Self-managed superannuation funds (SMSFs), also called DIY superannuation funds, are larger than any other single component of the superannuation industry. Their growth has been fostered by the significant tax concessions which they share with other superannuation vehicles. It is, therefore, legitimate to ask whether this arrangement generates benefits sufficient to justify the concessions or whether, as some commentators argue, it is simply a tax avoidance scheme for the wealthy.

This paper examines the growth of SMSFs and the reasons why this particular form of superannuation fund is attractive to savers. The paper also considers whether the encouragement of saving is a desirable objective for an Australian government and it examines the performance of SMSFs within this context.

The encouragement of SMSFs would be an undesirable policy if it resulted in saving being directed into underperforming assets. This paper also addresses prudential problems in the SMSF sector, possible reforms in this area, and the implications of the restrictions on borrowing by superannuation funds.

SMSFs

In order to qualify as an SMSF, a fund must have fewer than five members who are linked in some way, all of whom are trustees (either directly or indirectly via company trustee structure), and who receive no remuneration for acting as a trustee. The members of a fund are those who are accumulating benefits in it or receiving a pension from it. Members are linked if they are related or are business partners in the sense of being directors of the same company, trustees of the same trust or partners in a business.

SMSFs are subject to two tests — the sole purpose test and the in-house assets test. The purpose of these tests is to ensure that the fund is not used for personal consumption purposes. The sole purpose test (see Colley 2010, pp. 335–336) requires that the fund be used solely for the provision of benefits in retirement (or after age 65 or upon death of the member). The in-house assets test requires that the fund hold no more than 5 per cent of the market value of its assets in in-house assets. These are assets which are directly or indirectly linked to a member of the fund (see Colley 2010, pp. 336–340).

The current environment for SMSFs was established with the introduction of the Superannuation Industry (Supervision) Act 1993. This environment gives the following specific advantages to SMSFs (or DIY funds):

> They allow members to control their own investments. Many people find this attractive because they believe that they can earn a higher return than professional managers. An Australian Stock Exchange (2003) report cites this as a motive for adopting a SMSF. A survey carried out by the Cooper Review (Review into the Governance, Efficiency, Structure and Operation of Australia’s Superannuation System) produced the same result. The second and third motivations (well behind the first) were ‘greater flexibility over investment options’ and ‘believe SMSF can perform better than previous superfund’.
SMSFs do not attract the fees charged by professionally managed superannuation funds (although there are costs in administering SMSFs).

SMSFs provide members with considerable flexibility. For example, members can withdraw funds in the case of illness.

SMSFs also share the advantages available to all superannuation funds of significant taxation advantages for savings. Contributions are taxed at 15 per cent, income of the fund is taxed at 15 per cent (10 per cent for capital gains), and final benefits can be withdrawn on favourable terms. In addition, life insurance premia paid through funds are tax deductible, and superannuation assets are protected from creditors in bankruptcy actions.

Members can make undeducted in specie contributions to a superannuation fund by contributing existing assets. However, only certain assets can be contributed in this way and must be transferred at market value.

The disadvantages of SMSFs include:

- SMSFs are only cost effective for investors with significant assets. Estimates of the minimum asset level required vary, but they are in the order of $200,000.
- Administration of SMSFs can be complex. The Australian Taxation Office sets detailed compliance responsibilities for these funds.
- The trustees of these funds are generally inexperienced in making investment decisions and may produce poor returns. The Australian Stock Exchange (2003, p. 27) notes that managers of SMSFs ‘tend to stick with investments they know/understand’. This problem is relevant to the public policy objective of allowing these funds to facilitate the accumulation of adequate retirement resources by large numbers of individuals and families. Also, there is a risk that inexperienced or time-poor managers may allow their fund to become non-compliant.
- SMSFs cannot use the Superannuation Complaints Tribunal and members are not eligible for compensation for losses arising from fraud.
- The trustees of an SMSF could be personally liable for members’ losses.
- Apart from special cases, money in a superannuation fund cannot be accessed until retirement and there is a common view that it is exposed to future arbitrary changes in government policy, especially taxation policy.

| Table 1: Assets of superannuation funds, March 2010 |
|-------------|---------|----------|
|             | $billion | Number   |
| Corporate   | 60.9     | 171      |
| Industry    | 226.6    | 65       |
| Public sector | 177.4   | 39       |
| Retail      | 351.2    | 154      |
|             | 816.0    | 429      |
| Small APRA Funds | 1.6    | 3 879    |
| Single Member ADFs | 0.0    | 105      |
| Self-managed super funds | 400.2   | 422 687  |
| Balance of life office statutory funds | 39.6    | 1 257.5  |
|             | 1 257.5  | 427 179  |


Table 1 shows the results of these incentives/disincentives. SMSFs are the largest category of superannuation funds and hold around 32 per cent of superannuation assets.

