RETIREMENT INCOMES: AN ANALYSIS OF THE TAKE-UP OF INCOME STREAMS BY AGE PENSIIONERS

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The views in this Paper are those of the authors and do not necessarily reflect those of the Branch, the Department or the Government.

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## Glossary

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>APSF</td>
<td>Australian Pensioners’ and Superannuants’ Federation</td>
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<tr>
<td>ARISA</td>
<td>Australian Retirement Income Streams Association</td>
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<tr>
<td>ATE</td>
<td>Asset-test exempt</td>
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<tr>
<td>ATLT</td>
<td>Asset-tested (long term)</td>
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<tr>
<td>ATST</td>
<td>Asset-tested (short term)</td>
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<td>ETP</td>
<td>Eligible Termination Payment</td>
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<td>IFSA</td>
<td>Investment and Financial Services Association Ltd</td>
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<td>MLI</td>
<td>Market-linked income stream</td>
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<tr>
<td>RBL</td>
<td>Reasonable Benefit Limit</td>
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<td>SMF</td>
<td>Small managed funds (which includes self-managed superannuation funds and small APRA regulated superannuation funds)</td>
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<td>SSAct</td>
<td>Social Security Act 1991</td>
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<td>UPP</td>
<td>Undeducted purchase price</td>
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1. Purpose

As levels of private wealth increase, and with increasing numbers of older people in the population (and as a percentage of the population), it is becoming more important for retirees to develop strategies to support themselves. In this context, the Australian Government provides incentives for people to use a steady, predictable and gradual draw down of capital during retirement, and sustain a higher standard of living than would be possible from the age pension alone.

Income stream products are an important component of the retirement income system because they provide retirees with regular income throughout retirement from their superannuation and other savings. They also provide a degree of certainty for retirees in planning for their retirement.

This paper is to be the first in a series of research papers focusing on the issue of retirement incomes, and aims to analyse the take-up of income streams. This paper presents the findings of an analysis of current age pensioners who purchased income stream products from 1 July 1984 to 30 June 2004. It is based on Centrelink administrative data and uses descriptive analysis, and multivariate regression techniques.

We examined the following areas:

1. ATE and non-ATE income streams by volume, average purchase price and gender.
2. ATE and non-ATE income stream volume, average purchase price and age pensioner’s assessable assets by marital status.
3. ATE and non-ATE income stream volume and average purchase price by source of income stream (SMF or non-SMF).
4. The variation and prediction of average purchased prices for ATE and non-ATE income streams using a multiple linear regression model based on age pensioners’ demographic and financial characteristics and other categorical variables.
2. Scope

Within scope for analysis are age pensioners who purchased one or more income stream product from 1 July 1984 to 30 June 2004. This only includes age pensioners who are paid by Centrelink, and does not include pensioners who paid by Department of Veterans’ Affairs.

There are, however, limitations to using Centrelink administrative data.

Firstly, where a customer has died, the details of their assets (including income streams) are only held in Centrelink’s mainframe for 12 months. This has meant that we have only been able to include income streams for those customers who are still alive. For the earlier periods, the customer numbers will be significantly understated, and biased to younger customers. At this stage, we have not been able to quantify the extent of the understatement.

Secondly, the analysis only includes income streams purchased by age pensioners. Those customers who have not reached age pension age, or are not eligible for the age pension are not included.¹ A limited examination of the flow of new customers indicates that it takes between 12-18 months for more than 90% of income streams to be recorded on Centrelink’s mainframe. This was one of the reasons the analysis period was limited to 30 June 2004.

The social security legislation groups income stream products into three main categories:²

- asset test exempt (ATE) income streams, which includes ‘non-commutable’ lifetime and certain term superannuation pensions and annuities;
- asset-tested income streams (long term) (ATLT), which includes allocated pensions and annuities, and term superannuation pensions and annuities that have more flexible commutation provisions (i.e. access to capital) and terms of greater than five years³; and
- asset-tested income streams (short term) (ATST), which includes term products of five years or less duration.

¹ A significant group will be those persons who are not receiving a pension because they have assessable assets over the upper assets test threshold. However over time it is expected that many of these persons will be included as their capital reduces below the threshold.
² This paper examines the take-up of income streams up to 30 June 2004. From 20 September 2004 a range of changes were made to the social security assessment of income streams which will impact on these descriptions.
³ This group includes where the term pensions and annuities, which have terms less than five year however the term must also match the purchaser’s life expectancy at purchase.
This paper will focus on two categories: ATE income stream products and non-ATE income stream products (which combines ATLT and ATST products), as there are only a small number of ATST products. Figure 1 shows the volumes of each of these product categories purchased from 1 July 1984 to 30 June 2004.

