Arnhem INVESTMENT MANAGEMENT

# THE CASE FOR EQUITIES

## Why equities should remain a part of your portfolio through retirement

### INTRODUCTION

Conventional wisdom would suggest that as you approach retirement you should move all your savings into income producing investments rather than leaving them in growth assets. Indeed there is a great deal of merit in constantly reviewing your mix of assets but one should not lose sight of the fact that the average life expectancy of a male retiring at age 65 is around 18.5 years and a female 21.5 years. In fact, around 1 in 4 men retiring at age 65 will live at least another 25 years (to age 90), while 1 in 3 women will live past that milestone.[1]

With a life expectancy of this length, many retirees greatest financial risk will be outliving their saving and having to rely on an unpredictable public pension.

This paper illustrates that many retirees may be better off maintaining a significant allocation to growth assets, in particular shares, rather than switching wholly to more conservative asset classes such as cash, bonds or annuities.

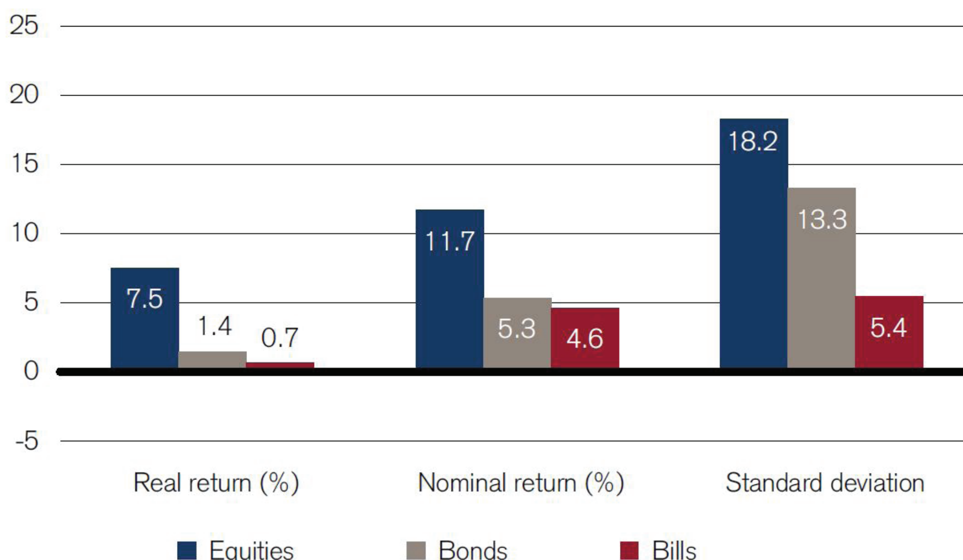
In the first part of this paper, we show that shares have been a sound hedge for inflation. We also show that over the long term, shares generally provide more favourable outcomes than bonds (albeit with higher volatility). We then demonstrate that historically, a portfolio of shares has been on average a better alternative than a more conservative portfolio in retirement.

In the second part of this paper, we look at whether high yield stocks are the best source of sustainable income and show that companies that can grow their earnings sustainably are likely to be a better source of income over the medium term. We also look at the income generation of the Arnhem Australian Equity Fund (Arnhem Fund) over time.

### SHARES AS AN INCOME STREAM

Shares are well known to offer the potential for higher returns, offset by the likelihood of higher volatility, than more stable asset classes. This has certainly been the historical experience, with shares delivering substantially greater performance over time than bonds or other interest rate asset classes. Chart 1 shows that the average equity returns over 110 years is 11.7% compared to Bonds 5.3% and Bills 4.6%

**Chart 1: Long term Performance of Different Asset Classes 1900-2010**

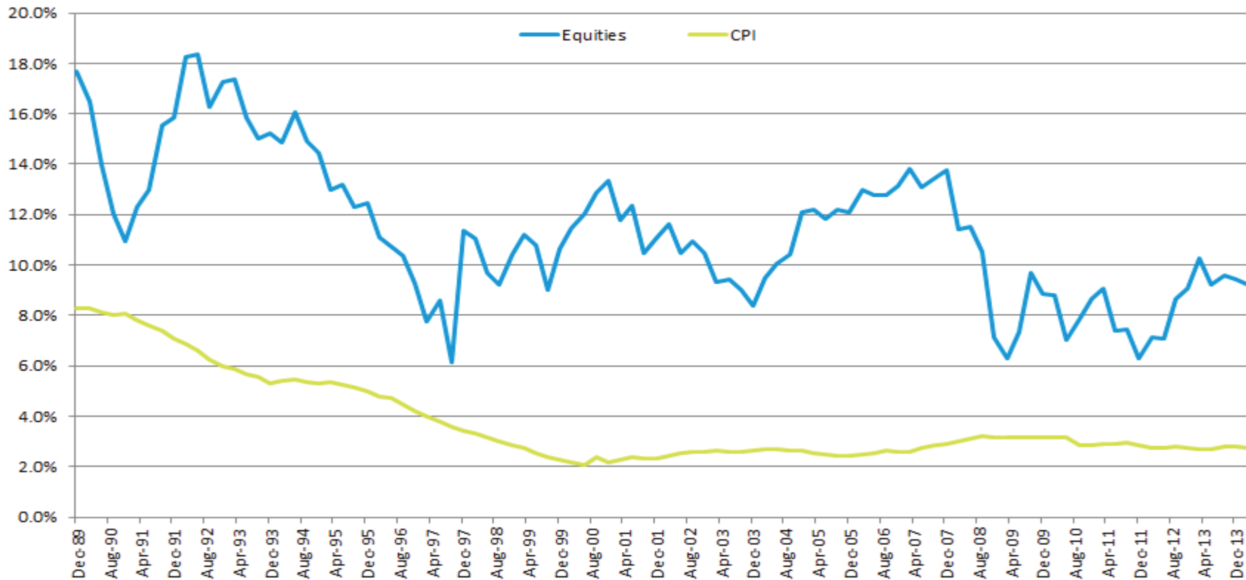



*Source: Elroy Dimson, Paul Marsh and Mike Staunton, Credit Suisse Global Investment Returns Sourcebook 2010. Past performance is not a reliable indicator of future performance.*

Australian shares are one of the best inflation hedges over longer periods of time. Chart 2 shows the rolling performance of Australian shares measured over 10 year periods. It shows that over all rolling 10 year periods since 1980, shares have delivered positive returns and have outperformed inflation, suggesting that shares are a good inflation hedge.

