides a higher expected return and 2 / it also increases the risk of the portfolio: taking on small company and value company exposure increases both the expected return and risk of the portfolio.

Within the international shares portion of their portfolio the theme for more exposure to small companies, value companies and emerging markets results in an asset allocation that sees:

- $35 \%$ of the international share exposure invested in an international index fund
- $30 \%$ invested in international value companies
- $20 \%$ invested in international small companies
- $15 \%$ invested in international emerging markets

Within the listed property asset allocation the investor was comfortable having 67\% exposure through an Australian listed property trust and $33 \%$ through international listed property trusts (hedged).

The table on the next page calculates the exposure to each asset class and sub asset class. To work out the exposure for each asset class we start by multiplying the weighting of defensive vs growth by the asset class weighting by the sub asset class weighting. For example, Australian index fund exposure is in the $87.5 \%$ growth allocation multiplied by the $45 \%$ Australian share exposure multiplied by the $40 \%$ sub asset allocation to the Australian index fund:
$87.5 \% \times 45 \% \times 40 \%=15.75 \%$.
We round this up to $16 \%$ because we don't want the figures to suggest that they are more precise than they really are.

## Asset Allocation - Investor 1

| Decision 1 Asset Allocation |  | Decision 2 - Sub Asset Allocation |  | Overall \% <br> Exposure of Portfolio |
| :---: | :---: | :---: | :---: | :---: |
| Defensive Assets $-12.5 \%$ of portfolio |  | Cash | $0 \%$ of defensive asset allocation | 0\% |
|  |  | Fixed Interest | $100 \%$ of defensive asset allocation | 12.5\% |
| Growth Assets 87.5\% of portfolio |  |  |  |  |
| Australian Shares | $45 \%$ of the growth portfolio | Australian Index Fund | $40 \%$ of the Australian Share allocation | 16\% |
|  |  | Australian Value Comp. | 35\% | 13.5\% |
|  |  | Australian Small Comp. | 25\% | 10\% |
| Listed Property | $25 \%$ of the growth portfolio | Australian Listed Property Trusts | $67 \%$ of the listed property allocation | 15\% |
|  |  | International Listed Property Trusts | 33\% | 7\% |
| International Shares | $30 \%$ of the growth portfolio | International Index Fund | $35 \%$ of the international shares | 9\% |
|  |  | International Value Comp. | 30\% | 8\% |
|  |  | International Small Comp. | 20\% | 5\% |
|  |  | Emerging Markets | 15\% | 4\% |

Actual trusts used for each sub asset class are listed at the end of the chapter.

## Investor 2

Let us consider a second investor, a 55 year old with a $\$ 1,000,000$ investment portfolio. They have recently retired and wish for the portfolio to fund their cost of living in retirement.

## Decision 1 - Defensive vs Growth Asset Allocation

The investor wants to immediately start drawing $\$ 50,000$ a year from their investment portfolio. This is a drawing rate of $5 \%$ a year, which should be sustainable in the long term.

Now that they are living off their investment portfolio the investor has said that they are not very comfortable with as much volatility in their portfolio. They feel that they would be able to accept a $20 \%$ drop in the value of their portfolio if a 1987 style investment crash were to recur.

The portfolio will also have to act as a 'cash reserve', and the investor has indicated that they would like to have a further $\$ 30,000$ invested in cash so that in the event of any unforeseen need this money would be available.

On the basis of this information it would appear that at least $\$ 280,000$ of the $\$ 1,000,000$ should be invested in defensive assets. This would allow the payment of 5 years of income at $\$ 50,000$, with an extra $\$ 30,000$ available if required. However the reluctance to accept downside beyond $20 \%$ of the value of the portfolio suggests that only about $60 \%$ of the portfolio should be invested in growth assets.

Let's review this decision against the three key drivers of the decision as to how much of the portfolio to allocate to defensive assets and how much to growth assets.

1/ The timeframe of the portfolio. The timeframe for the portfolio shows that it is starting to be used to fund the investor's living costs immediately. This suggests that a higher portion of the portfolio should be retained in defensive assets. Of course, while the investor is retiring at age 55 they may well still be relying on the portfolio in 35 years time, which will require some of the portfolio to be invested in growth assets.

2/ The liquidity requirements. At least $\$ 280,000$ should be invested in defensive assets to provide the cash needs for the next 5 years plus a cash reserve of $\$ 30,000$ to cope with any unexpected financial problems.

3/ The risk tolerance and experience of the investor. They have indicated that they are comfortable with their portfolio falling in value by $20 \%$ in the case of a 1987 style stockmarket crash. This implies a maximum growth asset allocation of $60 \%$ of the portfolio.

All in all allocating $40 \%$ of the portfolio to defensive assets and the remaining $60 \%$ growth assets is a reasonable decision.

## Decision 2 - Within the Defensive Asset Allocation

$40 \%$ of the portfolio, or $\$ 400,000$, is to be invested in defensive assets.
In this case the need for cash can be met by keeping 18 months of income requirements $(\$ 75,000)$ and the $\$ 30,000$ cash reserve invested in cash. We can
round this to $\$ 100,000$, or $25 \%$ of the defensive asset allocation. The remaining $\$ 300,000$ can be invested in fixed interest securities that will provide a slightly higher expected return. At a practical level we would use a combination of a good cash management trust with the Dimensional Five-Year Diversified Fixed Interest Trust to meet this need.

## Decision 3 - Within the Growth Asset Allocation

The first decision that the investor has to make relates to the weighting of Australian shares, international shares and listed property investments within the growth section of their portfolio. In this case the investor was comfortable with the rationale for investing the growth assets:
45\% Australian Shares
30\% International Shares
25\% Listed Property
In this situation the investor has asked that they use a conservative allocation towards value and small companies. After discussions there is agreement to increase the exposure to the index fund and decrease the exposure to small company and value funds.

Within the Australian share portion of their portfolio they have chosen to have $60 \%$ of their assets in the index fund, $25 \%$ in value companies and $15 \%$ in small companies.

Let us again be very clear about 2 factors here $-1 /$ this asset allocation provides a lower expected return than the asset allocation for investor 1 who had more exposure to small and value companies and 2 / it also decreases the risk (volatility) of the portfolio: taking on less small company and value company exposure decreases both the expected return and expected risk of the portfolio.

Within the international shares portion of their portfolio the theme for less exposure to small companies, value companies and emerging markets results in an asset allocation as follows:

- $60 \%$ of the international share exposure invested in an international index fund
- $20 \%$ invested in international value companies
- $10 \%$ invested in international small companies
- $10 \%$ invested in international emerging markets

Within the listed property asset allocation the investor was comfortable having $67 \%$ exposure through an Australian listed property trust and $33 \%$ through international listed property trusts (hedged).

The following table sets up the exposure to each asset class and sub asset class. To work out the exposure for each asset class we start by multiplying the weighting of defensive vs growth by the asset class weighting by the sub asset class weighting. For example, Australian index fund exposure is in the $60 \%$ growth allocation multiplied by the $45 \%$ Australian share exposure multiplied by the $60 \%$ sub asset allocation to the Australian index fund:
$87.5 \% \times .45 \% \times .4 \%=16.2 \%$.
We round this up to $16 \%$ because we don't want the figures to suggest that they are more precise than they really are.

