2016 Long-term Investing Report

Taking a long-term view of the historical investment landscape.
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Executive Summary

The 2016 Russell Investments/ASX Long-term Investing Report underscores the danger of Australian investors relying on local asset classes, and traditional ‘do-it-yourself’ approaches, to achieve their long-term investment goals.

The key findings this year are that domestic shares, bonds and cash yielded sub-3% returns in 2015, and Australian shares lagged overseas markets for the third successive year.

Over the 10-year period to December 2015, most traditional asset classes have lost momentum due to the recent weak performance of core equity and bond assets. In the same timeframe, Australian listed property and cash returned a meagre 1.7% and 3.1% respectively, compared to 7.3% from global fixed income and 6.2% from hedged global shares. Only residential property held its own at 8.0% p.a., making it the best performing asset class over the 10-year period to 31 December 2015.

These findings, combined with local currency falls and interest rates reaching historic lows, provide overwhelming evidence that investors who continue to rely on the domestic triple treat (Australian shares, currency and residential property) are in for a shock. The factors that, for 20 years, drove above-market returns across the triple treat are no longer in play. Australia’s resources boom, which took the local currency to unprecedented heights, is over. China’s growth is slowing – as is Chinese investment in Australia’s residential property. In a business environment characterised by declining demand, low confidence and falling capital expenditure, corporate profit growth is unlikely to return to its pre-2008 crisis heights.

It’s time for local investors to consider diversifying domestic exposures to include global asset classes and alternative assets and strategies. In a new era of lower returns, slower growth and higher volatility, investors need access to a wider and deeper set of alternative investment assets and strategies to reduce their reliance on traditional return drivers.

Traditional assets no longer enough

The long-term trend data indicates that relying on traditional asset classes, especially domestic shares, cash and property, will no longer achieve investors’ real return objectives – typically quantified as a target percentage above inflation.1 In fact, they have already ceased to do so, as shown in this year’s analysis.

Looking at the 10 years to December 2015, CPI +4% creates a return objective of 6.6% p.a. Yet, as this report demonstrates, a balanced managed fund, with a typical investment structure of 70% growth assets and 30% defensive assets, would have only returned 5.7% p.a. on a gross basis over this time.

Of the traditional core asset classes analysed in this report, only Australian residential investment property and global bonds (hedged) achieved this CPI +4% objective over 10 years.

Cracks appearing in residential property

Although Australian residential investment property was the top performing asset class over the last 20 years and continued to perform strongly in 2015, by year end, cracks were starting to appear. In the fourth quarter of 2015, Australia as a whole posted a -0.6% growth rate in median property prices, the first negative growth quarter since September 2012.

In other signs that property’s dream run may be coming to an end, in Sydney, the median property price growth rate peaked in the first half of 2015, fell in the second half of the year, and turned negative by the fourth quarter. In a similar trend, Melbourne also posted a negative growth rate in the final quarter of 2015. Perth returned a negative growth rate for the whole year.

This doesn’t necessarily mean that the Australian residential investment property market is poised to crash, but it certainly indicates a slowdown. In the coming years, investors are unlikely to be able to depend on this asset class to provide stable, positive returns.

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1 Commonly quantified in the market as Consumer Price Index (CPI) + 4% to reflect a moderate level of capital growth above purchasing power.
Relying on a single asset class to carry a portfolio can be a very dangerous play. Betting purely on residential property is akin to picking one higher yielding stock and hoping it performs in line with or better than the market. Just as smart investors don’t rely on a single stock in a shares portfolio, they also shouldn’t hold a large part of their portfolio in any one large investment – especially one where price/valuation may have peaked.

Investors should also avoid basing their investment decisions purely on historical returns. To achieve the investment returns they seek in a lower return, higher volatility environment, investors need to consider taking a different investment approach.

Diversify
Given the prospect of traditional assets achieving low to mid single-digit returns, with much greater volatility, local investors need to look beyond domestic assets and beyond traditional shares and bonds. By diversifying their portfolios and exposing them to more asset classes, investors can spread risk out and limit the downside risk in their investments in periods where traditional share and bond markets fall.