[1] Australian Life Tables 2005-07

**Chart 2: Rolling 10 Year Performance of Australian Shares and Inflation (CPI)**



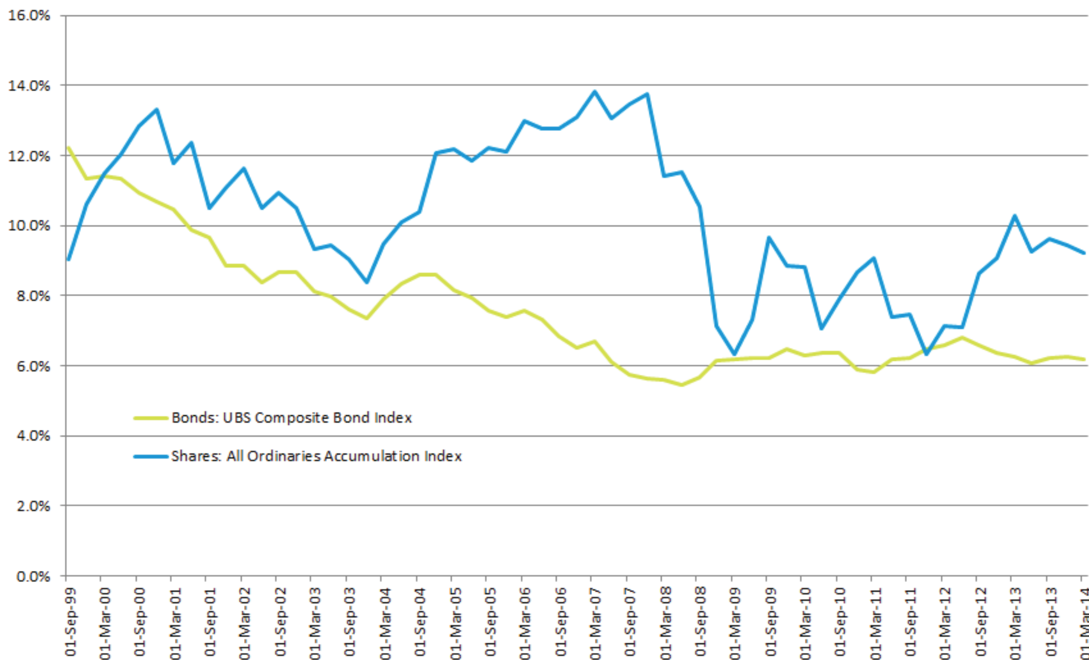

*Source: Iress (XAOAI, ACPI). Past performance is not a reliable indicator of future performance.*

The back data for the bond market indices are somewhat more limited, but Chart 3 shows 10 year rolling performance of Australian shares relative to Australian Bonds (Australian Composite Index). This shows that over most periods, shares have been a superior alternative.

We note however that bonds are likely to have done better than shares for a period prior to the commencement of this chart due the compression in bond yields that took place in the late eighties, combined with the chequered performance of shares due to the crash of 1987.

To counter this however, we refer you to the appendix where there are two charts (Charts 13 and 14) showing that over the 101 years to 2001, shares have been a far better inflation hedge than bonds as real returns, on average, have been better for shares than bonds over longer measurement periods.

**Chart 3: Rolling 10 Year Performance of Australian Shares and Australian Bonds**




*Source: Iress (XAOAI, SCPALL). Past performance is not a reliable indicator of future performance.*