## Asset Allocation - Investor 2

| Decision 1 Asset Allocation |  | Decision 2 - Sub Asset Allocation |  | Overall \% <br> Exposure of Portfolio |
| :---: | :---: | :---: | :---: | :---: |
| Defensive Assets - 40\% of portfolio |  | Cash | $25 \%$ of defensive asset allocation | 10\% |
|  |  | Fixed Interest | $75 \%$ of defensive asset allocation | 30\% |
| Growth Assets 60\% of portfolio |  |  |  |  |
| Australian Shares | $45 \%$ of the growth portfolio | Australian Index Fund | $60 \%$ of the Australian Share allocation | 16\% |
|  |  | Australian Value Comp. | 25\% | 7\% |
|  |  | Australian Small Comp. | 15\% | 4\% |
| Listed Property | $25 \%$ of the growth portfolio | Australian Listed Property Trusts | $67 \%$ of the listed property allocation | 10\% |
|  |  | International Listed Property Trusts | 33\% | 5\% |
| International Shares | $\begin{aligned} & 30 \% \text { of the } \\ & \text { growth portfolio } \end{aligned}$ | International Index Fund | $35 \%$ of the international shares | 10\% |
|  |  | International Value Comp. | 30\% | 4\% |
|  |  | International Small Comp. | 20\% | 2\% |
|  |  | Emerging Markets | 15\% | 2\% |

Comparing the process for the two investors with different needs and therefore different asset allocations demonstrates how portfolios can be built to suit individual investors and individual circumstances. The reality is that large funds, particularly superannuation funds that offer only five to ten different investment
options do not allow this thoughtful construction of individualised investment portfolios.

The following table outlines the actual investment funds that we use to invest in each sub asset class.

| Sub Asset Class | Fund Used |
| :--- | :--- |
| Cash | Cash Management trust |
| Fixed Interest | Dimensional 5 Year Diversified <br> Fixed Interest Trust |
| Australian Index Fund | Vanguard Australian Share Trust |
| Australian Value Comp. | Dimensional Australian Value <br> Trust |
| Australian Small Comp. | Dimensional Australian Small <br> Companies Trust |
| Australian Listed Property <br> Trusts | Vanguard Listed Property <br> Securities Fund |
| International Listed Property <br> Trusts | Vanguard International Listed <br> Property Securities Fund (Hedged) |
| International Index Fund | Vanguard International Share <br> Fund |
| International Value Comp. | Dimensional Global Value Trust |
| International Small Comp. | Dimensional Global Small <br> Companies Trust |
| Emerging Markets | Dimensional Emerging Markets <br> Trust |

## Chapter 43 - A Twist - Using Higher Yielding Securities in Your Portfolio

By now you understand most of what we are trying to achieve in building investment portfolios. There is one more twist that we use in building portfolios which focuses on using higher income 'direct' securities in portfolios.

By 'direct' securities we mean investing directly in shares, listed property trusts or fixed interest investments listed on the Australian stock exchange.

As mentioned in the earlier chapter on choosing the asset allocation for growth assets, Cannavan, Finn and Grey, in an article entitled 'The Value of Dividend Imputation Tax Credits in Australia' published in the Journal of Financial Economics, found that franking (or imputation) credits are not priced into the value of shares. That is, they are effectively an 'additional bonus' of share ownership. This differed from previous research that found that franking credits did have some value, however this previous research was carried out in a time when franking credits were able to be traded between investors.

Franking credits are usually paid as part of the dividends from Australian shares and are able to be used fully by Australian investors to either reduce their tax or, if their franking credits are greater than their tax owing, to receive a tax refund for the value of the credits. A 'fully franked' dividend valued at $\$ 70$ will include a further $\$ 30$ in value from franking credits. The research notes that international investors often cannot use the franking credits and, as such, they have no value to them. If these investors are the price setting investors, then this explains why franking credits are not priced into the value of shares.

This 'additional bonus' can be significant. Even a share yielding around the market average of $4 \%$ provides an extra $1.7 \%$ of return through franking credits if the dividend is fully franked. An investment yielding around 6\% (fully franked) provides an extra $2.6 \%$ return through franking credits.

This remains the first and foremost reason for using some direct investments within a portfolio, to target higher yielding securities to increase the access to this bonus return.

We are also prepared to purchase some direct fixed interest and listed property trust securities that pay above average income streams. This increases the average yield of the portfolio. In the case of listed property trusts it allows us to target the tax effectiveness of 'tax deferred' or 'tax free' income paid by listed property trusts. As their names imply, tax free income is not taxed and tax deferred income is not taxed until you sell the listed property trust.

Let's be really clear about our use of direct securities in a portfolio: we are not trying or expecting to beat the market with these investments. That would make no sense at all and would stand in contradiction to our overall investment philosophy. We are using direct investments to increase the tax effective income received by the portfolio.

There are other advantages to holding direct securities including:

- Zero ongoing costs
- Complete control of trading and capital gains tax
- The 'dollar cost averaging' that comes from re-investing income in a portfolio

There are downsides including:

- Loss of diversification
- Time taken to manage investments

Let's look at these advantages and disadvantages one at a time.

## Advantage - Zero Ongoing Costs

Holding direct securities means that you have no ongoing management fees. Once the brokerage has been paid to purchase the investments there are no direct ongoing fees.

This helps to reduce the overall costs associated with the portfolio. Just as one of the advantages of index investing or passive investing is the low fees. This is also an advantage in holding some direct securities.

## Advantage - Complete Control of Trading and Capital Gains Tax

A benefit of using a passive or index fund is that there are low levels of trading and therefore low levels of capital gains tax to be paid.

Holding direct securities means that you have almost complete control over the timing of any sales of investments. The only time you lose some control is if an investment that you own is taken over and you are forced to sell your holding.

## Advantage - The Dollar Cost Averaging that Comes From Reinvesting Income

One certainty is that over time markets will fall and markets will rise. Having a constant stream of income produced by your investments means that in the down time you will be able to reinvest this income into assets when their price is low.

This is similar to the concept of 'dollar cost averaging'. Dollar cost averaging is the effect that you get by investing a regular amount of money into a portfolio at regular intervals. When investment markets are down you end up buying more investment units and when they are up you end up buying fewer. The overall effect is that it lowers your average purchase price.

This stream of income produced by your portfolio is improved by targeting some high income securities. This in turn increases the dollar cost averaging effect of reinvesting income back into the investment portfolio over time.

## Disadvantage - Loss of Diversification

Indexing and passive investments are made up of portfolios of hundreds of securities. A portfolio with a variety of index and passive funds is therefore made up of exposure to thousands of securities.

Exposing part of your portfolio, say $30 \%$, to 10 or so direct securities means that this part of your portfolio is far less diversified than the other $70 \%$. In fact, you now have 10 securities that each represents about $3 \%$ of the value of your portfolio. If any one investment suffers an isolated business problem that wipes $50 \%$ of the value of that investment, then your overall portfolio will fall in value by $1.5 \%$.

## Disadvantage - Time and Cost Taken to Manage Investments

Holding a portfolio of direct securities means that more time is spent monitoring the investments. It is also likely that decisions on individual investments will have to be taken, such as when companies offer additional shares to investors, if there is a share buyback offered or if the company is a subject of a takeover bid.