This means investors should consider making use of a wide range of alternative assets and strategies, such as high-yield bonds and volatility strategies that are less affected by market fluctuations in traditional markets.

Navigate markets dynamically
Investors need a more dynamic approach to capture these new return opportunities, as evidenced by the increase in the number of dynamically managed multi-asset real return funds available in 2015. These funds tend to be more agile than traditional balanced funds and aim to proactively anticipate and adapt to the opportunities and curveballs that markets can present to investors.

In summary, in coming years, traditional share and bond markets are expected to deliver lower returns and higher volatility than the buoyant conditions (driven by falling interest rates and inflation, productivity gains and strong economic growth) of the last few decades. Investors wanting to continue to achieve their required rate of return, at a risk level they can tolerate, should consider dynamically managed real return funds to gain exposure to a more diversified investment opportunity set and be able to quickly respond to changing market conditions.

Analysis of the 2016 update

Results:
10 years to 31 December 2015
Investment performance was mixed in the 2015 calendar year, despite all asset classes producing positive returns. Traditional asset classes, such as domestic shares, domestic bonds, international shares (hedged) and global bonds (hedged), produced low single-digit returns. Only international shares (unhedged) and Australian listed property enjoyed double-digit returns.

Over the longer 10-year period, all asset classes analysed in this report produced positive returns. Australian residential investment property overtook international shares (hedged) as the best performing asset class over the 10-year period to 31 December 2015.

2 See Russell Investments’ Global Market Outlook quarterly updates for details.

3 Volatility strategies are innovative ways to take advantage of not just whether the market will go up or down, but also how erratically these swings occur.
Comparison across asset classes on a before-tax basis: 10 years

- Australian residential investment property overtook global shares (hedged) this year and was the strongest performing asset over the 10-year period, producing 8.0% p.a. on a before-tax, after-fees basis.
- This was followed by global bonds (hedged), at 7.3% p.a. while global shares (hedged) tied with Australian bonds, with both returning 6.2% p.a. over 10 years.
- Australian shares fell out of the top 4 performing asset classes (returning 5.5% p.a.) after a weak 2015, while 2005, which had returned 22.5%, dropped off the 10 year period analysed.
- Australian listed property had a strong year due to the low interest rate environment, returning 14.4% in 2015. However, it continued to achieve a below-inflation return over the 10 years to 31 December 2015. Australian listed property returned 1.7% p.a. over 10 years, while inflation was 2.6% p.a.
- Cash returns averaged 3.1% p.a. for the 10-year period.
- Managed funds performed in line with expectations over a 10-year horizon to 31 December 2015, given the low returns observed in traditional assets over 2015. The sample conservative managed fund returned 5.6% p.a., while the sample balanced managed fund returned 5.7% p.a., and the sample growth managed fund returned 5.8% p.a.
- The marginal difference in returns between the sample conservative and growth funds was due to the stronger performance from domestic and global fixed income compared to Australian and global shares.

Exhibit 1 Gross returns for 10 years to December 2015

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Returns (% p.a.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian shares</td>
<td>5.5</td>
</tr>
<tr>
<td>Residential investment Property</td>
<td>8.0</td>
</tr>
<tr>
<td>Australian Listed Property</td>
<td>1.7</td>
</tr>
<tr>
<td>Australian Bonds</td>
<td>6.2</td>
</tr>
<tr>
<td>Global Bonds (hedged)</td>
<td>7.3</td>
</tr>
<tr>
<td>Cash</td>
<td>3.1</td>
</tr>
<tr>
<td>Global Shares (hedged)</td>
<td>6.2</td>
</tr>
<tr>
<td>Global Shares (unhedged)</td>
<td>4.6</td>
</tr>
<tr>
<td>Global Listed Property (unhedged)</td>
<td>5.0</td>
</tr>
<tr>
<td>Conservative managed fund*</td>
<td>5.6</td>
</tr>
<tr>
<td>Balanced managed fund*</td>
<td>5.7</td>
</tr>
<tr>
<td>Growth managed fund*</td>
<td>5.8</td>
</tr>
</tbody>
</table>

* Only before-tax returns have been calculated. See Appendix for details on how these sample fund are defined.