**Can shares can provide an adequate stream of income when compared to annuities or other more certain income streams?**

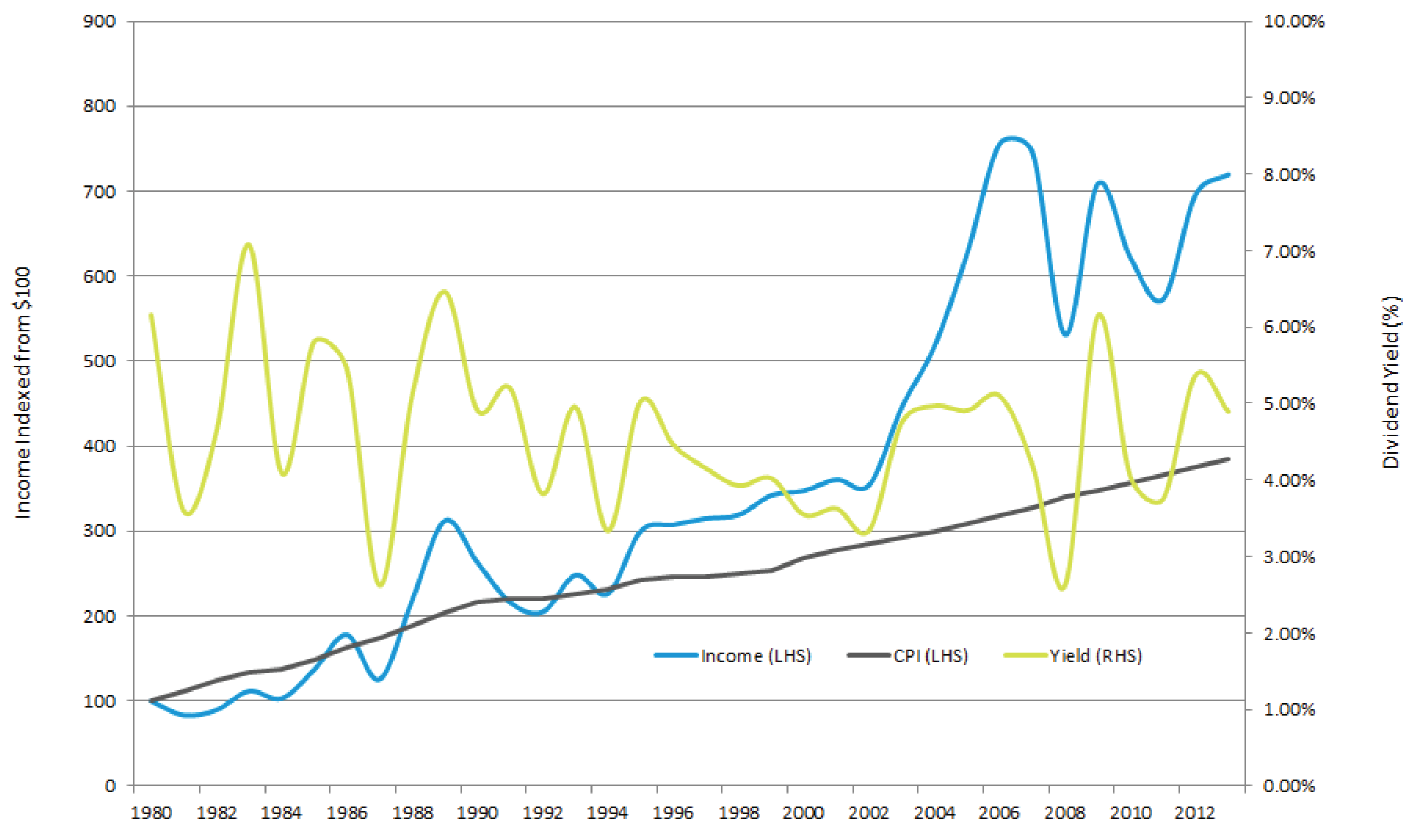
Dividends, while they have been volatile at times, have generally grown at a faster pace than living costs, as measured by CPI. It is worth noting too that Chart 4 excludes franking credits which are a real cash benefit for Australian tax residents investing in Australian shares, on top of income growth and capital return.

With that backdrop, we can show that when living off a combination of capital and income, an equity portfolio will serve you well.

The Association of Superannuation Funds of Australia (ASFA) has suggested that a couple currently needs $57,665[2] per annum to retire with a comfortable lifestyle. If you don't want to be reliant on any pension entitlement, and want to fund yourself for at least 25 years, you will need a current starting balance of at least $1,043,794[3].

To consider whether an equity portfolio can support retirement, we have modelled equity funds for 25 year retirement periods starting in each year from 1965 to 1989 (and for partial periods from 1990 to 2007). In our analysis, we use the ASFA suggested current starting balance and retirement income stream noted above, instead of discounting both numbers back to the start of each retirement period. This effectively scales the starting capital and income requirements equally, such that the dollar values are more comparable between retirement years. However, as both income and capital are scaled equally, it does not change the results of this analysis. That is, the outcome in terms of whether the model fund can support 25 years of retirement, and the ending capital relative to the starting capital, remain the same. In years where the dividend stream does not provide the required inflation adjusted income stream, shares are sold to meet that income objective (i.e. capital realised). Essentially, if you don't run out of capital, you have met your retirement income requirements. In fact, in many cases your estate will end up with far in excess of your starting capital, allowing you to leave a financial legacy for your family.

**Chart 4: Dividend Income, Dividend Yield and CPI (1980-2013)**




*Source: Iress (XAOAI, ACPI). Past performance is not a reliable indicator of future performance.*

[2] www.australiansuper.com
[3] Assumes 2.5% inflation and 5% investment return per annum. No income tax is included.

By way of example, let's look at a couple who retires in 1965, with the equivalent of $1,043,794 and a requirement of a retirement income of $57,665 indexed by 2.5%. Table 1 looks at the capital value of an equity investment which is used to fund retirement. By the end of 25 years, even after living off income and capital, they would then have an asset worth over $5m.