There are also individual dividend statements to collect and records of purchasing and selling to be kept.

There may also be costs in terms of research to support the decisions to buy, sell and hold investments.

## Keep in mind that high income is a proxy for 'value'

With the Fama and French research into 'value' companies and small companies, there were many different financial ratios that they could have used to define what a 'value' company is. One of the ratios is income; companies offering above average yield could be considered 'value' companies.

On that basis it should be acknowledged that targeting higher income securities effectively gives a portfolio a value bias.

## Choosing the Exact Securities

We don't have the time to detail the exact process of choosing these high income paying securities. Scott Francis's previous book, 'A Clear Direction - Your Personal Finance Guide’ provides more information about analysing the key financial ratios of these investments. We have included the key aspects of direct Australian share investments, direct listed property trust investments and direct listed fixed interest investments in the following three paragraphs. In all cases we are targeting investments with above average income payments.

Within the direct Australian share holdings we are looking for shares that are paying a yield at least $25 \%$ above the market average. Because of our desire to target franking credits we are looking for fully franked, or substantially franked investments. Currently the average sharemarket yield is $4 \%$. Therefore we are looking for investments paying fully franked income streams of $5 \%$ or more. The other characteristics we are looking for in the companies include:

- Strong 'dividend cover', that is the earnings of the company comfortably cover the dividend payments.
- A history of increasing dividends over time. This is what we want from the dividends in the future and we look for this trend historically.
- A moderate level of debt, ideally a debt to equity ratio of $55 \%$ or less. This reduces the potential impact of interest rate rises on both the company and the dividend stream.
At the time of writing, the sort of opportunities that would fit broadly into these parameters include companies such as Wesfarmers, the banks, Tabcorp and Macquarie Airports.

This is very similar to what we are looking for in the Listed Property Trust sector. Our focus is on targeting securities with above average yield, cash earnings that cover the income payments and moderate levels of debt. This currently includes investments like Macquarie Prologis (which does have higher levels of debt than we would like) and Abacus property group.

In direct fixed interest investments we are still looking at securities of high credit quality with time to maturity of no more than 5 years. We are currently using Hi Fi securities as part of some portfolios. The series 3 Hi Fi investment has a AA Standards and Poors rating, holds a portfolio of 70 underlying fixed interest investments, matures in just over 2 years and pays interest at a rate of just over $7.3 \%$. This relatively high interest rate is a function of the fact that the underlying securities, which were issued at $\$ 100$, are currently trading at around $\$ 96.00$.

## A Marginal Benefit, With Risks, That Will Not be For Everyone

The bottom line with this strategy is that:

- We would only use this with a small portion of a portfolio, no more than $15 \%$
- It would sit alongside a core of index and passive funds
- We do not intend to try to outperform the average market return
- We use it to increase the income from the portfolio
- It will decrease the diversification of the portfolio

This is one area where, after explaining the risks and rewards, we let clients make their own decision about whether they are comfortable with using direct investments as part of their investment strategy.

## How Do We Apply This?

The evidence that franking credits are an 'unpriced' bonus paid by direct Australian shares provides the initial impetus for using direct securities with strong income streams as part of investment portfolios.

This approach will not be for everyone, and for those who choose some direct investment exposure they must be aware of the potential downside of this strategy.

While at first glance holding a portfolio of direct investments would seem to contradict the idea of index and passive investing, we are trying to achieve many of the same benefits including:

* We are not trying to outperform the index, rather we are trying to expose the portfolio to characteristics that are beneficial
* We are looking to keep costs low, as there are no ongoing fees associated with holding direct investments
* Similar to index and passive funds we are looking to keep the level of portfolio turnover very low by not buying and selling regularly


## Chapter 44 - Passive Investments: Tax Efficiency, Research Costs, Market Impact, Portfolio Asset Allocation Control, Diversification and Fees

In the early chapters of this book we looked at managed funds and saw that they were ineffective investment vehicles when compared to the simpler strategy of investing in index funds. We also saw that passive funds that capture the small company and value company premiums discovered by Fama and French in the early 1990's allow passive investors to build portfolios that will outperform the simple index.

We looked at the importance of asset allocation and discussed the fact that asset allocation is the key driver of investment returns. By using passive funds we are able to focus on building an asset allocation that suits the requirements of each investor.

This chapter sets out some advantages of using index and passive funds to build an investment portfolio. Some of the issues have been touched on in previous parts of the book. However it does not hurt to review them. The six areas of advantage that index and passive funds have over active management include:

- Tax Efficiency
- Reduced Market Impact
- Research Costs
- Portfolio Asset Allocation Control
- Diversification
- Fees

As we saw in the early chapters of this book passive and index funds also have the important attribute of providing above average investment returns. For this section of the book let's focus on the six points listed above, and consider these one at a time.

## Tax Efficiency

Active management, regardless of whether it is done by a managed fund, stockbroker or an individual assumes that you are going to actively make investment decisions over time that will result in a higher than average portfolio performance. These decisions mean that you will have to buy and sell investments.

Each time you buy or sell an investment you have to pay capital gains tax, assuming that the investment has increased in value. This applies even if you are an investor in a managed fund. If the fund manager sells an investment at a profit you become liable to pay capital gains tax on this profit at the end of the financial year.

An interesting way to think about an unrealised capital gain that you have in an investment is that it is 'an interest free loan from the tax department'. (An unrealised gain is where an investment has made a gain, however you have not yet sold the investment. So the gain is described as 'unrealised'.) As soon as you sell the investment you will have a tax obligation that will need to be paid. However, if you never sell the investment then you will never have to pay that capital gain.

Therein lies the tax efficiency of passive investing. If all the underlying investment manager is doing is tracking an index or subsection of the index, then there is little need for any trading. Less trading means less realised capital gains, and more 'interest free loans from the tax department' in your underlying investment portfolio.

Using market figures from the Australian Stock Exchange website (www.asx.com.au), we calculated the total turnover for the Australian Stock Exchange in the 12 months to November 2005 as being $89.4 \%$ - great for the shareholders of the ASX who generate revenue every trade, but perhaps not so great for investors who have to pay tax on every profitable trade. We actually find this level of share trading quite staggering. A nearly $90 \%$ sharemarket turnover implies that every 13 or 14 months every single investment on the Australian stock exchange is traded. Clearly index funds are not trading much at all, so the remaining market participants must have very high levels of trading in their portfolios.

## Reduced Market Impact

A key problem with managing large sums of money in structures such as managed funds is that when a large fund manager wants to buy or sell an investment they end up moving the price of that investment against themselves. For example, if a fund manager wanted to take a $\$ 40$ million position in a listed company such as Leightons, their demand for shares would be pushing the price of the shares up as they bought in. Similarly, when they decided to sell their stake in Leightons, their $\$ 40$ million of shares would mean an oversupply of sellers and therefore push the price of the shares down. This market impact effect sees the price of the shares increase as the fund manager buys and decrease as the fund manager sells, reducing the expected return from the investment.

Index funds have less of a problem in this regard. Firstly, they are trading less than active market participants, so have fewer trades that can be affected by market impact. Secondly they own all of the companies in an index, so they have their capital more evenly spread over all the investments in a market, rather than just the 30 or 40 that might be targeted by an active manager.

Market impact costs, exacerbated by the high level of trading by fund managers, are largely avoided with index funds.

