Fool’s Gold?
Linking a Tax-Efficient Super Fund Equity Portfolio to Retirement Savings for Members

“...gold which he cannot spend will make no man rich.”
- Dr. Samuel Johnson (1709-84)

Superannuation funds in Australia will rightly be pleased with the average double-digit investment returns they delivered in 2017. And funds are not the only ones pleased. Higher investment returns generally mean a higher tax take from superannuation to the Australian Taxation Office (ATO). In one sense, it is hardly a bad thing that superannuation’s sterling results in 2017 have benefitted the ATO. But fund members have a different perspective – every dollar that a fund earns after paying its investment fees and costs will go either to the ATO or to the member. If a fund is too risk-averse and generous with the ATO, or too busy to manage investment taxes, the ATO’s win is the member’s loss.

While these principles build a clear case for managing superannuation fund investments on an after-tax basis, one concern muddies the issue. The concern is that higher after-tax returns from a tax efficient equity portfolio do not flow through to superannuation member accounts. So the argument goes, because accrued (future) taxes are deducted from member accounts, if a tax efficient portfolio is just deferring taxes, then the member must pay them anyway before the member can access his or her retirement savings. This would make the fund a mere “holding account” for future tax revenue streams to the ATO. We could then rather colourfully describe the fruits of tax efficiency as a type of “fool’s gold” – the “value” shown in portfolio-level after-tax performance reporting being illusory because it cannot be passed through to or accessed by members. This paper examines this concern and dispenses with it using a simple example.

The research presented in this paper models two competing sets of member account journeys – one exposed to an equity portfolio with a traditional pre-tax focus (ignoring the dividend and capital
gains taxes that in fact apply to the portfolio); the other using a tax efficient equity portfolio which mirrors the first portfolio in all other respects. We compare the value of the different member accounts at key points through a 40-year journey covering each member’s working life (contribution phase) and retirement (drawdown phase). We show that each member is almost $200,000 better off over this journey, as measured at a unit-priced member option level, even after accounting for the impact of deferred taxes. This establishes a clear link between a tax efficient equity portfolio delivering higher after-tax returns to a superannuation fund and higher savings for the fund’s members to help in retirement.

We explain the differences between a tax efficient and tax naïve member journey by identifying different sources of tax efficiency in an equity portfolio, how the pension tax exemption works (in a fund with ageing members) and how deferred taxes compound pre-tax returns. We finish by offering some broader insights about how funds themselves, and the industry in general, can use these research findings.

Methodology

We establish a hypothetical superannuation fund (Non-TM Fund) with three members, each with a 30-year working life and a 10-year retirement. Year 1 is the first year of the fund. Member A (the fund’s first member) contributes $10,000 at the end of year 1 and adds $10,000 each year thereafter, up to and including year 30 (pre-retirement). Member A retires in year 31 and withdraws $30,000 at the end of year 31 and $30,000 annually thereafter up to and including year 40, then exits the fund. Member B joins the fund in year 2 and follows the same pattern as member A, but lagged by one year. Member C joins the fund in year 3 and follows the same pattern again, but lagged by two years (relative to Member A) and one year (relative to Member B). For simplicity, assume the contributions are made net of 15% contributions tax (which is outside the scope of this research) and all member account balances in the pension phase are under the new $1.6 million Transfer Balance Cap.

This scenario allows us to quantify the portfolio value and member-level unit pricing impact of member contributions, drawdowns and accumulation versus pension tax status through different stages of the fund.

We also assume for simplicity that the Non-TM Fund has 100% of its capital allocated to an equity pool which is pre-tax focused (Non-TM pool) for the entire period. All income and gains are reinvested in the portfolio save for those funding the hypothetical pensions of one or more members in years 31-42 as set out above.