**Table 1: Year Equity Fund for Income Model 1965-1990**

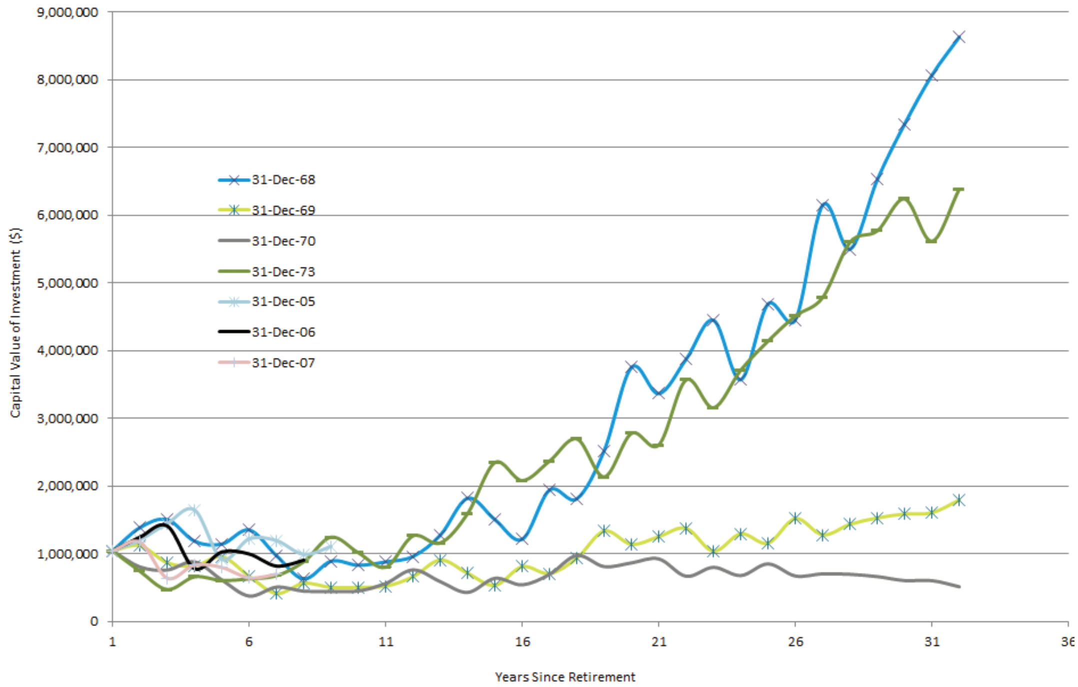
| | Start of Year Capital | Income Required | Income Generated | Capital Realised (Income Reinvested) | End of Year Capital |
|---|---|---|---|---|---|
| **1965** | 1,043,794 | 57,665 | 40,740 | 16,925 | 897,610 |
| **1966** | 897,610 | 59,107 | 35,034 | 24,073 | 905,334 |
| **1967** | 905,334 | 60,584 | 35,336 | 25,249 | 1,188,842 |
| **1968** | 1,188,842 | 62,099 | 46,401 | 15,698 | 1,582,722 |
| **1969** | 1,582,722 | 63,651 | 61,774 | 1,877 | 1,722,518 |
| **1970** | 1,722,518 | 65,243 | 67,231 | -1,988 | 1,361,534 |
| **1971** | 1,361,534 | 66,874 | 53,141 | 13,732 | 1,316,926 |
| **1972** | 1,316,926 | 68,546 | 51,400 | 17,145 | 1,561,786 |
| **1973** | 1,561,786 | 70,259 | 60,957 | 9,302 | 1,127,844 |
| **1974** | 1,127,844 | 72,016 | 44,020 | 27,995 | 736,284 |
| **1975** | 736,284 | 73,816 | 28,737 | 45,079 | 1,048,008 |
| **1976** | 1,048,008 | 75,661 | 40,904 | 34,757 | 985,596 |
| **1977** | 985,596 | 77,553 | 38,468 | 39,085 | 1,051,033 |
| **1978** | 1,051,033 | 79,492 | 41,022 | 38,470 | 1,155,389 |
| **1979** | 1,155,389 | 81,479 | 45,095 | 36,384 | 1,541,574 |
| **1980** | 1,541,574 | 83,516 | 94,936 | -11,420 | 2,211,270 |
| **1981** | 2,211,270 | 85,604 | 79,612 | 5,992 | 1,839,565 |
| **1982** | 1,839,565 | 87,744 | 85,029 | 2,715 | 1,496,751 |
| **1983** | 1,496,751 | 89,938 | 105,947 | -16,010 | 2,406,659 |
| **1984** | 2,406,659 | 92,186 | 98,446 | -6,260 | 2,260,188 |
| **1985** | 2,260,188 | 94,491 | 131,429 | -36,938 | 3,161,545 |
| **1986** | 3,161,545 | 96,853 | 172,462 | -75,609 | 4,715,584 |
| **1987** | 4,715,584 | 99,274 | 123,797 | -24,523 | 4,245,892 |
| **1988** | 4,245,892 | 101,756 | 216,845 | -115,089 | 4,903,143 |
| **1989** | 4,903,143 | 104,300 | 317,114 | -212,813 | 5,652,021 |
| **1990** | 5,652,021 | 106,908 | 277,487 | -170,580 | 4,555,021 |

*Source: Arnhem Investment Management. Past performance is not a reliable indicator of future performance.*

Notes to analysis: (1) No adjustment was made for tax. Share yield is not available prior to 1980, so we have assumed a 3.9% yield which is 85% of the average yield for the period 1980-2010. (2) This table, along with the rest of the analysis in this section is based on the current value of money. This effectively scales the starting capital and income requirements equally, such that the outcome (i.e. whether a portfolio of equities successfully funds the retirement scenario, and the ending capital relative to the starting capital) is the same but the dollar values are more comparable between retirement years.