## Research Costs

There are many levels of research services that offer advice to investors on which managed funds to invest in or which individual shares to buy. These include services such as:

- Portfolio management services that manage direct share portfolios for investors
- Investment newsletters and stock picking sheets
- Services that help select managed funds
- Financial planners that help select managed funds for a commission payment

With index funds these services are no longer important. An index fund is a simple 'commodity' that investors should feel confident choosing themselves based on the price of the fund. All Australian share funds based on the ASX200 will be almost exactly the same, and investors should be confident simply choosing the cheapest fund.

## - Portfolio Asset Allocation Control

This book has presented significant evidence that asset allocation is the primary driver of portfolio performance. Using index funds that mirror each asset class, and in the case of small companies and value companies passive funds that provide exposure to sub-asset classes, the focus can be taken away from the investment selection process and onto building a portfolio with an asset allocation that best suites each investor.

The adoption of index investment and passive investment is something that should empower individuals to be more closely involved in their own investment process. The simplicity and effectiveness of indexing and passive investment means that investors are no longer compelled to pay high fees to the financial services industry for mediocre results.

- Diversification

That indexing and passive investment allows a great deal of diversification is not hard to understand. For example, an index fund based around the 200 largest stocks in the Australian share market will have 200 investments in its portfolio. This minimises the impact that a fall in value of any one investment can have on your portfolio, the key advantage of diversification.

Once you start to get into the world of active management it is almost a given that the portfolios formed will be less diversified than the underlying index. However, active investment managers often choose to have well diversified portfolios.

Here is a fundamental problem for active management. Let's call it the third paradox of active management. The more diversified an investment portfolio becomes the more it will look like the underlying investment index, and the less it becomes able or likely to outperform the index. The paradox is this: most active fund managers and investment managers exist because of their belief that they have 'skill' that can beat the relevant investment index; however they also believe in diversification as a risk management tool. If active fund managers really believed in their skill at picking outperforming investments, surely they would only choose the best 10 - 15 investment ideas to hold in their portfolio! If they have the ability to pick better performing investments, then why not just hold the very best of their ideas? Why water these best ideas down with diversification?

Consider a large company fund invested from the top 200 companies in the Australian Stock Exchange. Large investment managers are always touting the idea of 'diversification' as a way of managing risk and often hold portfolios that consist of the majority of the investments in an index. Suddenly active management starts to look very much like very expensive index management, an issue addressed in a recent academic study.

Ross Miller, in his paper 'Measuring the True Cost of Active Management by Mutual Funds', sets out to identify how much the returns from mutual funds (US term for a managed funds), are a result of closet indexing and how much they are a result of active management unrelated to the index. He then proportions a reasonable fee for the index fund management based on the Vanguard S\&P 500 Index Fund ( $0.18 \%$ ) to find out the true cost of the actively managed portion of the fund. That is, he assumes that the indexing investment management cost $0.18 \%$ for the portion of the fund managed this way, with the remaining management cost being attributed to the actively managed portion of the fund. The results are very interesting. For the 152 'large company' mutual funds that formed the sample, on average only $15.55 \%$ of the total funds were actively managed. (ie the other $84.45 \%$ effectively mirrored the index return). The average management expense
ratio (MER) for the actively managed portion of the funds was $6.99 \%$. On average more than $96 \%$ of the variance in the returns of the fund was explained by movements in the index. On average the 'value added' by the active management was negative $9 \%$. This is an investment loss of $2 \%$ on top of the fees of $6.99 \%$ apportioned to the actively managed component of the fund, clearly demonstrating that in this sample active management destroyed value.

On an overall basis the 152 mutual funds underperformed the index by an average of $1.5 \%$.

- Fees

Earlier in the chapter we looked at the research costs borne by investors and the market impact costs of investing through an actively managed fund. It stands to reason that any active investment process will incur higher level of fees as the underlying investment manager is really selling you their expertise.

This expertise might be 'sold' to you in the form of the fees paid on a managed fund, the fees paid for a portfolio management service or the fees paid to a financial planner.

These fees add up, and it is not uncommon to find people paying in excess of $2 \%$ of the value of their portfolio in fees. In fact, most active managed funds charge fees of around $1.8 \%$ to $2 \%$ per year.

Somehow a $2 \%$ fee doesn't sound too expensive. However, a $\$ 4,000$ annual fee on a portfolio valued at $\$ 200,000$ starts to add up very quickly.

Assessing fees in the world of active management is difficult, because of the assumption that the fund manager, portfolio manager or research company that you have chosen will outperform the market anyway. If they can do better than average, then why worry about fees? Once the reality that they cannot outperform sinks in, then the level of fees that have been paid becomes a very sad lesson.

Whereas the average fees for a managed fund are $1.8 \%$ to $2 \%$, the fees on an index fund start at around $0.7 \%$. This level of fee is still higher than in the United States, where fees start at around $0.18 \%$, and it is hoped that over time as the Australian index fund market matures and becomes less expensive the level of fees charged will fall.

Lower fees in index and passive funds are a function of the lack of research needed to run index or passive funds. Simply holding all the investments in a market, in the proportion that they exist in the market, requires little research, ongoing monitoring or advanced decision making.

## How Do We Apply This?

We have looked at evidence that concludes that index and passive investing are effective. This chapter presents the reasons behind that effectiveness.

These reasons lie at the core of the success of index and passive investing. They are part of the compelling evidence for building investment portfolios using this approach.

Index and Passive funds are not only effective but inexpensive, extremely well diversified and tax effective. It is no wonder that they form the basis of our investment approach!

## Chapter 45-Quotes Related to Passive Investing

"Properly measured, the average actively managed dollar must underperform the average passively managed dollar, net of costs. Empirical analyses that appear to refute this principle are guilty of improper measurement." William F. Sharpe, Nobel Laureate in Economics, 1990. The Arithmetic of Active Management, The Financial Analysts' Journal Vol. 47, No. 1, January/February 1991. pp. 7-9
"The deeper one delves, the worse things look for actively managed funds." Bernstein, William The Intelligent Asset Allocator
"This message (that attempting to beat the market is futile) can never be sold on Wall Street because it is in effect telling stock analysts to drop dead." Paul Samuelson, Ph.D., Nobel Prize laureate.
Q. So investors shouldn't delude themselves about beating the market? A. "They're just not going to do it. It's just not going to happen." Daniel Kahneman, Nobel Laureate in Economics, 2002. Investors Can't Beat Market, Jan 2, 2002.
"If there's 10,000 people looking at the stocks and trying to pick winners, one in 10,000 is going to score, by chance alone, a great coup, and that's all that's going on. It's a game, it's a chance operation, and people think they are doing something purposeful... but they're really not." Miller, Merton Nobel Laureate and Professor of Economics, Univ. of Chicago, 2000.
"It's human nature to find patterns where there are none and to find skill where luck is a more likely explanation (particularly if you're the lucky [mutual fund] manager)." Mutual fund manager performance does not persist and the return of stock picking is zero." Bernstein, William. The Intelligent Asset Allocator.
"It's just not true that you can't beat the market. Every year about one-third of the fund managers do it. Of course, each year it is a different group." Stovall, Robert , Investment Manager, 2002.
"Most investors, both institutional and individual, will find that the best way to own common stocks ("shares") is through an index fund that charges minimal fees. Those following this path are sure to beat the net results (after fees and expenses) of the great majority of investment professionals." - Warren Buffett, Berkshire Hathaway letter to shareholders 1996
"Why does indexing outmaneuver the best minds on Wall Street? Paradoxically, it is because the best and brightest in the financial community have made the stock market very efficient. When information arises about individual stocks or the market as a whole, it gets reflected in stock prices without delay, making one stock
as reasonably priced as another. Active managers who frequently shift from security to security actually detract from performance [compared to an index fund] by incurring transaction costs." Burton G. Malkiel, author of A Random Walk Down Wall Street.