Figure 1: The number of ATE, ATLT and ATST income streams purchased by current age pensioners between 1984-85 and 2003-04

When exploring this topic, it was initially a concern that a significant number of age pensioners would own both an ATE and non-ATE income stream, as this might devalue some of the results. On investigation, it was revealed that only 5% of those age pensioners with income streams purchased both an ATE and non-ATE income stream.

A further data issue relates to the changes that have occurred over time in relation to these categories. While we endeavoured to match every category to its most appropriate group, we had to make a range of assumptions.4

The paper also examined the differences between income streams purchased from small managed funds (SMFs)5 compared to those purchased from non-SMFs.

The paper does not cover age pensioners who are receiving payments from defined benefit income streams.6 This group was not included because it was

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4 For example, allocated income streams purchased before 1 July 1994 were exempt from the assets test however we have included these products as ATLT.
5 Small managed funds includes self-managed superannuation funds (SMSFs), small APRA regulated funds (SAFs), and other funds that have the same Centrelink reporting requirements (i.e. the requirement for an annual actuarial certificate).
felt that these income stream products were sufficiently different to purchased income streams. This may be the focus of a future research paper.

Appendix A provides a short summary of the changes to the social security treatment of income streams over the past 20 years.

3. The context of income streams

Historically, income streams were paid mainly as defined benefit lifetime pensions to long-term employees of public sector or large private organisations. A limited number were also purchased as either lifetime or fixed-term annuities by retirees who had substantial financial assets or were particularly risk averse.

The Australian Government responded to the increasing proportion of people of retirement age and concern about implications for age pension expenditure by making a range of changes, which included the introduction in July 1992 of compulsory superannuation for all employees (known as the Superannuation Guarantee). The Government also increased the tax concessions for voluntary contributions and made changes to the preservation arrangements. The aim of these initiatives was to encourage individuals to increase their personal savings to obtain a higher standard of living in retirement than would be possible from the age pension alone. This goal was supported by the concessional taxation arrangements for superannuation.

The resultant increase in superannuation balances has meant superannuation has become an integral component of how retirees fund their retirement, along with other private savings and social security income support.

The Government also encourages individuals to use their superannuation savings to fund their retirement through income streams. Incentives are provided through the tax and social security systems to encourage retirees to invest their superannuation in income stream products that provide a steady, predictable drawdown of capital and income in retirement.7 8

The social security incentives for income streams include counting only 50 per cent of the assessable assets for certain ‘non-commutable’ income streams under the assets test.9 There is also a generous income test treatment, which

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6 The term ‘defined benefit income stream’ is defined in section 9(1F) of the Social Security Act 1991. It should not be confused with a ‘defined benefit pension’, which is defined in Superannuation Industry (Supervision) Regulations 1994.
7 Tax incentives include a 15 per cent rebate on the taxable component of a pension paid from a taxed source, and access to the higher reasonable benefit limit (RBL) where at least 50 per cent of a person’s superannuation is taken as a complying income stream.
8 For further information on the social security treatment of income streams refer to Understanding Retirement Income Streams, which is available at www.facs.gov.au.
9 Prior to 20 September 2004, these income streams attracted a 100 per cent asset test exemption.
determines assessable income for social security purposes by reducing gross income by a portion of the capital used to purchase or acquire the product.\(^{10}\)

While the concessions allow some people to access income support who may not otherwise be eligible, their value lies in the extent to which they further the Government's retirement income policy objectives. For example, the limitations on access to capital that accompany the 50 per cent asset test concession effectively ensures that the invested funds are used to provide a gradual, sustained and regular drawdown of income over the purchaser’s retirement.

4. Analysis

ATE and non-ATE income streams by volume, average purchase price and gender

Figure 1 (on page 5) presents a time series of the number of current age pensioners who purchased ATE, ATLT and ATST income streams from 1984-85 to 2003-04.

Over the past two decades, the number of age pensioners each year who have bought one of these kinds of income stream products steadily increased to over 34,000 in 2003-04. The increase underlines the growing popularity of income streams as a source of income in retirement.

**Numbers of ATE and non-ATE income streams purchase by age pensioners**

Until 1997-98 the number of ATE income streams purchased was relatively small. From 1998-99, ATE products have steadily grown in popularity. A range of factors seems to be the reason for this:

- the changes in 1998 simplified the system making it relatively easier for retirees to understand their options, and provided product providers with greater certainty regarding the social security treatment of income streams.
- increases in accumulated retirement savings because of the superannuation guarantee and additional superannuation contributions (either through salary sacrifice or making undeducted contributions), rising sharemarkets in the late 1990s, and increases in real wages.\(^{11}\)

\(^{10}\) A further change was undertaken on 20 September 2001 to remove several loopholes for ATE products. The impact of these changes is considered minimal.