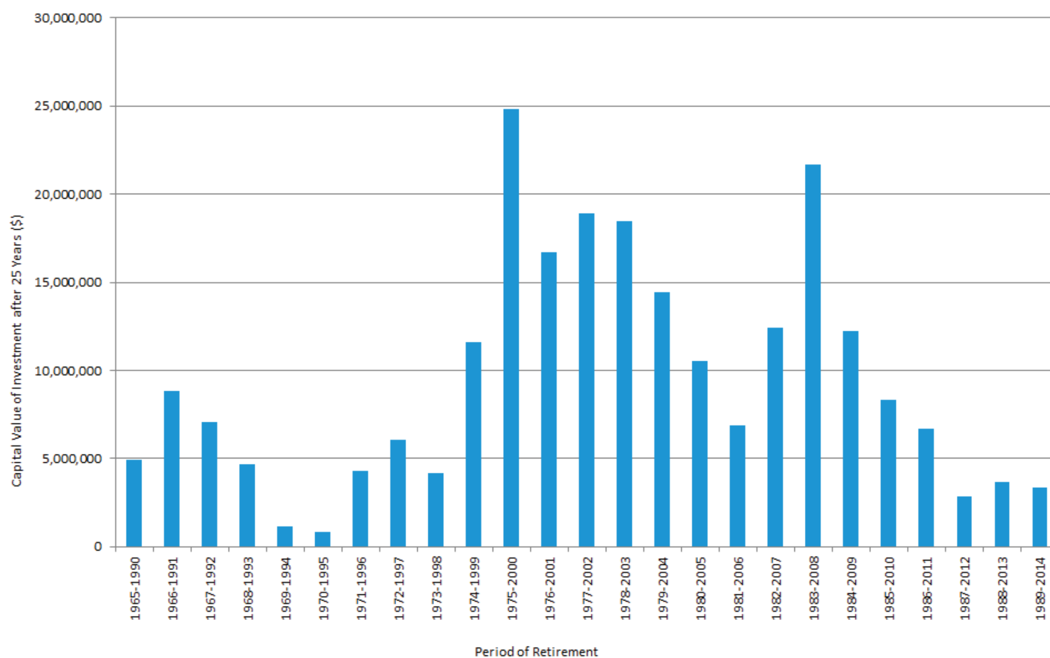
Of course, not every scenario results in as positive an outcome as the example shown above. In Chart 5 below, we look at some of the retirement base years that generate larger negative capital outcomes in the early years. That is, you experience years when your initial capital position is substantially eroded via draws on capital in order to maintain your income levels. This chart also includes the early development of some more recent experiences which incorporate the Global Financial Crisis (2005/2006/2007). **In each and every case, including the worst experience, initial equity investments would have sufficiently funded a retirement income for at least 25 years, and in many cases provided a capital legacy.** Chart 6 shows the capital position of your equity portfolio after 25 years for each of the retirement years.

**Chart 5: Capital Remaining after Living Expenses**




*Source: Arnhem Investment Management. Past performance is not a reliable indicator of future performance.*

**Chart 6: Capital Position of Portfolio after funding Retirement for 25 years**




*Source: Arnhem Investment Management. Past performance is not a reliable indicator of future performance.*

Without doubt retirees would find this capital volatility extremely unsettling and are unlikely to take solace from the fact that holding all your retirement funds in equities would have historically adequately funded ones retirement. Indeed, we have little doubt that those retiring in 1973 would not have had the resolve to maintain an equity portfolio, after seeing their retirement nest egg halve in just 2 years.

**The conventional wisdom to reweight your asset mix away from shares at retirement could be misguided. While a retirement portfolio which is fully invested in shares is likely to result in outcomes too volatile for retirees to stomach, shares should remain a significant portion of your savings at retirement, with review and rebalancing taking place over time.**

## SUPER INFLATION

It should also be noted, that this modelling assumes that spending power (inflation) increases by 2.5% each year. However, Australia has experienced two periods of inflation well in excess of this. The early 1950s (when inflation averaged 15% a year for three years and peaked at 23.9% in the 4th quarter of 1951) and the 1970s/early-1980s (when inflation averaged 10% per year). The cause of both of these inflationary periods is quite different. The 1950s was in part caused by the price of wool during the Korean War, while the 70s was largely caused by energy price shocks.

Would an equity portfolio have been able to maintain the real purchasing power, while funding your retirement, through such extreme events? Based on historical equity market performance, the starting balance of $1,043,794 and starting income requirement of $57,665 used earlier can accommodate inflation of up to 3.5% in all but one retirement year (1970). Lifting your starting capital to $1,200,000 would see you manage with inflation of up to 5% in all years. However, you would have needed a far higher starting balance to maintain real purchasing power at the rates of inflation experienced in the 70s. In fact, the single worst year to retire would have been 1970, where one would have had to retire with in excess of $1,750,000 to maintain purchasing power throughout the high inflation years and fund retirement for 25 years (but no longer). By contrast, someone retiring in 1971 on that amount would have had a capital base of almost $7,000,000 some 25 years later!

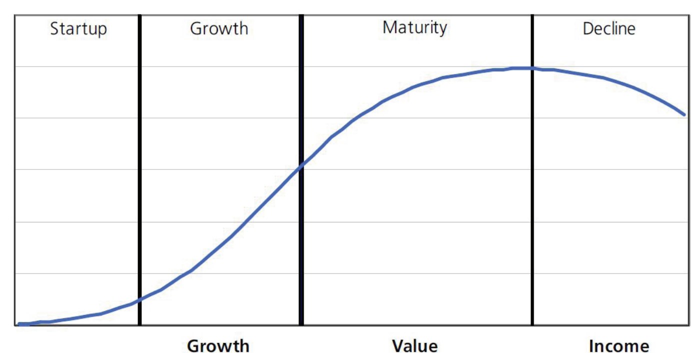
Whilst changes in the variables used can lead to different outcomes, for those concerned about a return to the inflation rates of the 70s, one can take some solace in the fact that the RBA now has an inflationary target. The RBA introduced a target inflation band of 2-3% in 1993, and has largely been successful in keeping within, or close, to that band. While one must be aware of the potential risk of inflation eroding purchasing power, we see a low probability that inflation will spike to double digit levels in the medium term, barring a large exogenous shock.

## DISPELLING THE MYTH – HIGH DIVIDEND YIELD STOCKS

If one is to invest a substantial portion of one's retirement funds into shares, we must understand how best to achieve a portfolio with sustainable growing income. Global bank UBS reviewed this question in a research note that they published in 2012. In this note, they concluded that "using dividend yield to form a portfolio will provide unwanted tilts into financials and away from resources, but more importantly, into companies that have passed the "mature" phase of the lifecycle and are into "decline". Whilst the yield on these stocks may be attractive, they tend to be very volatile."

By way of illustration, UBS stylized a company's life cycle into 4 phases as illustrated in Chart 7. Typically the highest yielding stocks are those that are in decline, being those companies that have no growth opportunities requiring capital deployment.