Saving policy

Governments led by both of the major political parties have adopted policies aimed at stimulating saving. This objective has been criticised as irrelevant and as favouring the wealthy. However, there are good reasons for encouraging saving. These are outlined below.

- Until 2008, the household saving ratio was close to zero, perhaps negative. It is true that this ratio has increased in recent years, but we are likely to revert to earlier behaviour once the memory of the global financial crisis fades.
- Saving is the change in national wealth. If it is low, we are not adding to national wealth, which will reduce national income in the future.
- Any deficiency in the domestic supply of funds will have to be covered by importing funds through running a current account deficit. This inflow of funds will, other things being equal, cause an appreciation of the Australian dollar, which damages businesses in the ‘slow-speed’ section of the economy (i.e. non-mining industries).
- With an ageing Australian population, there is an emerging problem of providing an income for the increasing percentage of retirees in the population. If this is not done, future taxpayers will carry an increasing burden.

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The second and third points can be elucidated by examining the twin deficits relationship which is:

\[ \text{CAD} = (I - S) + DF \]

where,

- \( \text{CAD} \) = current account deficit
- \( I \) = investment
- \( S \) = private (household and business) saving
- \( DF \) = government budget deficit (government dissaving)

This identity indicates that the CAD covers the shortfall of saving within Australia. Also, we can rewrite the identity as:

\[ S - DF = I - CAD \]

i.e. total saving (the change in wealth) is equal to investment minus the current account deficit.

The only policies which appear to be useful in increasing saving are to:

> allow governments to save for us by running surpluses and transferring them to entities such as the Future Fund. This approach faces political obstacles; or
> increase contributions under the Superannuation Guarantee Change, which also faces political problems; or
> make contributions to superannuation attractive. The encouragement of SMSFs is an effective way to do this.

It is true that the second and third approaches favour higher-income taxpayers. However, if the aim is to encourage saving (rather than to redistribute income), this bias cannot be avoided.

Performance of SMSFs

An obvious concern about SMSFs is that they may adopt a suboptimal investment policy because of the lack of knowledge or preferences of the trustee. Table 2 indicates the composition of the assets of all superannuation funds and those of SMSFs.

SMSFs hold a higher percentage of cash, property and shares than superannuation funds as a whole. However, they hold less in securities and (especially) overseas assets. These large cash holdings could be a problem for long-term wealth accumulation because it is typically a safe but low yielding asset.

One way of evaluating these portfolios is to compare them to the Markowitz efficient frontier for Australian asset classes shown in Figure 1. The asset classes included are cash, Australian and international fixed interest, Australian and international shares and property, and the data were obtained from the AXA website.

The minimum variance portfolio has an average return of 9.62 per cent p.a. and a standard deviation of 4.79 per cent p.a. It includes cash (85.6 per cent), Australian fixed interest (10.2 per cent) and Australian shares (4.0 per cent). As might be expected, this is a very conservative portfolio. As you move up the efficient frontier, the percentages of Australian shares and Australian fixed interest increase, and the percentage of cash falls. For example, a portfolio close to the middle of the efficient frontier with an average return of 11.94 per cent p.a. and a standard deviation of 10.1 per cent includes: Australian fixed interest (43.4 per cent); international fixed interest (14.2 per cent); Australian shares (30.2 per cent); and property (12.2 per cent). Of course, the highest portfolio contains only the highest yielding asset class over the period of the study (i.e. Australian shares).

The results give rise to a number of comments. First, cash is a very attractive asset over this period because it has a high average return (bolstered by very high returns on cash in the early part of the period) and a low standard deviation of returns. The return on cash also has low correlations with the returns on other asset classes.