Note: All returns are net of costs. Past performance is not a reliable indicator of future performance.
Comparison across asset classes taking into account tax: 10 years

- Returns changed significantly when tax was factored into the analysis, as tax had different levels of impact across the different asset classes.
- Bonds and cash were more heavily affected than Australian shares and Australian residential investment property. Franking credits added to the returns for Australian shares, while tax deductible expenses from Australian residential investment property lowered taxes paid. In contrast, defensive assets, such as Australian bonds and cash, were taxed without any concessions.
- The impact of tax on global assets was noticeably larger than the impact of tax on Australian assets.

Exhibit 2 Before & After Tax Returns for 10 Years to December 2015

<table>
<thead>
<tr>
<th>Returns (% p.a.)</th>
<th>Gross return</th>
<th>Superannuation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian shares</td>
<td>5.5</td>
<td>5.8</td>
</tr>
<tr>
<td>Residential investment property</td>
<td>3.3</td>
<td>3.9</td>
</tr>
<tr>
<td>Australian listed property</td>
<td>1.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Australian bonds</td>
<td>6.2</td>
<td>6.2</td>
</tr>
<tr>
<td>Global bonds (hedged)</td>
<td>7.3</td>
<td>7.3</td>
</tr>
<tr>
<td>Cash</td>
<td>2.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Global shares (hedged)</td>
<td>4.2</td>
<td>5.4</td>
</tr>
<tr>
<td>Global shares (unhedged)</td>
<td>4.6</td>
<td>5.5</td>
</tr>
<tr>
<td>Global listed property (unhedged)</td>
<td>4.2</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Note: All returns are net of costs. Past performance is not a reliable indicator of future performance.
Comparison with last year’s gross returns: 10 years

Comparing the 10-year results to 31 December 2014 and 31 December 2015 on a gross basis, global shares (hedged) fell from first place to third and was replaced with Australian residential investment property, producing 8.0% p.a. Global bonds (hedged) came in second, producing 7.3% p.a.

- Australian shares had a weak 2015, held back by stretched valuations, market selloffs and poor data coming out of the big four banks. This meant Australian bonds overtook Australian shares, breaking into the top 4 asset classes over the 10-year period to 31 December 2015, returning 6.2% p.a.
- Cash remained the second worst performer, returning 3.1% p.a. over the 10-year period to 31 December 2015, compared to 3.4% p.a. over the 10-year period to 31 December 2014. Global shares (unhedged) remained in seventh position, returning 4.6% p.a. over the 10-year period to 31 December 2015, compared to 5.4% p.a. over the 10-year period to 31 December 2014.
- Australian listed property was the worst performing asset class, retaining its ranking from last year, returning 1.7% p.a. over the 10 years to 31 December 2015, compared to 1.6% p.a. to 31 December 2014.
- Global listed property (unhedged) remained in sixth position, returning 5.0% p.a. over the 10-year period to 31 December 2015, compared to 6.0% p.a. over the 10-year period to 31 December 2014.

Exhibit 3 10 years to December 2015 vs December 2014

Returns (% p.a.)

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>10 years to December 2015</th>
<th>10 years to December 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Shares</td>
<td>5.5</td>
<td>7.1</td>
</tr>
<tr>
<td>Global Shares (hedged)</td>
<td>8.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Global Shares (unhedged)</td>
<td>7.8</td>
<td>7.6</td>
</tr>
<tr>
<td>Australian Listed Property</td>
<td>6.5</td>
<td>6.2</td>
</tr>
<tr>
<td>Global Listed Property (unhedged)</td>
<td>5.4</td>
<td>4.6</td>
</tr>
<tr>
<td>Conservative managed fund*</td>
<td>6.0</td>
<td>5.6</td>
</tr>
<tr>
<td>Balanced managed fund*</td>
<td>6.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Growth managed fund</td>
<td>6.7</td>
<td>5.8</td>
</tr>
</tbody>
</table>

* Only the before-tax returns have been calculated

Note: All returns are net of costs. Past performance is not a reliable indicator of future performance.
Results: 20 years to 31 December 2015

For the longer 20-year period to 31 December 2015, the impact of the weak performance for Australian shares in 2015 was not as apparent as in the 10-year results due to the longer timeframe. Most asset classes returned above CPI+4% p.a. with the exception being cash and unhedged global shares.