All the time and effort people devote to picking the right fund, the hot hand, the great manager, have in most cases led to no advantage." and "Most individual investors would be better off in an index mutual fund." Peter Lynch. "Beat the Street", Simon and Schuster, 1993, p. 60.
"... skepticism about past returns is crucial. The truth is, much as you may wish you could know which funds will be hot, you can't -- and neither can the legions of advisers and publications that claim they can. That's why building a portfolio around index funds isn't really settling for average. It's just refusing to believe in magic." Bethany McLean. "The Skeptic's Guide to Mutual Funds," Fortune Magazine,March 15, 1999.
"Santa Claus and the Easter Bunny should take a few pointers from the managed fund industry [and it's fund managers]. All three are trying to pull off elaborate hoaxes. But while Santa and the bunny suffer the derision of eight year olds everywhere, actively-managed stock funds still have an ardent following among otherwise clear-thinking adults. This continued loyalty amazes me. Reams of statistics prove that most of the fund industry's stock pickers fail to beat the market. For instance, over the 10 years through 2001, U.S. stock funds returned $12.4 \%$ a year, vs. $12.9 \%$ for the Standard \& Poor's 500 stock index." Jonathan Clements. Only Fools Fall in ... Managed Funds?, Wall Street Journal, September 15, 2002

Michael Drew and Jon Stanford, academics and economists, wrote the paper 'Returns from Investing in Australian Equity Superannuation Funds, 1991-1999' that was published in the Services Industry Journal in 2003. They found that there was 'no evidence that active fund management adds value' and 'the market for equities in Australia appears to be remarkably efficient'.

As Buffett said in the 1993 annual report of Berkshire Hathaway, "By periodically investing in an index fund, the know-nothing investor can actually out-perform most investment professionals."
"If you go through life convinced that your way is always best, all the new ideas in the world will pass you by." Morita Akio, Founder \& CEO, Sony Corporation
"Don't try to buy at the bottom and sell at the top. It can't be done except by liars." Bernard Baruch
"I favour passive investing for most investors, because markets are amazingly successful devices for incorporating information into stock prices." Merton Miller. Nobel Laureate in Economics, 1985.
"Properly Measured, the average actively managed dollar must underperform the average passively managed dollar, net of costs. Empirical analyses that appear to refute this principal are guilty of improper measurement." William Sharpe, Nobel Laureate in Economics, 1990.

## Eureka report

'Behind Closed Doors' 26 April 2006. By Scott Francis


#### Abstract

PORTFOLIO POINT: Many actively managed funds are all too often 'hugging the index' and actively managing only a small portion of capital in order to protect their returns. Compare the investments of your managed fund against the index carefully to avoid paying for a service you aren't receiving.


It's the bane of fund management investing: fund managers who charge big fees for doing little more than tracking sharemarket indices. It's called 'closet indexing' or 'index hugging' and a flurry or recent research has revealed the problem is worse than many investors might ever have imagined.

Among the reasons given for actively managed funds being closet index funds are the 'marketing imperative' and the problems of size. The 'marketing imperative' suggests that managed funds are reluctant to take big positions away from the index because if they do, and the positions don't work out, the fund will have significantly underperformed their benchmark (such as the S\&P/ASX 200). This underperformance will be difficult to explain to existing investors and even more troublesome when it comes to attracting new investors. So the safe alternative is to hold a portfolio that is roughly the same as the index, that way the managed fund will get roughly the same return.

The problem of size means that large fund managers have so much money to deploy that they are forced to purchase investments in a large number of companies, just to get all their money invested. For example, Colonial First State says on its website that it has $\$ 99$ billion in funds under management. Let us assume that one third of this, $\$ 33$ billion, is invested in Australian shares. The sheer size of this sum of money requires that it is spread over many investments. Particularly it cannot be focused too much in smaller companies, because they are not big enough for large portions of the $\$ 33$ billion. As such, the fund ends up with a large number of investments, tending to have bigger investments in the bigger companies, much like the index itself.

US academic Ross Miller, in his paper 'Measuring the True Cost of Active Management by Mutual Funds', sets out to identify how much the returns from mutual funds, a US term for managed funds, are a result of closet indexing and what proportion of returns actually come from active management unrelated to the index. He then attributes a reasonable fee for the index fund management based on the Vanguard S\&P 500 Index Fund ( $0.18 \%$ ) to find out the true cost of the actively managed portion of the fund. That is, he assumes that the indexing investment management cost $0.18 \%$ for the portion of the fund managed this way, with the remaining management cost being attributed to the actively managed portion of the fund.

The results are very interesting. For the 152 'large company' mutual funds that formed the sample, on average only $15.55 \%$ of the total funds were actively managed. The average MER for the actively managed portion of the funds was $6.99 \%$. On average more than $96 \%$ of the variance in the returns of the fund was explained by movements in the index. On average the 'value added' by the active management was negative $9 \%$. This is an investment loss of $2 \%$ on top of the fees of $6.99 \%$
apportioned to the actively managed component of the fund, clearly demonstrating that in this sample active management destroyed value.

On an overall basis the 152 mutual funds underperformed the index by an average of $1.5 \%$.
It is worth making some comments on the study. Firstly, the data sample was for an 18 month period from January 2002 to December 2004. This is a short time frame from which to be drawing conclusions about performance. Secondly, the results assume the cost of an index fund to be $0.18 \%$, based on the Vanguard S\&P 500 index fund available to retail investors in the US. In Australia, the Vanguard Australian Share Fund has an MER of $0.7 \%$. Given this difference in the underlying cost of indexing it is reasonable to assume that the results would not have been as dramatic if this study were performed in the Australian Managed Fund environment. Thirdly, the study does not consider the tax consequences of using an actively managed fund. All performance considered in the study was before tax. We know that actively managed funds tend to have higher portfolio turnover than index funds, and therefore higher levels of realized capital gains, which decreases their tax efficiency.

Overall the study provides a different perspective on the academic literature that widely questions the ability of active fund managers to outperform the index. Its conclusion that the active management of funds does not add value for investors is consistent with much of the existing literature, including research carried out in Australia. It also provides a strong indication that the problem of 'closet indexing' or 'index hugging' is a significant issue in actively managed funds. It is fair to suggest that this 'closet indexing' issue brings into question the value added by the managers of actively managed funds.

It also highlights one of the differences in using an index fund in Australia, with the cost of the Vanguard Australian Share Fund for a retail investor $0.7 \%$, nearly four times the cost of the equivalent Vanguard investment for a US retail investor of $0.18 \%$. It seems reasonable to put these differences down to differences in the scale of markets and the difference in maturity of index funds in the two different markets. According to the Vanguard websites in the US and Australia, Vanguard in the US has $\$ 950$ billion in funds under management whereas Vanguard in Australia manages $\$ 36$ billion. Vanguard in the US was founded in 1975 whereas Vanguard in Australia was started in 1996.