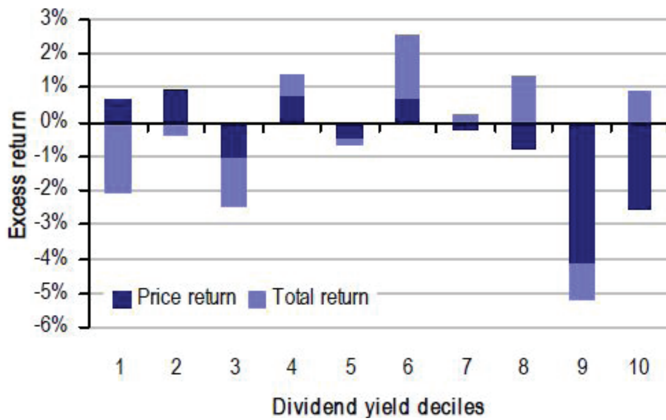
**Chart 7: Four Phases of a Company's Lifecycle**




*Source: UBS*

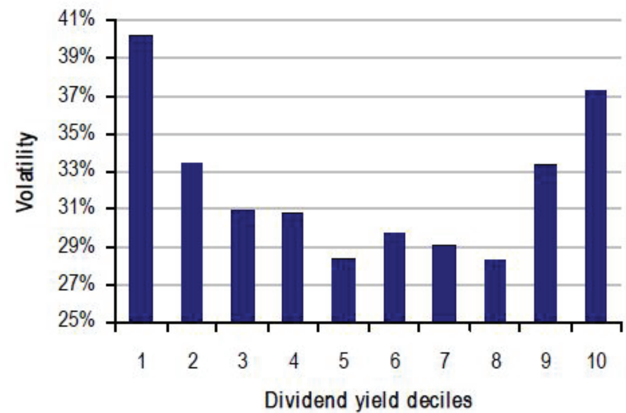
UBS went on to conclude that when building an equities income portfolio it is more instructive to focus on factors that predict dividend sustainability or indeed dividend growth rather than focussing on companies with extraordinary yields. Charts 8-11 below show that the highest yielding stocks (those in deciles 9 and 10) tend to underperform and are very volatile (measured over the period 1994 to 2012).

**Chart 8: Excess Return by Dividend Yield Decile**




*Source: UBS, Aspect. Past performance is not a reliable indicator of future performance.*

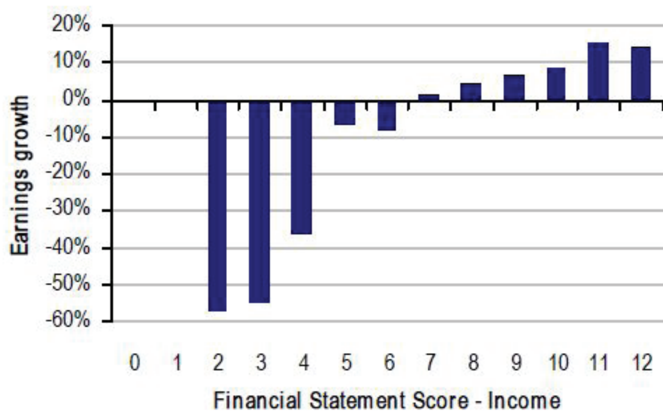
**Chart 9: Volatility of returns within each dividend yield decile**




*Source: UBS, Aspect. Past performance is not a reliable indicator of future performance.*

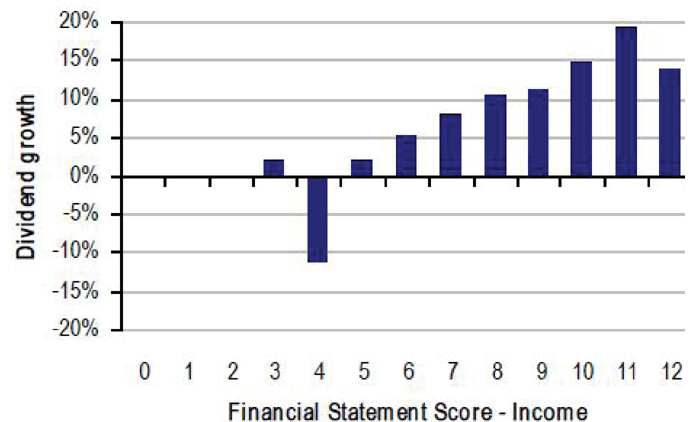
Instead, one is better off focusing on sustainable yield. UBS screened for this by scoring each company for financial statement quality and showed a strong correlation between this score and earnings per share and dividend growth.

**Chart 10: Earnings Growth Split by Financial Statement Score**




*Source: UBS, Aspect. Past performance is not a reliable indicator of future performance.*

**Chart 11: Dividend Growth Split by Financial Statement Score**




*Source: UBS, Aspect. Past performance is not a reliable indicator of future performance.*

We have run the Arnhem portfolio through this measure and have determined that the median Financial Statement Score of its stocks is 9, positioning it well to grow income and returns over time.