The stronger 20-year results compared to 10 years reflect the stronger share and bond markets domestically and globally in the first decade of the 20-year period to 31 December 2015, while the second decade saw greater volatility and market correction, including the global financial crisis.

Comparison across asset classes on a before-tax basis: 20 years

› Australian shares and Australian residential investment property continued to share the top 2 performing asset class positions, with Australian shares returning 8.7% p.a. and Australian residential investment property returning an even better 10.5% p.a. over the 20-year time period.

› Global listed property (unhedged) was third and returned 8.4% p.a. over a 20-year period.

› Global shares (hedged) came next, returning 7.6% p.a. over a 20 year period. Its unhedged counterpart, global shares (unhedged), returned 6.4% p.a. Hedging added an extra 1.2% p.a. over the period; however, this was down from 1.5% p.a. last year as the AUD showed further decline in 2015.

› Global bonds also performed well, returning 7.7% p.a. over the 20-year period. Its domestic counterpart, Australian bonds, returned 6.8% p.a.

› Australian listed property finished with 7.7% p.a. and cash returned 3.4% p.a.

› All asset classes beat inflation, which stood at 2.5% p.a. over the 20-year period.

Note: All returns are net of costs. Past performance is not a reliable indicator of future performance.
Comparison across asset classes taking into account tax: 20 years

› In a similar pattern to the 10-year results, tax significantly changed returns, particularly for investors in the highest marginal tax rate category.
› For investors in super and the lowest marginal tax category, tax reduced returns for all asset classes aside from Australian shares.
› Over a longer timeframe, the impact of tax, franking credits and tax deductions became more apparent due to the cumulative effect of compounding.
› In Australian shares, investing in a superannuation vehicle added an extra 0.4% p.a. compared to gross returns from the asset class over the 20-year period. For investors on the lowest marginal tax rate, after-tax returns were 0.2% p.a. higher, while investors on the highest marginal tax rate saw returns reduced by 1.8% p.a. after tax.
› As expected, the impact of tax is more heavily felt on Australian bonds and cash as they are treated as income and are not offered any tax concessions.
› Investing in cash and paying the highest marginal tax rate led to a 1.8% p.a. return over the 20-year period, making it the only asset class and investment structure that failed to keep up with the 2.5% inflation rate for the period.

Note: All returns are net of costs. Past performance is not a reliable indicator of future performance. See Appendix for details of marginal tax rates.
Comparison with last year’s gross returns: 20 years

- Comparing the 20-year results to 31 December 2015 and 31 December 2014 on a gross basis, Australian residential investment property continued to be the top performing asset class, returning 10.5% p.a. compared to 9.8% p.a. for the respective 20-year periods.
- Albeit seeing a slight dip, Australian shares remained in second place, returning 8.7% p.a. for the 20-year period to 31 December 2015 compared to 9.5% p.a. to 31 December 2014.
- Australian listed property moved up one spot, returning 7.7% p.a. for the 20-year period to 31 December 2015 – the same level of return as for the 20-year period to 31 December 2014. Its global counterpart, global listed property (unhedged), retained its place as the third-highest-performing asset class, returning 8.4% p.a. for the 20-year period to 31 December 2015 compared to 8.9% p.a. to 31 December 2014.
- Australian bonds retained its position as the seventh leading asset class even though it returned a lower 6.8% p.a. for the 20-year period to 31 December 2015 compared to 7.5% p.a. to 31 December 2014. Global bonds stepped one spot up to the fourth leading asset class, despite returning 7.7% p.a. for the 20-year period to 31 December 2015 compared to 8.6% p.a. to 31 December 2014.
- Global shares (hedged) fell two spots down, returning 7.6% p.a. for the 20-year period to 31 December 2015 compared to 8.6% p.a. to 31 December 2014. Its unhedged counterpart, global shares (unhedged), stayed the same rank returning 6.4% p.a. for the 20-year period to 31 December 2015 compared to 7.1% p.a. to 31 December 2014.
- Cash returned 3.4% p.a. for the 20-year period to 31 December 2015 compared to 3.7% p.a. to 31 December 2014.