The problem of closet indexing is that you end up paying too much for the service being delivered to you. It is worth looking at the investments in managed funds that you own, and considering how similar they are to the top companies in the index. If you are concerned that your managed fund looks like the index, performs like the index but charges more, perhaps you should consider either using a lower cost index fund, or find a manager who takes a genuinely active approach to their investments. Such managers often describe themselves as 'index unaware', will often hold smaller portfolios of 15 to 30 investments and will have performances history often quite different to the underlying index. Of course, you don't need to do one or the other, and may choose to use the combination of an index fund and some genuine active management, so long as you know what you are paying for... and that you get what you expect.

## EUREKA <br> report

'Planners Money Drain'<br>2 August 2006. By Scott Francis

PORTFOLIO POINT: Most offerings to retail investors promise to beat the market, but few do. Investors should compare carefully and be sure to check funds' after-tax returns.

Financial planners are getting into all sorts of trouble this year over what might be called "professional standards", but for most investors the burning question is how they have performed as investment managers.

Sharemarket funds run by the "back end" of the big finance houses - which in turn operate the big financial planning networks - remain the main path to market for many private investors.

If the funds recommended by the planning networks perform strongly, many investors will forgive any failings at the front end of the system.

Virtually every sharemarket fund offered by the big planning networks will promise to "beat the market". Investors take these promises at face value, but how often do they come true?

AMP is not alone in having a large base of financial planners; most of the big financial service companies examined here having financial advisers recommending their own products.

It's worth noting that AMP is by far the biggest financial planning network in the local market with a network 1552 financial planners. AMP's nearest rival is National Australia Bank with 1346, then Commonwealth Bank with 1022: The rest of the market has significantly smaller networks: AXA 951, ANZ 821 and Westpac 504.

AMP is in the front line as controversy surrounds how the finance house does business. A new survey from ASIC revealed that up to half of the investment recommendations offered by AMP planners in a random sample could not be justified under the terms of current regulations.

Of the 11 financial services companies in the ASX Top 100, AMP - although it is not the biggest company - has by far the biggest planning network. The companies are:

- AMP
- ANZ
- AXA
- Challenger
- Commonwealth Bank (Colonial First State)
- Macquarie Bank
- National Bank (MLC)
- Perpetual
- St George (Advance)
- Suncorp Metway
- Westpac (BT funds Management)

So how have the biggest operators in financial planning actually performed? There is little value in looking at short-term returns so I have looked at five-year managed fund returns. The past five years have been quite a mixed period for the Australian sharemarket. The first two were difficult, with overall negative returns, and then the following three were very strong years, with the total return from the index over the last three-year period returning just over $90 \%$.

In order to fairly compare sharemarket funds with sharemarket returns, the most useful benchmark is the Accumulation Index, which measures the growth in value of all the companies in the index, plus the dividends paid, to work out the total average return for shareholders

Over the five years to the June 30, 2006, the ASX 300 Accumulation Index has provided an average return of $12.31 \%$ a year. (Companies in the index are weighted according to size, so that bigger companies have a bigger impact on the index.)

Another feasible comparison to sharemarket fund returns is sharemarket index funds. These are managed funds that invest in all of the companies in the index and in the same proportion that they exist in the index, to provide investors with the same return as the index, less the cost of the fund. One of the best known of these is the Vanguard Index Australian Shares Fund. It mirrors the ASX300 index and its return over the five years to June 30 has been $11.63 \%$ a year.

Index funds should be low cost but it is not always the case. The Vanguard Index Australian Shares Fund has a management expense ratio (MER) of $0.75 \%$ but if an investor buys into it through the MLC financial planning network it is going to cost a lot more: $1.28 \%$.

So how have the big funds matched these benchmarks of $12.31 \%$ a year for the market and $11.63 \%$ for the best known index fund?

The results are comprehensively disappointing. I have looked at the core Australian managed funds for each company: their Australian share fund, imputation fund or industrial companies fund. I have not considered specialist funds such as ethical funds. I have also excluded small-company funds, as they should be compared against a different index. The appropriate index for small-company funds is generally the ASX Small Ordinaries Index

The Challenger funds group had a major restructure four years ago, so does not yet have five-year results data. The returns from AMP and MLC funds are only updated to May 31, 2006. It is not expected that these returns will be significantly different from the five-year returns to June 30, 2006.

As you can see from the table on the next page, over the last five years you would almost always be better off putting your money directly into the market than putting it into share market funds from the big planning groups. On average you will lose $\$ 8,000$ on every $\$ 100,000$ in lost earnings.

How the funds performed

Fund \begin{tabular}{c}
5-yr annual <br>
return to 30.6 .06

 

$5-\mathrm{yr}$ under or over <br>
performance

 

Value created/ <br>
destroyed on <br>
$\$ 100 \mathrm{k}$ investmen
\end{tabular}

| Index Return AMP Limited | 12.31\% |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| AMP Equity Fund* | 10.80\% | -1.51\% | -\$7,325 |
| AMP Blue Chip Fund* | 10.70\% | -1.61\% | -\$7,795 |
| ANZ |  |  |  |
| ING Australian Share Trust | 11.07\% | -1.24\% | -\$6,048 |
| AXA Asia Pacific Holdings Limited |  |  |  |
| AXA Equity Imputation Fund | 9.10\% | -3.21\% | -\$15,052 |
| AXA Australian Equity Growth |  |  |  |
| Fund | 9.30\% | -3.01\% | -\$14,171 |
| AXA Industrial Fund | 8.90\% | -3.41\% | -\$15,926 |
| Commonwealth Bank Of Australia |  |  |  |
| Colonial Australian Share Fund | 10.20\% | -2.11\% | -\$10,114 |
| Colonial Imputation Fund | 10.11\% | -2.20\% | -\$10,527 |
| Macquarie Bank Limited |  |  |  |
| Macquarie Leaders Imputation |  |  |  |
| Trust | 10.15\% | -2.16\% | -\$10,343 |
| Macquarie Active Aust. Equity |  |  |  |
| Trust | 9.17\% | -3.14\% | -\$14,745 |
| National Australia Bank Limited |  |  |  |
| MLC Vanguard Aust. Shares |  |  |  |
| Index* | 11.03\% | -1.28\% | -\$6,238 |
| MLC Australian Share Fund* | 10.10\% | -2.21\% | -\$10,572 |
| Perpetual Limited |  |  |  |
| Perpetual Industrial Share Fund | 12.20\% | -0.11\% | -\$549 |
| St George Bank Limited |  |  |  |
| Advance Imputation Fund | 9.28\% | -3.03\% | -\$14,259 |
| Suncorp-Metway Limited |  |  |  |
| Suncorp Australian Shares Fund | 12.83\% | 0.52\% | \$2,627 |
| Westpac Banking Corporation |  |  |  |
| BT Australian Share Fund | 11.14\% | -1.17\% | -\$5,715 |
| BT Imputation Fund | 14.88\% | 2.57\% | \$13,528 |
| Average | 10.64\% | -1.67\% | -\$8,054 |
|  |  | * 5 ye | o 31 May |

The average return was $10.64 \%$, against the index return of $12.31 \%$. Yet the funds listed belong to some of the biggest and, you would expect, best-resourced financial services companies in Australia. The value added by Suncorp Metway and the BT Imputation fund go against the general trend. BT's imputation fund provided a very strong return but its Australian share fund failed to beat the index.