We also establish a hypothetical superannuation fund (TM Fund) with the same member, cash flow and investment profile as the non-TM Fund, except that the TM Fund is after-tax focused and therefore uses a tax-efficient version of the Non-TM pool equity strategy (TM pool) which integrates tax considerations into its investment decision-making. For example, the manager of the TM pool may:

- Differentiate between stocks eligible for a 10% capital gains tax rate on gains realised (long gains) and stocks which are not eligible and attract the non-concessional rate of 15% (short gains)
- Apply intelligent tax lot selection to the trades
- Refer to the portfolio’s wider return, risk and tax characteristics (e.g. the existence of realised losses) to optimise the timing of gain (or loss) stock trades
• Remove or limit trades that are value-accrretive pre-tax but detract from value after tax and transaction costs are factored in, and
• Trade through a Centralised Portfolio Management (CPM) implementation structure.

In practice, we see these techniques resulting in lower turnover and a lower proportion of short (versus long) realised gains in after-tax focused portfolios. Hence, we give the Non-TM and TM pools the same underpinning assumptions except for realistic capital gains tax differences as set out below.

**Figure 1: TM and Non-TM pools – underlying hypothetical portfolio assumptions**

<table>
<thead>
<tr>
<th>Annual</th>
<th>Non-TM pool</th>
<th>TM pool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price return</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Dividend return</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>One-way turnover (sales)</td>
<td>50%</td>
<td>25%</td>
</tr>
<tr>
<td>Short gains (% of turnover)</td>
<td>50%</td>
<td>0%</td>
</tr>
<tr>
<td>Long gains (% of turnover)</td>
<td>50%</td>
<td>100%</td>
</tr>
<tr>
<td>Dividend tax rate</td>
<td>15% accumulation, 0% pension</td>
<td>15% accumulation, 0% pension</td>
</tr>
<tr>
<td>Capital gains tax rate</td>
<td>15% accumulation, 0% pension</td>
<td>15% accumulation, 0% pension</td>
</tr>
<tr>
<td>Capital gains tax discount</td>
<td>1/3</td>
<td>1/3</td>
</tr>
<tr>
<td>Deferred tax provision rate</td>
<td>12.5% accumulation, 0% pension</td>
<td>12.5% accumulation, 0% pension</td>
</tr>
</tbody>
</table>

For illustration purposes.

For simplicity, we have ignored the impact of franking credits on Australian equity portfolios and withholding tax on international equity portfolios and the opportunities the TM pool would have to manage these impacts. In practice, these would create further differences in the outcomes of the Non-TM Fund and TM Fund and their underlying members, meaning that the outperformance of the TM Fund we quantify below is somewhat conservative.

Each year, we track for each fund:

• The opening value of the equity portfolio
• The opening tax cost base of stocks in the equity portfolio
• The dividend and realised capital gains tax impact of current year trading and dividend receipts
• The after-tax value of the equity portfolio
• The deferred (accrued) tax impact of current year trading and dividend receipts
• The closing value of the equity portfolio (pre-member contributions and withdrawals)
• The closing tax cost base of stocks in the equity portfolio
• The “post-liquidation” unit price of the fund (pre-member contributions and withdrawals); i.e. the fund’s option-level unit price after accounting for both current year and deferred taxes
• The post-liquidation number of units issued by the fund and balances available to members, before member contributions and withdrawals
• The post-liquidation unit price, number of units and member balances, after annual contributions and withdrawals by members.

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1 Readers should interpret these return assumptions as net of fees and transaction costs, noting that there will be no material difference between the two funds. The Non-TM fund will have no fees relating to tax management, but will have higher transaction costs due to the higher turnover assumption. The TM Fund will incur a small fee for tax management, but will have lower transaction costs due to the lower turnover assumption.
2 Our tax lot selection uses an average cost methodology. This is not permissible in practice but keeps our scenario simple.
At the end of each year, the aggregate member balances, after processing contributions and withdrawals, provide the opening balance of the equity portfolio for the following year, save for one important difference – the balance of deferred taxes (what in unit pricing is called a Deferred Tax Provision or Deferred Tax Liability) is added back into the portfolio’s opening balance because it has not yet been withdrawn from the fund (as it is not yet owed to the ATO) and remains invested in the portfolio. This insight is key to explaining our findings (see below) and we shall return to it later.