Note: All returns are net of costs. Past performance is not a reliable indicator of future performance.
**Comparison with and without gearing: 10 years**

- Gearing did not enhance returns for Australian shares for investors at the highest and lowest marginal tax rates, as seen in prior reports.

- The main reason returns did not receive an uplift from having a 50% geared portfolio solely invested in Australian shares was because the capital returns and benefits of franking credits were insufficient to cover the borrowing costs and tax incurred over this 10-year time period. 2015 was a poor year for Australian shares in terms of capital appreciation, while 2005 (the year that dropped off) was a relatively stronger year for capital appreciation in Australian shares.

- Conversely, investors with residential investment property saw an uplift in returns by holding a 50% geared portfolio. The low interest rate environment has kept (asset backed) borrowing costs cheap relative to gearing-related tax deductions. Rental yields and capital gains were also higher for the 10-year period to 31 December 2015.

- As a result, total returns on residential property for both groups of investors (highest and lowest marginal tax rates) were higher after gearing compared to investors who owned the full initial outlay (no gearing). This was because the cost of the borrowing was offset by rental income and tax deductions.

- Australian residential investment property outperformed Australian shares for the lowest and highest marginal tax rates after gearing was taken into account for the 10 years to 31 December 2015.

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**Exhibit 7 Investment Returns for 10 Years to December 2015**

Returns (% p.a.)

<table>
<thead>
<tr>
<th></th>
<th>After Tax Lowest Marginal Tax Rate</th>
<th>After Tax Top Marginal Tax Rate</th>
<th>After Tax Lowest Marginal Tax Rate</th>
<th>After Tax Top Marginal Tax Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Australian Shares</strong></td>
<td>[5.8, 7.1]</td>
<td>[5.8, 4.0]</td>
<td>[4.6, 8.5]</td>
<td>[3.2, 7.8]</td>
</tr>
<tr>
<td><strong>Residential Investment Property</strong></td>
<td>[7.1, 5.8]</td>
<td>[4.0, 5.8]</td>
<td>[8.5, 4.6]</td>
<td>[7.8, 3.2]</td>
</tr>
</tbody>
</table>

**Note:** All returns are net of costs. Past performance is not a reliable indicator of future performance.
Comparison with and without gearing: 20 years

› Borrowed funds enhanced returns for Australian shares and residential investment property for both groups of investors (highest and lowest marginal tax rates) over the 20-year period.

› The enhancement of returns was felt by both the lowest and top marginal tax rate investors.

› Compared to the 10-year results to 31 December 2015, capital gains and franking credits were able to cover the cost of borrowing and tax well above break-even point, giving investors additional returns of 0.7%-0.8% p.a. from Australian shares over a 20-year period respectively for investors on the lowest and highest marginal tax rates.

› Reversing the trend from last year’s report, Australian residential investment property outperformed Australian shares for both the lowest and highest marginal tax rates after taking gearing into account.

Exhibit 8 Investment Returns for 20 Years to December 2015

Returns (% p.a.)

- No gearing
- 50% gearing on initial investment

- Australian Shares
- Residential Investment Property

Note: All returns are net of costs. Past performance is not a reliable indicator of future performance.
Appendix

This analysis has been conducted on the following basis:

**Investment comparison**

› All investment returns are determined after taking into account expenses relating to the acquisition, management and disposal of the asset. **Gross returns** are calculated before tax but after costs. **Net returns** allow for the taxation treatment of each investment over the period of the analysis. This aims to represent a realistic method of comparing the different asset classes for an investor.