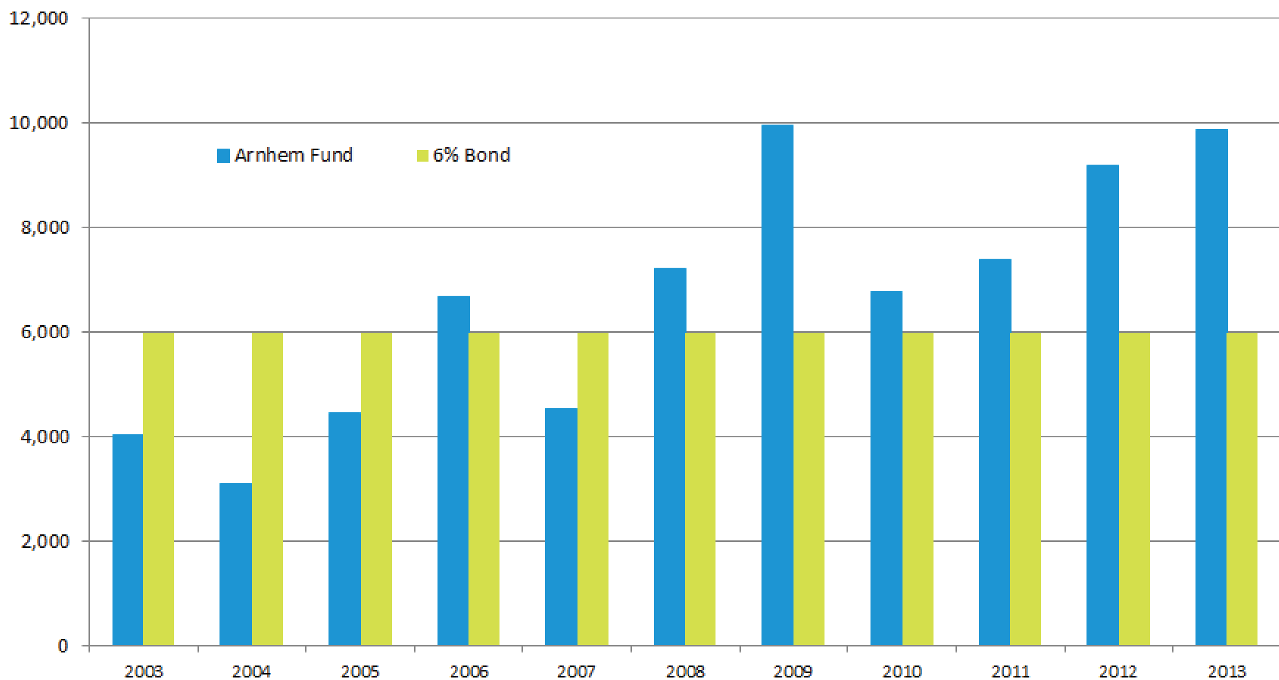
## THE INCOME TEST - THE ARNHEM AUSTRALIAN EQUITY FUND

Finally, we have reviewed how the Arnhem Australian Equity Fund (Arnhem Fund) has performed in respect of income growth over time. Our ten year analysis (2003 to 2013) assumes an initial $100,000 investment in the AAEF and that the investor decides to receive all dividends and capital distributions rather than reinvesting these distributions. Our analysis of pre-tax returns since 2003 shows that $100,000 invested into the AAEF has delivered accumulated dividend income of $73,104, 10.8% more than the accumulated income from a 6% coupon bond of $66,000[4]. As the chart shows, income is lower than a 6% bond yield in the initial years, but quickly grows to exceed the annual income of a fixed bond over time.

Importantly, we have not incorporated the tax benefits from receiving franking credits on distributions from the Fund. Nor have we included the capital component of the distribution in the income calculation.

[4] We have used 6% as that has historically been used as the “risk free rate”. In reality, one would struggle to find a low risk bond offering such attractive returns.

**Chart 12: Income from $100,000 invested**




*Source: BNP Paribas Investment Partners (Australia) Limited, Arnhem Investment Management. Past performance is not a reliable indicator of future performance*

However, as with the previous back-tested portfolios, there are downsides to relying on equities income as your sole source of income. The first key observation is that there are several years where bonds would have delivered a better income stream than shares.

The second observation is that there are large variations in distributions, including a sharp fall in dividend income from 2006 to 2007 and again from 2009 to 2010. Again, this highlights the benefit of a balanced portfolio of assets.

## CONCLUSIONS

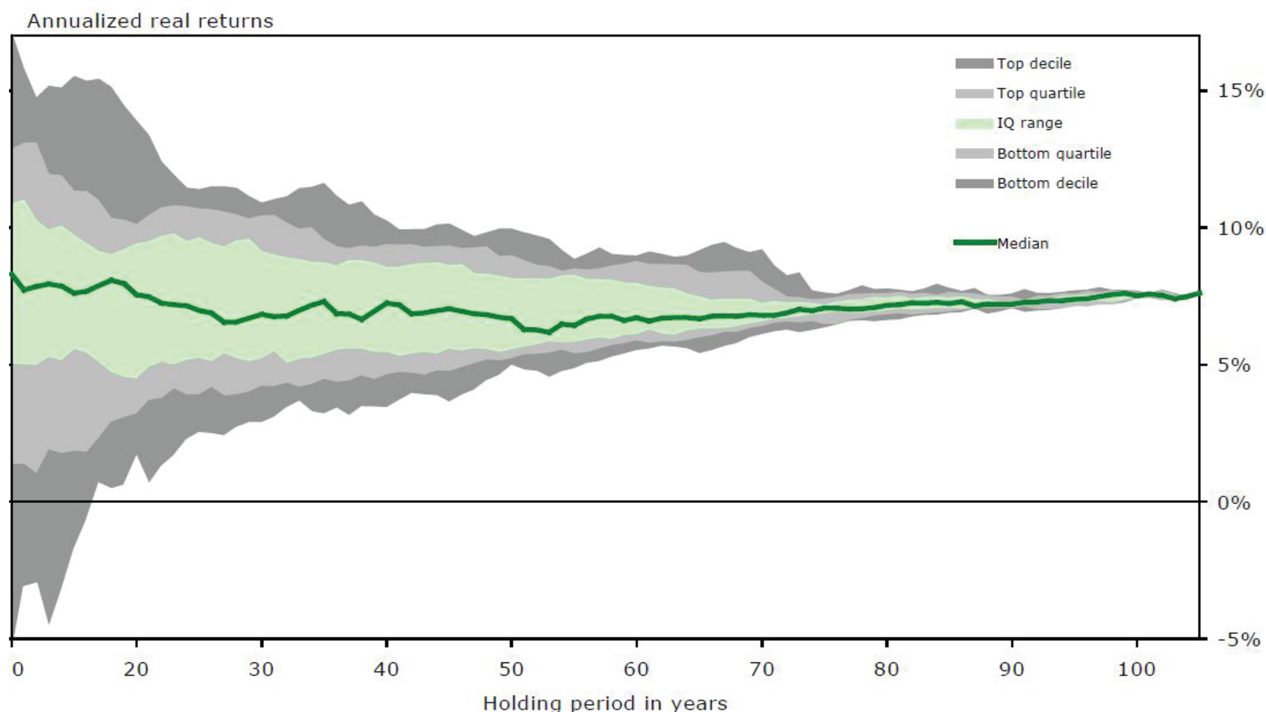
This analysis highlights the importance of incorporating a reasonably significant equity weighting during your retirement years as equities can deliver superior income outcomes and are a good hedge against inflation. In addition, by investing your equity portfolio in sustainably growing yield companies, your financial circumstances may indeed be far better than if all your superannuation was put solely into “high yield” strategies. However, returns from equities can be more volatile. As such, while they ought to form a meaningful part of your post retirement income, they should be balanced with lower volatility assets.