Results

The fund-level differences between the Non-TM Fund and TM Fund are relatively modest to begin with, but become more material through time. Identifying 5 key stages of each fund’s life, the net-of-tax (including deferred tax) value of each fund is summarised below.

Figure 2: Fund-level differences in value, net of current and deferred tax

<table>
<thead>
<tr>
<th>Fund stage</th>
<th>Non-TM Fund $</th>
<th>TM Fund $</th>
<th>Difference, $ (TM benefit)</th>
<th>Difference % of fund</th>
</tr>
</thead>
<tbody>
<tr>
<td>All members working, just before first member (Member A) retires</td>
<td>3,896,278</td>
<td>4,079,111</td>
<td>182,833</td>
<td>4.69</td>
</tr>
<tr>
<td>Just after first member retires</td>
<td>4,257,405</td>
<td>4,486,818</td>
<td>229,413</td>
<td>5.39</td>
</tr>
<tr>
<td>When majority of fund members become pension members</td>
<td>4,625,332</td>
<td>4,903,596</td>
<td>278,264</td>
<td>6.02</td>
</tr>
<tr>
<td>Maximum value of portfolio</td>
<td>8,097,993</td>
<td>8,681,297</td>
<td>583,304</td>
<td>7.20</td>
</tr>
<tr>
<td>Just before last member (Member C) leaves fund</td>
<td>2,969,369</td>
<td>3,179,691</td>
<td>210,322</td>
<td>7.08</td>
</tr>
</tbody>
</table>

Source: Parametric (2018). For illustration purposes only. Simulated performance is hypothetical and does not reflect the experience of any investor. It is not intended to reflect a specific investment strategy offered by Parametric. Simulated performance reflects the deduction of management fees and transaction costs and the reinvestment of dividends. All investments are subject to the risk of loss. See disclosures for additional information about hypothetical performance.

From a fund’s perspective, the adoption of tax management has added 4.69% (around $183,000 in this three-member scenario) to the value or size of the fund while the fund is entirely in accumulation phase. This is even after excluding capital that will be used in the future to pay the ATO. As members transition to the pension phase, the after-tax focus of the TM Fund allows it to continue to outpace the Non-TM Fund in the growth stakes. At its peak, the TM Fund is 7.20% (over half a million dollars) larger than the Non-TM. In other words, the three members of the TM Fund have, together, more than half a million dollars extra to fund their retirement because of the tax efficiencies generated in the equities pool of the TM Fund relative to the Non-TM Fund. We know from the profile of these members that each intends to withdraw an annual pension of $30,000 from the fund in retirement. The benefit of this extra half a million dollars to these retiring members is obvious: it may fund another six or seven years of each member’s retirement (i.e. address longevity risk); it may allow them to live more comfortably in their retirement; it may expand their aged care options; or it may allow them to leave a bequest, which is very important to some members.

How do these differences play out from a member option-level unit pricing perspective? The unit prices of the Non-TM Fund and TM Fund deviate through time as depicted in Figure 3.
These unit prices differences may not seem important, until they are applied to the number of units each member has to arrive at the member’s actual retirement savings balance. Two-thirds of the way through our simulation exercise (year 30), with members in retirement-planning mode, Member A holds 11,286 units in the TM Fund, Member B holds 10,286 and Member C 9,366 (unitholdings in the Non-TM Fund differ slightly). This represents around $60,000-$70,000 extra in each member’s account, prior to retirement. Near the end of the simulation (year 39), after around ten years of retirement and drawdown, the unitholdings are 9,858 (Member A), 9,161 (Member B) and 8,517 (Member C). Figure 4 below shows how these unit price-level differences translate to increased retirement savings in each member’s account across the entire investment horizon, which are wholly attributable to the tax efficiency of the TM Fund’s portfolio.
Figure 4: Member balance differences, net of current and deferred tax

Source: Parametric (2018). For illustration purposes only. Simulated performance is hypothetical and does not reflect the experience of any investor. It is not intended to reflect a specific investment strategy offered by Parametric. Simulated performance reflects the deduction of management fees and transaction costs and the reinvestment of dividends. All investments are subject to the risk of loss. See disclosures for additional information about hypothetical performance.