› **Compound returns** are calculated over a 10-year period from 1 January 2006 to 31 December 2015 and over a 20-year period from 1 January 1996 to 31 December 2015. The returns are equivalent to the per annum compound returns that investors would have received for an investment in the particular asset class if they invested in an equivalent portfolio over the two periods.

**Capital gains**

› Generally, assets acquired on or after 20 September 1985 are subject to the capital gains tax provisions. For 10- and 20-year returns, capital gains tax is calculated on the initial investment and any subsequent reinvestment of income. Cash is not subject to capital gains tax as all gains are taxed as income and so are subject to marginal rates. For ease of calculation, and in the absence of Australian bonds coupon and capital data, the report assumes returns from Australian bonds are treated as income.

› Assets acquired prior to 21 September 1999 and held for longer than 12 months can be assessed for capital gains tax in one of two ways. Private investors can choose to pay capital gains tax (at their marginal tax rate) on 100% of the capital gain (with indexation of the tax cost) or 50% of their capital gain (with no indexation). In this report, we have presented sector returns based on the calculation method that provides the higher after-tax returns. The discounted capital gain method (as opposed to indexation) has provided the higher after-tax returns in all cases.

**Income tax**

› The lowest and highest marginal tax rates are currently 19% and 45% respectively, as quoted on the Australian Tax Office website. These rates have varied slightly over the 10 and 20 years due to changes in taxation policy. These variations have been taken into account in the calculation of after-tax returns.

› The calculation of after-tax returns is also inclusive of the 2% Medicare levy, which brings the applied lowest and highest marginal tax rates to 21% and 47% respectively.

**Capital losses**

› **Capital losses** may be carried forward indefinitely and offset against other **capital gains** in future periods. We have assumed that the investor has other investments – either today or in the future – that have produced or will produce capital gains against which capital losses may be offset.

**Imputation credits**

› Since July 2000, low-tax rate investors with imputation credits remaining after offsetting all tax have been able to claim back the excess as a refund from the Australian Taxation Office. Prior to this, the excess could only be offset against income tax from other sources. We have assumed that, before July 2000, the investor had other sources of income against which to offset this excess.
Effective tax rates

- This study shows that tax (and its differing effect on capital gains and income) makes a significant difference to the end return for an investor. Overall, for the 20-year period to 31 December 2015, the effective tax rate for top marginal tax payers were:

<table>
<thead>
<tr>
<th>Investment Type</th>
<th>Effective Tax Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian shares</td>
<td>21%</td>
</tr>
<tr>
<td>Australian listed property</td>
<td>31%</td>
</tr>
<tr>
<td>Residential investment property</td>
<td>23%</td>
</tr>
<tr>
<td>Global shares</td>
<td>28%</td>
</tr>
<tr>
<td>Global shares (hedged)</td>
<td>25%</td>
</tr>
<tr>
<td>Global listed property</td>
<td>33%</td>
</tr>
<tr>
<td>Australian bonds and cash</td>
<td>48%</td>
</tr>
<tr>
<td>Global bonds</td>
<td>48%</td>
</tr>
</tbody>
</table>

* To 31 December 2015.

Gearing

- After-tax returns with gearing have also been calculated for Australian shares and residential investment property over the 10-year period from 1 January 2006 to 31 December 2015, and over the 20-year period from 1 January 1996 to 31 December 2015. Half of the initial investment is assumed to be borrowed, and gearing arrangements are assumed to involve interest-only loans (that is, periodic payments do not include any repayment of principal). In addition, allowance is made for the deductibility of interest costs.

- Borrowing costs are based on data from the Reserve Bank of Australia (RBA) bulletin. The borrowing costs for residential investment property are based on the standard variable rate for housing loans. The borrowing costs for Australian shares are based on the margin loans rate.

Superannuation

- The investment earnings of a complying superannuation fund or retirement savings account have been taxed at a rate of 15% as of 1 July 1988. Prior to this, there was no tax on superannuation earnings. The capital gains tax discount for superannuation funds is one-third of the capital gains included in a superannuation fund’s assessable income. The tax that a superannuation fund pays on its assessable income (earnings and taxable contributions) can be reduced by using of imputation credits.