Second, no international shares are included in the portfolios on the efficient frontier and they include

<table>
<thead>
<tr>
<th>Asset</th>
<th>Percentage</th>
<th>Asset</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and deposits</td>
<td>16.5</td>
<td>Shares</td>
<td>31.3</td>
</tr>
<tr>
<td>Loans and placements</td>
<td>1.0</td>
<td>Cash and term deposits</td>
<td>28.2</td>
</tr>
<tr>
<td>Short-term securities</td>
<td>5.6</td>
<td>Debt securities and loans</td>
<td>1.0</td>
</tr>
<tr>
<td>Long-term securities</td>
<td>5.4</td>
<td>Property</td>
<td>14.9</td>
</tr>
<tr>
<td>Equities and units in trusts</td>
<td>44.4</td>
<td>Trusts and managed investments</td>
<td>20.4</td>
</tr>
<tr>
<td>Land and buildings</td>
<td>7.0</td>
<td>Overseas assets</td>
<td>0.7</td>
</tr>
<tr>
<td>Assets overseas</td>
<td>16.7</td>
<td>Other assets</td>
<td>3.5</td>
</tr>
<tr>
<td>Other assets</td>
<td>3.4</td>
<td></td>
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</tr>
</tbody>
</table>

Source: Statistical tables, Reserve Bank of Australia and ATO websites.
relatively little international fixed interest. This result leads to a rejection of the assertion that Australian investors suffer adversely from ‘home bias’. Our calculations indicate that rational Australian investors would not have included international shares in their portfolios over the 1981–2009 period.

It is also worth noting that if we take the international share return as the market return, the software estimates the beta for Australian shares as 0.688. This value is similar to those obtained by Valentine (2006) and it indicates that Australian shares are less risky than overseas shares.

It appears that neither of the portfolios given in Table 2 would be on the efficient frontier. In particular, both of them include an excessive amount of cash (i.e. are very conservative) and an insufficient amount of fixed interest securities. However, the low representation of overseas assets in the portfolios of SMSFs actually represents an optimal decision.

In financial years 2006, 2007 and 2008, SMSFs achieved returns on assets (ROAs) of 12.6 per cent, 16.9 per cent and -6.1 per cent, respectively. In the corresponding years, the ROAs for APRA superannuation funds were 23.9 per cent, 28.7 per cent and -13.4 per cent. That is, SMSFs have underperformed other superannuation funds. Moreover, many SMSFs are quite small and smaller funds achieved a lower ROA than larger funds. This outcome could be due, in part, at least, to the poor diversification of these funds. As at 30 June 2008, about 53 per cent of SMSFs with a fund size of $50,000 or less invested in only one asset class and held 77 per cent of their assets in listed shares and cash.

It should be noted that both groups underperformed the S&P/ASX 200 Accumulation Index in the 10 years from 2000 to 2009. This raises the question of the time horizon over which investment performance should be measured.

Comments about the relative variability of the returns on different assets are often based on short time periods (e.g. one quarter or one year). Such measures are useful if we are investing for one year, but if the time horizon is longer, we should use a measure appropriate for that longer period. If we are investing for 10 years, the relevant variability measure is the 10-year variability of returns. Thus, share returns are quite variable on a year-to-year basis, but if we look at 10-year returns, the variability is much lower. Shares may be a risky short-term investment, but a much safer long-term investment. Figure 2 shows the one-year and 10-year percentage changes in the AllOrdinaries Share Price Index over the period from 1950 to 2010. It is clear that the one-year change is much more volatile than the 10-year change. In particular, there are 23 one-year negative changes in this 60-year period, whereas there was only one 10-year period which produced a negative change over the whole period.

Let us consider the desirability of diversification when the investor has a long time horizon. This is certainly the case when we are considering superannuation funds which may evolve into pensions. There is no disagreement about the desirability of diversifying within asset classes (such as cash, domestic and international fixed interest, domestic and international shares, and property). Investors should not hold a single asset or a very small number of assets in their portfolios.