The benefits of this tax efficiency peak at $195,885 for Member A, $194,010 for Member B and $191,202 for Member C, just before each member (or member’s dependant) withdraws his/her remaining balance entirely from the fund.

Explaining the results

Our motivation is to comprehensively address the contention that tax efficiency in a superannuation fund equity portfolio is a kind of “fool’s gold” as these higher after-tax returns do not flow through to member accounts. If this were true, then we would see no difference in the unit price journeys charted in Figure 3 of this paper.

In fact, Figure 3 shows a difference in the member’s unit price-level experience which grows powerfully through time. We offer three explanations as to why we see the differential effects of an after-tax investment approach flow through to the member options, net of both current and deferred tax. These are:

1. Some of the benefits of after-tax management of an equity portfolio are permanent, not timing, in nature. For example, when a manager is able to adjust a trade to generate a long gain taxed at 10% rather than a short gain taxed at 15%, the 5% difference does not get captured or “clawed back” in a Deferred Tax Provision in an option unit price. It is a permanent tax saving achieved at the portfolio level which flows directly through to the unit prices members experience.
2. As the proportion of pension assets or pension members rises through time, a greater proportion of future income and gains will be tax exempt. A fund is able to claim a partial tax exemption on income and gains to the extent that the income, gains or assets relate to pension members. As most funds expect higher pension proportions of their total members and assets in future years, they will have a higher pension tax exemption in future years. Hence, they benefit from any strategies which result in tax being payable in a future rather than current year. This benefit is not usually reflected in portfolio-level after-tax reporting, but will always be captured at the option unit price level.

3. Deferred tax compounds pre-tax investment performance. This is the “time value of money” principle. If a fund were offered a loan at 0% interest to invest money, keep the proceeds and return the principal in a future year, it would, surely, view that as a good deal. Deferring tax is analogous to receiving a 0% interest loan from the ATO – if an equity strategy or structure can legally lower the tax payable on a fund’s portfolio in a current year and push some of the liability out to a future year, the fund benefits from the investment returns of that additional capital invested for the period of the notional loan. This compounded investment return from tax efficiency shows up (perhaps counter-intuitively) in the pre-tax return of an equity portfolio and will flow through to member-level unit prices.

Other applications of results

Beyond member benefits (no small thing!), we finish by noting other applications of these research insights to superannuation funds. Consider these other areas of strategic interest to funds where net-of-tax option returns are the measure of success:

- Rankings in peer surveys are based on after-tax option level returns. Funds with tax efficient portfolios will have (ceteris paribus) an innate tailwind versus other funds with tax naïve portfolios.
- The annual MySuper outcomes assessment proposed by the Government and APRA is based on the “financial interests of the beneficiaries” (members), which are after-tax. Funds, arguably, will be better positioned to pass this test by aligning their investment focus with their members’ after-tax interests.
- The track records of competing sectors within superannuation (for profit versus profit to members versus self-managed funds) are compared on the basis of after-tax performance. Funds will be well aware of broad industry themes like the ageing population, “product dashboards” to aid consumer choice and scrutiny of mechanisms for existing default superannuation contributions. In this competitive environment, superannuation industry sectors can gain an edge by better focusing on after-tax returns.
- The Productivity Commission is gearing up in 2018 to report publicly on the superannuation industry’s efficiency and effectiveness against benchmarks including after-tax investment returns. Tax is, obviously, a lever that can be used by funds if they see an advantage in collectively outperforming these tax-naïve benchmarks.

Conclusion

This research establishes a clear link between tax efficiency in a superannuation fund’s equity portfolio (delivering higher after-tax returns) and higher savings for members to fund their

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