### RISK

All investments carry risk. Different investment strategies may carry different levels of risk, depending on the assets acquired under the strategy. Assets with the highest long term returns may also carry the highest level of short term risk. You should consider risk factors when deciding whether to invest. We recommend you talk to an adviser about the risks involved and how it might impact on your individual financial circumstances.

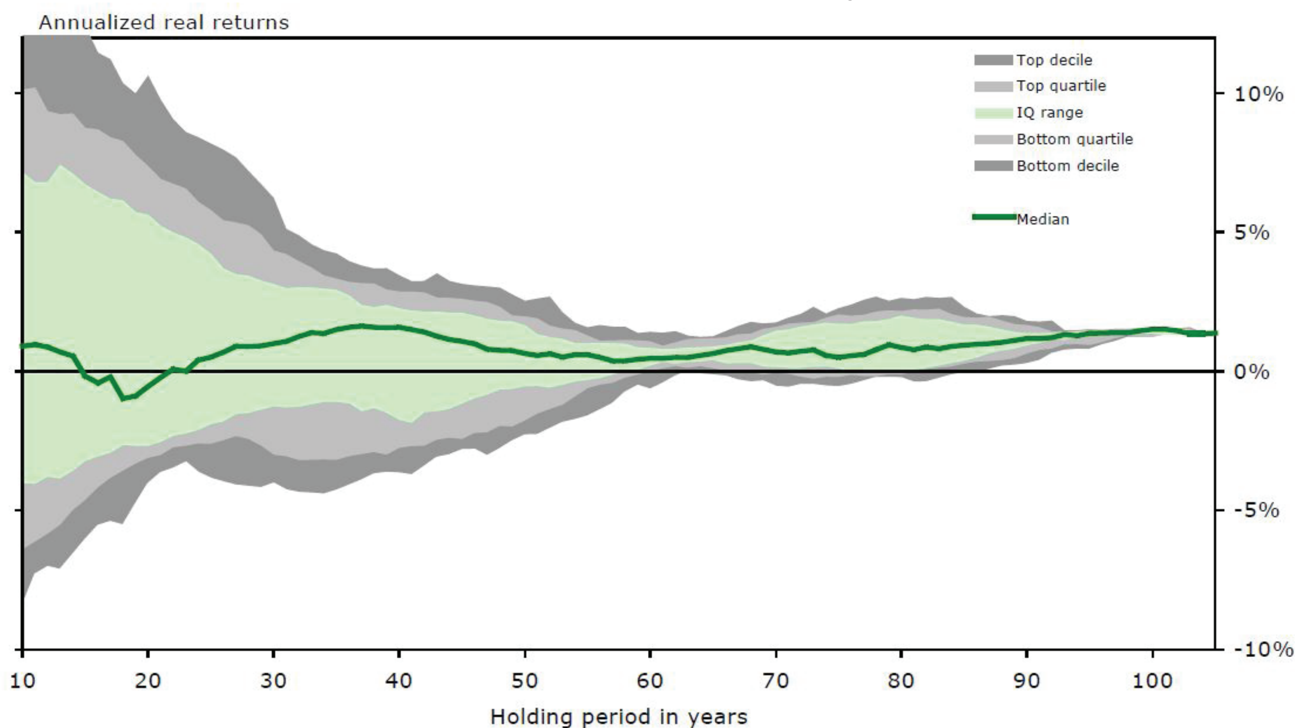
## APPENDIX

**Chart 13: Dispersion of real returns on Australian equities over periods of 10-105 years**




*Source: Dimson, Marsh and Staunton, Triumph of the Optimists: 101 Years of Global Investment Returns, Princeton University Press, 2002 and subsequent research. Past performance is not a reliable indicator of future performance.*

**Chart 14: Dispersion of real returns on Australian bonds over periods of 10-105 years**




*Source: Dimson, Marsh and Staunton, Triumph of the Optimists: 101 Years of Global Investment Returns, Princeton University Press, 2002 and subsequent research. Past performance is not a reliable indicator of future performance.*

## ABOUT ARNHEM INVESTMENT MANAGEMENT

Arnhem Investment Management is a boutique Sydney based Australian Equity Fund Manager. Arnhem manages approximately AU$4 billion of institutional and retail funds.*

The founding members of the investment team, George Clapham, Neil Boyd-Clark and Mark Nathan were instrumental in the establishment of the Australian equity funds for ABN AMRO Asset Management in 2000.

In 2008 they formed the boutique manager, Fortis Investment Partners which was renamed Arnhem Investment Management in 2010. Arnhem is majority owned by the investment team with BNP Paribas Investment Partners having a minority holding.

*As at 30 June 2014

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* Source: BNP Paribas Investment Partners as at 30 June, 2014

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