- In the superannuation example, it is assumed the investor is over the age of 60 when assets are redeemed, so no tax is payable on a superannuation lump sum or income stream benefit payments.

Investment measures

- The residential property measure is a population-weighted average return calculated across major capital cities. Increases in value are based on median house prices obtained from the Real Estate Institute of Australia.

- Data from the Australian Bureau of Statistics is used to make adjustments for capital improvements. Net rental income allows for vacancy rates, maintenance expenses, management fees, government charges, land tax and insurance. Acquisition and disposal costs include conveyancing, stamp duty and agent’s fees.

- The cash measure assumes an investment of $50,000 in cash management bank accounts, based on an average of the five largest banks’ rates sourced from the RBA.

- The Australian shares measure is based on investment in listed shares, with price movements and dividend reinvestment consistent with the S&P/ASX All Ordinaries Accumulation Index. Allowance is made for brokerage and stamp duty (where applicable) on acquisition and disposal. Stamp duty ceased to apply from 1 July 2001 for transfers of marketable securities quoted on the Australian Securities Exchange. Dividend franking is taken into account in determining the impact of tax on dividends.
The **Australian bonds** measure is based on investment in Australian Government and corporate bonds. Returns are derived from the UBS Australia Composite Bond Index. For ease of calculation, and in the absence of available data, price movements and coupon payments are both deemed to be taxed as income.

The **Australian listed property** measure is based on the returns implied by the S&P/ASX 200 Property Trust (Accumulation) Index. Acquisition and disposal costs, such as brokerage and stamp duty (where applicable), have been factored into the return calculations. Assumptions have been made with respect to the tax treatment of listed property income, including the component of tax-free income (abolished in July 2002) and tax-deferred income.

The **global shares (unhedged)** measure is based on investment in listed shares with price movements and dividend reinvestment consistent with the Russell Developed Large Cap Index (unhedged) in Australian dollars from 1997, onwards and the MSCI World ex-Australia Gross Dividends Accumulation Index (unhedged) in Australian dollars prior to 1997. Allowance is made for brokerage on acquisition and disposal. Withholding taxes are used to offset Australian taxes in the year the dividends are received.

The **global shares (hedged)** measure is based on investment in listed shares with price movements and dividend reinvestment consistent with the Russell Developed Large Cap Index (hedged) in Australian dollars from 2000 onwards, and the MSCI World ex-Australia Gross Dividends Accumulation Index (hedged) in Australian dollars prior to 2000. Allowance is made for brokerage on acquisition and disposal. Withholding taxes are used to offset Australian taxes in the year the dividends are received.

The **global listed property** measure is based on dividend reinvestment consistent with the FTSE EPRA/NAREIT Developed Index in Australian dollars (unhedged). Allowance is made for brokerage on acquisition and disposal. Withholding taxes are used to offset Australian taxes in the year the dividends are received.

The **conservative managed fund** measure is based on investment in an indexed managed fund with an asset allocation consistent with the industry average for funds that have between 25–35% growth assets. Growth assets include Australian shares, overseas shares (hedged and unhedged) and property. Allowance is made for buy/sell spreads on acquisition and disposal, and annual investment management fees equivalent to that of a retail indexed manager. After-tax returns are not calculated due to lack of data on distributions.

The **balanced managed fund** measure is based on investment in an indexed managed fund with an asset allocation consistent with the industry average for funds that have between 65–75% growth assets. Growth assets include Australian shares, overseas shares (hedged and unhedged) and property. Allowance is made for buy/sell spreads on acquisition and disposal, and annual investment management fees equivalent to that of a retail indexed manager. After-tax returns are not calculated due to lack of data on distributions.

The **growth managed fund** measure is based on investment in an indexed managed fund with an asset allocation consistent with the industry average for funds that have between 75–85% growth assets. Growth assets include Australian shares, overseas shares (hedged and unhedged) and property. Allowance is made for buy/sell spreads on acquisition and disposal, and annual investment management fees equivalent to that of a retail indexed manager. After-tax returns are not calculated due to lack of data on distributions.
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