## What about tax?

These return figures are all pre-tax. The after-tax returns will generally be a lot worse.
One of the realities of these managed funds is that there would be considerable trading within their portfolio over the five-year period. This trading means there will be tax to be paid on capital gains, and therefore the after-tax returns to investors will be less than the returns published.

Very few Australian fund managers publish after-tax returns. This is a shame, because pre-tax returns offer an incomplete picture for the investor. At the end of the day tax is a reality for all investors, and returns after tax are all that really matter.

Vanguard does publish after-tax returns. For an investor with a $31.5 \%$ tax rate, the five-year after-tax return from the Vanguard Index Australian Shares Fund is $11.33 \%$, meaning that only $0.3 \%$ of the fund's return is lost in tax. This is based on the investor not selling the actual investment, just paying any capital gains tax and income tax each year. Index funds are very tax-effective because they are not actively trading and trying to beat the overall market; there is very much a buy and hold strategy.

It is disappointing that other fund managers have been reluctant to make this information available, information that would help investors make informed investment decisions. The calculation of this should not be difficult. Indeed, if I had money invested with a fund manager who did not have the skills or resources to calculate after-tax returns for each of five tax rates rates - the super fund rate, a $16.5 \%$ rate, $31.5 \%, 41.5 \%$ and $46.5 \%$, then I would be extremely worried about their competence to manage my money.

Most people take an "active" approach to managing their money. This does not necessarily mean that they are regular traders and always looking to buy and sell; rather it means that they hold investment positions that are different from the index in the expectation that they will get long-term returns that are higher than the index. There is certainly nothing wrong with this approach, but it is worth measuring your returns to be sure that the active approach you have chosen is actually adding value to the index. After all, if the biggest and best-resourced financial service companies in Australia can't beat the index it would seem to be a difficult task for anyone.

## Are wrap accounts an alternative?

The short answer is no. Here's why: Many financial planners like to promote their ability to access investments at wholesale rates. In most cases this means placing investments into wholesale funds using "wrap"-style accounts.

Wrap style accounts collectively invest money into cheaper wholesale accounts. The catch is that the wrap accounts have their own fees. The fees on wrap accounts are up to $1 \%$. Add that to a fee of $1 \%$ for the wholesale managed funds and you are paying the same amount as when you started out as a retail investor stuck with retail fees. You generally have to access the wrap account through a financial planner, so if they add another $1 \%$ fee on top of the wrap fees and wholesale managed fund fees the total fee being paid is $3 \%$.

Some financial planners will argue that the wrap account adds significant value to the client. The wrap account will collect the paperwork for the year, prepare a tax statement and allow clients to log on to a screen and see all their investments in the one place. However, a $1 \%$ fee is a lot to pay, particularly if a client is happy to collect the paperwork for themselves and track the value of their investments themselves. What is also certain is that wrap accounts make things very easy for financial planners. They have all their client accounts at the one place, they can charge their fees through the wrap account and can use the wrap service to print of portfolio reports and performance reports for clients. If a financial planner recommends a wrap account, you should ensure that you are getting real value from the recommendation; that it is not merely in your planner's best interest. After all, there is no point in saving $0.5 \%$ in fees by accessing a wholesale managed fund if you are paying an extra $1 \%$ in fees for the wrap account.

## Conclusion

The results of the past five years show that large managed funds, even when they are managed by the biggest financial services firms, do not produce great results for investors. With this in mind, all investors should keep one eye of the performance of their investments, to ensure that they are getting the investment returns that they deserve.

You can try and access lower fees through wrap accounts, but unfortunately you are likely to end up paying even higher fees at the end of the day.

The poor performance of the biggest players in financial planning, many of whom will be supported by a strong sales force of "financial advisers", is a reminder that all investors relying on the advice of an adviser should know exactly how they are paid and who owns their firm.

## Eureka <br> report

'Dimensional Investing' 26 September 2006. By Scott Francis

PORTFOLIO POINT: Dimensional Fund Advisors' passive approach to investing, based on a belief that markets are usually right, produces good returns over time for the risks involved.

This article looks at Dimensional Fund Advisors, which applies academic research findings to investment solutions. With two Nobel Prize winners on its board, Dimensional has always had close ties to academia. Not surprisingly then, it focuses more on the science of capital markets than on speculation.

First, a couple of disclaimers: I use Dimensional funds as a key part of the investment solutions for my clients. That said, I am not paid by Dimensional, nor do I receive commissions from them. I use them only because, as an independent financial planner, I believe they provide the best portfolio solutions for my clients. To take self-interest even further, I invest a significant portion of my own portfolio in Dimensional funds.

## The ' 3 factor model'

In 1992, two University of Chicago professors, Gene Fama and Ken French, wrote a paper entitled The Cross Section of Expected Stock Returns. This long-term study of the US market, which was published in the Journal of Finance, found that the bulk of variation in portfolio returns could be related to three factors:

- Stocks are riskier than bonds and have greater expected returns.
- Small stocks are riskier than large stocks.
- Value stocks are riskier than growth stocks.

The small-company factor had been documented by other researchers and was the foundation of Dimensional's initial strategy on its formation in 1981. Intuitively, this concept sits well with people, because investing in smaller companies is considered riskier and therefore requires a higher return to compensate for that risk.
"Value" is a commonly used investment term and, in its broader use, refers to stocks with low price/earnings ratios or high dividend yields. For their research, Fama and French identified value stocks by using the book-to-market ratio. This ratio, which compares the accounting value of a company's assets to its market value as measured by the share price, is less variable year to year than other ratios such as price/earnings and dividends.

Value stocks - those with high book to market ratios - are companies that are out of favour with the market for one reason or another. So while value and small stocks offer a higher expected return, they also represent a greater risk. This means the additional return, which is the same as the company's cost of capital, can be seen as compensation for that additional risk.

Early critics of Fama and French accused them of "data mining", of sourcing data to support the results that they wanted to find. Since then, however, significant out-of-sample testing of the results, across varying timeframes and different markets, found that both the value and size effects hold true. Today, almost all research into investment returns uses the three-factor model as a benchmark. And in the academic world, the Fama-French model is widely accepted as a premier standard of investment performance.

A second important idea behind the Dimensional approach is the efficient market hypothesis. This theory, developed by Fama in the 1960s, is that markets do such a good job of pricing individual investments that it is difficult to "beat" them consistently. This is the theoretical basis for investing in index funds or using passive managers generally. Since the market is mostly efficient (no one says it's perfect), the long-term costs and tax implications of trying to beat it by picking individual stocks and trying to time your entry and exit points do not pay.

## Building funds from the '3 factor model'

Dimensional has built four Australian equity funds based on the three-factor model and the efficient markets hypothesis: large caps, small caps and value. The fourth, the core equity strategy, provides a single vehicle to capture all three dimensions of risk.

The large-company trust is similar to an index fund: simply investing in the market's biggest 100 companies. Designed to be a core component of an Australian equity portfolio, it distinguishes itself through patient trading and controlling transaction costs. Costs associated with the fund are $0.25 \%$ per annum.