Figure 2 illustrates that as the time horizon increases, the variability of returns falls, and it is also the case that the correlations of returns across asset classes increase. In terms of the Markowitz model, this means that investors (other than those who are extremely risk averse) should put 100 per cent of their funds into the highest yielding asset class. Over the past 20 years, this would mean property or Australian shares, which produced similar returns when we consider franking credits on shares. This view has been supported by a number of commentators. Malkiel (2005, p. 88) concludes that ‘... stocks are a wholly appropriate medium for investing in long-term retirement funds’. He expands this point further as follows (see pp. 89–90):

One rule of thumb used by some investment advisers is to set the proportion of bonds in your portfolio equal to your age. A woman in her twenties should keep only 20 per cent of her portfolio in relatively safe bonds and
80 per cent in equities. A man aged seventy five should put no more than 25 per cent of his portfolio in stocks, and that equity exposure should probably contain a substantial proportion of real estate investment trusts with their generous dividend yields that can be used for living expenses.

Clare (2005, p. 4) makes the same point in a different way. One study suggests that over the last 100 years shares have returned about 11 per cent a year compared to a mere 4 per cent from bank deposits and the like, implying a premium return to shares of around 7 per cent a year in order to compensate for the volatility of returns.

... Looking at these numbers the real mystery might be why superannuation funds invest in anything other than growth assets.

These considerations indicate that the commonly accepted Australian view that a high degree of diversification is desirable in investors’ portfolios is incorrect. In a large number of cases, we may be giving investors bad advice.

Possible changes

Our discussion indicates that the existence of SMSFs encourages saving and there appear to be few alternative ways to accomplish this objective. However, these funds, in common with other superannuation funds, do not appear to be achieving their potential in earning returns and, therefore, in accumulating resources to fund retirements. Some changes may reduce these problems.

First, as suggested by Valentine (2004), SMSFs could be required to choose their portfolios from a small number of indexed portfolios suggested by the regulator. These portfolios should be heavily focused on the highest yielding assets — shares and property — so as to ensure the highest possible average return over the long accumulation period. However, given that the ability to choose assets is one of the attractions of SMSFs, this may reduce contributions to them. Perhaps contributors could be given flexibility with respect to a small proportion of the portfolio. The alternative is to carry out an education program to develop a longer-term approach to investment. Such a program would need to start with regulators, accountants and financial advisers.

Second, any education program should stress the undesirability of creating small SMSFs which are not likely to grow. Again, the primary target should be advisers.

Third, there is a restriction on superannuation borrowing. This restriction makes superannuation funds less attractive than non-super portfolios which can gear their assets. Of course, superannuation funds have numerous ways of obtaining leverage so long as it is not called a loan. These include high beta shares or share funds, leveraged share funds, hedge funds, instalment warrants on shares and (recently) property and positions in derivatives. The problem with these approaches is that the degree of leverage can be difficult to measure and trustees can easily be led into taking excessive risks. Property purchases could be a particular problem. A relatively small fund would only be able to purchase a single investment property and this would produce a very undiversified portfolio. A better alternative would be to allow superannuation funds to take a loan secured on the assets of the fund from a financial institution up to a certain (modest) percentage of the value of the assets of the fund. This opportunity would make SMSFs more attractive.

Fourth, the Review into the Governance, Efficiency, Structure and Operation of Australia’s Superannuation System (the Cooper Review) made a number of recommendations with respect to SMSFs. They are summarised by Colley (2010, pp. 363–364) and include:

- a review of borrowing restrictions with a view to tightening them. A better approach was proposed above;
- in-house investments should not be allowed;
- advisers should be required to have an AFSL to advise on the setting up of an SMSF; and
- SMSFs should be required to add value their assets at net market value.

There were also some recommendations aimed at preventing specific abuses of the system (such as early release schemes).

Fifth, holders of SMSFs cannot obtain compensation if they lose money in an investment. It would be useful to subject them to a levy to create a compensation fund. This would put them on the same basis as APRA funds. However, it could also create moral hazard. That is, funds might take riskier positions because they know they will be compensated for losses. It might, therefore, be necessary to impose some limits on portfolios which qualify for compensation. For example, the asset on which compensation is claimed is not to constitute more than 10 per cent of the portfolio.
Notes
1. Benefits can also be provided on termination of employment due to ill health or other specified conditions.
2. However, the deductible contribution will be reduced to $25,000 (from $50,000) in 2011–12 and this is likely to reduce the rate of growth of the funds.
3. The frontier in Figure 1 was calculated from annual data on software provided with Haugen (1997).

References
Clare, R. 2005, ‘Uniformity and diversity in superannuation fund investment portfolios’, paper presented to the 13th Annual Colloquium of Superannuation Researchers, Centre for Pensions and Superannuation, University of New South Wales, June.

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