\(^{11}\) It is likely that the additional contributions to superannuation and the rising sharemarkets have had the greatest impact. This is because an individual can contribute far more through additional contributions than the amount required under the superannuation guarantee. Also funds invested in superannuation are held in a tax effective
These individuals are likely to be more assets test sensitive (i.e. customers whose payment is actually or potentially reduced by the assets test)

- the growth in the financial press and financial planning has made retirees more aware of the options to use income streams to fund their retirement, which may also allow them to access the age pension and associated concessions.

The big spike in 1998-99 can be explained by the changes introduced on 20 September in that year. All income streams, irrespective of when they were purchased, were assessed under the new rules. That is, there was no grandfathering of previous income stream arrangements. This meant that an age pensioner who held an income stream product that was previously asset test exempt would need to satisfy the new requirements. In many cases this resulted in an age pensioner commuting (i.e. ceasing) their income stream to purchase a new ‘complying’ ATE income stream.

From 1999-2000 to 2003-04, there was a marked rise in the number of ATE products purchased. A potential explanation for increased volume in ATE income streams may be that there was a substitution effect between non-ATE and ATE products. The poor market returns from 2001-02 to 2003-04 may have caused retirees to seek a more ‘guaranteed’ income source that is available from insurance-based products. Also the changes to ATE products announced in February 2004 may have increased the number of ATE income streams purchased in the last few months of 2003-04.

Figure 1 shows that, from 1984-85 to 1993-94, age pensioners purchased non-ATE income streams in increasing numbers. This increase was mainly in allocated income streams. The growth of the allocated products has been attributed to their flexible design features. These products offer retirees access to their capital, control over the asset allocation of the portfolio supporting the income stream, and provide some flexibility regarding the timing and size of pension payments (Drew, Standford and Stanhope, 2003).

In 1993-94, the uptrend peaked at over 12,000 products purchased and then dropped substantially from its peak to 1995-96. The drop could be attributed to a change in the asset test treatment where these products became 100 per cent asset tested when they were previously asset test exempt. The dip in 1994-95 indicates that people either deferred their purchase of allocated products or were unable to qualify for income support because of the change.

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12 An exemption to the changes was available where a current social security recipient could prove that they would experience significant financial costs in changed their arrangements to comply with the new rules.
That is, the change in the asset test treatment meant that they now had assessable assets exceeding the upper assets test threshold.

From 1994-95 to 2001-02, the purchase of non-ATE income streams increased at an annual rate of over 29 per cent. As stated above, this was mainly driven by the increasing popularity of allocated products, and was in spite of the change in the asset test exemption for allocated products in 1994.

From 2001-02 to 2003-04, the number of non-ATE products purchased dropped by an annual rate of 9 per cent. This can, at least in part, be explained by the downturn in the sharemarkets over this period. That is, a drop in current or potential age pensioners' accumulated superannuation balances over this period may have caused some to delay purchase an allocated product or purchase an insurance-based product which is not affected by sharemarket returns.

**Average purchase prices of ATE and non-ATE income streams by gender**

Figure 2 shows the average purchase prices for both ATE and non-ATE products for men and women. It is not surprising that on average more money is invested in non-ATE products than ATE products. The difference relates to the flexibility of non-ATE products (i.e. allocated products) and that people seeking to gain an asset test advantage by purchasing an ATE product would only invest to the extent necessary to obtain the benefit they required. In effect, this would place a limit on the amount that customers would use to purchase ATE products.

Of people who invested in ATE income streams, until the late 1990s, on average men invested significantly more than women. However, this gap has narrowed. By 2003-04, women invested on average $2,000 more in ATE products than men. This could reflect women having sufficient financial assets, in recent years, to reach the ‘ATE limit’ discussed in the previous paragraph either through their own savings or by contributions from spouses.

For non-ATE income streams, the story is far different. The average purchase price for men has been significantly higher than that for women over the whole period. Over the past 15 years, the average difference has been around $10,000.
Figure 2: Average ATE and non-ATE income streams purchase prices between 1984-5 and 2003-04 by gender (nominal dollars)

![Graph showing purchase prices for ATE and non-ATE income streams by gender from 1984-5 to 2003-04.]