The small-company trust invests in companies smaller than the top 100 companies down to as low as $\$ 15$ million in market capitalisation. It takes care to avoid extremely small or illiquid investments. As at June 30, there were 409 companies in the fund; the cost ratio is $0.6 \%$.

The value fund invests in companies that are in the $30 \%$ of the market with the highest book to market ratios; as at June 30, the fund owned 211 companies with a cost ratio of $0.36 \%$.

The relatively new core equity fund invests across the broad market with an increased exposure to small and value stocks than you would find in a market-weighted portfolio; the cost ratio is $0.35 \%$.

This style of asset class investing provides the individual investor with the benefits of diversification, cost effectiveness and tax efficiency:

- Diversification by holding nearly all the stocks in a particular section of the market.
- Cost effectiveness by not funding expensive research aimed at finding individual stocks that might outperform.
- Tax efficiency by reducing portfolio turnover; that is, the manager is freed from having to pick stocks.


## The results from Dimensional funds

The vast majority of fund managers in Australia do not publish after-tax returns. Two that do are Vanguard (which builds index funds) and Dimensional. That is because the approaches taken by Vanguard and Dimensional are tax-efficient and they are happy to publish the results. It seems to me that returns before tax are not of great use to investors; tax is a reality and only after paying tax are your investment returns really yours to keep.

Five-year average annual returns, after expenses, for an investor in the $31.5 \%$ tax bracket to the end of August this year were:

- Australian Large Trust: $13.65 \%$ ( $13.46 \%$ after tax).
- Australian Value Trust: $19.30 \%$ ( $18.76 \%$ after tax).
- Australian Small Trust: $18.54 \%$ ( $18.41 \%$ after tax).

Dimensional trusts: Five-year average returns to August 31, 2006


Dimensional has a longer history in the United States, where the company was established. It is interesting to look at the 10 -year data for the similar funds there during a time when overall annualised market returns, as measured by the S\&P-500 index, were $8.91 \%$.


## Building portfolios

Dimensional's funds are available to individuals only through accredited, fees-only financial planners who have been through educational programs about the company's philosophy and approach to markets.

Dimensional also asks that their funds not be used in isolation but as part of an overall portfolio with a clear focus on asset allocation, which research shows explains more than $90 \%$ of the variation in total portfolio returns.

Having built an appropriate asset allocation, the funds are then used to diversify Australian shareholdings between large, small and value companies, depending on the client's tolerance of risk. Large, small and value funds are also available for international investments. To reduce volatility in a diversified portfolio, the company also offers fixed-interest trusts, which focus on short-maturity and high credit quality investments.

## Are markets are right or wrong?

As an investor, the most profound question you have to ask is whether you are going to build your portfolio using an active approach - trying to pick stocks, sectors, fund managers and asset classes that will provide above average returns - or are you going to use a passive approach, employing index managers or structured asset class managers like Dimensional.

The significant difference is that the active approach means you are working on the basis that markets are wrong. You are trying to identify shares (or sectors or asset classes) that are, for some reason, wrongly priced and that will have above-average returns in the future. Ironically, the investor in these supposedly mispriced securities is then banking on the market to somehow become more efficient in the future and get the price right, so that their true value will be recognised and the investor can earn an above-average return.

The passive approach works on the premise that markets actually work well. They do a good job of rewarding you over time for the risk that you take on.

## EUREKA report

# David Murray's alpha mail By Scott Francis 

PORTFOLIO POINT: Active investors, as a group, get the same market returns as index huggers; they just pay more fees, as the Future Fund boss points out.

David Murray was reported in a media article last week discussing plans for the investment of the $\$ 50$ billion-plus Future Fund. This is going to be a very interesting story over the next 12 months: just how is Australia's biggest investment portfolio invested?

He was quoted in the article as saying: "What we are looking for will be the cheapest beta risk that we can find in the market, and on top of that, reliable alpha." He went on to say that "alpha is a zero sum game, but a negative sum game after you subtract fees, so to buy reliable alpha to deepen returns will be our objective".

So what are alpha and beta? "Beta" refers to the average market return. For example, if the ASX 300 market returns $24 \%$ over a three-year period, then that is the beta (market) return. "Beta" is captured using an index fund. Index funds invest in the whole market, owning all of the investments in the proportion as they sit in the index. For example, the ASX 300 index measures the return of the biggest 300 stocks listed on the Australian Stock Exchange. An ASX 300 index fund holds these biggest 300 stocks in a portfolio that mirrors the index, and therefore captures the overall return of the index.
"Alpha" generally refers to the activity of adding performance over the market average return. For example, if a large company fund manager produces a return of $27 \%$ over the same period that the ASX 300 returns $24 \%$, then we would say that their alpha is $3 \%$. If they only returned $21 \%$, then their alpha is minus $3 \%$.

## "Alpha is a negative sum game after you subtract fees"

This is an interesting comment by Murray, and one that is particularly profound. He is suggesting that in the market has two groups of investors: passive and active. The passive, or index investors simply receive the average market return (beta), less fees. Averaging returns across all active investors produces the same result - the market return - but because they have been pursuing different stocks, there will be positive and negative alpha (and bigger costs).

Perhaps this is most easily explained by looking at some numbers. Let's assume that we are looking at a period in the market were investment returns were $10 \%$ a year, and that $10 \%$ of the investors are passive, so will receive the beta less, say, $0.5 \%$ costs.

Active investors, overall, also received $10 \%$, whether they were individuals, stockbrokers, managed funds or institutions. However their costs will, on average, be much higher than the index investors because they cover research, brokerage, market impact costs (for large investors who buy and sell such big volumes of stocks such that they move the trading prices against themselves) and fund manager fees. Let's approximate this at $1.5 \%$ a year.

The average return in the active investor side of the market is, after costs, $8.5 \%$. This is why David Murray commented that alpha is a negative sum game after you subtract fees.

## The simple maths of alpha

Bill Sharpe, who won Nobel Prize in Economic Sciences in 1990, wrote an article in 1991 entitled The Arithmetic of Active Management, which was published in the Financial Analysts Journal. In it he made the following statements, which support David Murray's comments about alpha (active management) being a zero sum game.
"Over any specified time period, the market return will be a weighted average of the returns on the securities within the market. Each passive manager (index manager or beta manager) will obtain precisely the market return, before costs. From this, it follows (as the night from the day) that the return on the average actively managed dollar must equal the market return.
"Because active and passive returns are equal before cost, and because active managers bear greater costs, it follows that the after-cost return from active management must be lower than that from passive management."

Once again, the proof is embarrassingly simple and uses only the most rudimentary notions of simple arithmetic.

## Conclusion

This is a major investment debate raging at the moment: active or passive? The great thing is that as an independent investor, you don't have to take sides. It is possible to use a beta and alpha strategy where you capture the market performance in a low-cost way, and look to add value with active strategies in other parts of the portfolio, always acknowledging that this is a "negative sum game".

David Murray provided a little bit of investment advice in the article as well. He said: "If I were just leaving school, I'd invest in an index product provided the fees were right." Surely this is not the same David Murray who spent a career at Commonwealth Bank selling active managed funds that charged fees of $2 \%$ a year to investors?