Numbers of ATE and non-ATE income streams purchased by gender

Figure 3 shows the number of ATE and non-ATE income streams purchased by male and female age pensioners. In total, men have purchased more income streams than women, though this is not the case for both categories. For non-ATE, men have purchased significantly more products than women. This is probably because a larger proportion of men than women who retired during the period would have superannuation.\(^{13}\) It would be expected that the difference would narrow in the future as more women enter the workforce and are able to contribute to superannuation for long periods of time. Also, the Government’s recent changes to allow all Australian residents, irrespective of their work status, to contribute to superannuation and the concessions provided for spousal contributions should help to further narrow the gap.\(^{14}\) In addition, the increase in the age pension age for women could also delay demand by women for non-ATE products until they reach age pension age.

For ATE products, however, there has been little difference between men and women over the period, and since 1999-00 women have purchased more products than men. This may be because of a range of factors, which could include:

\(^{13}\) This could be from one or more of the following: pre-superannuation guarantee employer and employee contributions; superannuation guarantee payments; by salary sacrificing; or through making personal after tax superannuation contributions.

\(^{14}\) From 1 July 2004 any person under the age of 65 can contribute to superannuation irrespective of their work status. Previously, a person under age 65 had to be either gainfully employed or to have ceased gainful employment within the past two years to contribute to superannuation.
as complying annuities can be purchased with non-superannuation money, females may be using money provided to them on the death of their partners (this will be examined later in the paper); and

women are generally considered to be more conservative in terms of making investment decisions. This would be supported by the findings by Gerrans and Clark-Murphy (2003) that the odds of choosing the riskier investment options are highest for single men and the lowest for women.

*Figure 3: Numbers of income streams purchased between 1984-85 and 2003-04 by income stream category and gender*

Average age of current age pensioners at purchase date by gender

Figure 4 shows the average age of current age pensioners at the time that they purchased their ATE or non-ATE income stream. As mentioned previously, the earlier years understate the population because of the lack of data for deceased persons. The earlier years have been included primarily for completeness.
Figure 4: Average age at purchase of Age Pensioners from 1985-86 to 2003-04 by income stream category and sex

There are two striking aspects displayed in the graph:

- firstly, over the past 10 years, the average age of customers who purchase ATE and non-ATE income streams has been increasing.

- secondly, the average age for age pensioners who purchase ATE products has been consistently above that for age pensioners who purchase non-ATE income streams. This difference may relate to:
  - the exemption from the assets test for superannuation that applies up to age pension age. When a person reaches age pension age, their superannuation is assessed under the means test in the same manner as if they held it as cash. However they gain a more beneficial treatment under the income test if they convert their superannuation to an asset-tested income stream, and still have full access to their capital.
  - a tendency for age pensioners to delay purchasing ATE income streams until the impact of the assets test is known and real, possibly because of the lack of access to capital for ATE streams.

The reasons for the increase in average age, especially since 1997-98, are not entirely clear. While we are aware that it does take several years for nearly all income streams to be recorded in this data set, a significant percentage of total sales (at least 90%) appear within 12-18 months. This is
especially the case for ATE products, which can reduce assessable assets under the social security means test.

One possible explanation is that some age pensioners who are about to enter an aged care facility use ATE income streams as a means to reduce the amount of aged care bond they are required to pay. This may have an effect on the average age.

The difference in the average ages of men and women purchasing non-ATE products may reflect the lower pension eligibility age for women.

**ATE and non-ATE income stream average purchase price and age pensioner’s assessable assets by marital status**

This section examines average purchase price and assessable assets across differences in marital status. The categories used are single, couples and widowed as they cover almost the entire customer population. As the analysis focuses on individuals, any amounts relating to couples will need to be doubled to reflect the family unit.

Figure 5 shows that average ATE purchase prices for widows is above that for couples and singles. This may reflect that widows have received money from their deceased partner’s estate, so are looking for effective mechanisms to balance access to the age pension with steady and reliable income payments. Figure 7 seems to support this conclusion.

Figure 6 shows that single age pensioners do not invest as much in non-ATE income streams as couples and widows. However, the picture changes for total assessable assets, which includes non-ATE income streams. Figure 8 shows that singles have the highest assessable assets. The difference between singles and couples reflects the focus on individuals rather than family units, and the differing assets test thresholds.

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15 Covering customers who are married or in a Marriage-Like Relationship. (Stuart to get words)
Figure 5: Average ATE purchase prices for Age pensioners by marital status as at the date of purchase (nominal dollars)

Figure 6: Average non-ATE purchase prices for Age pensioners by marital status as at the date of purchase (nominal dollars)
Figure 7: Average total assessable assets for Age pensioners with ATE income streams by marital status as at the date of purchase (nominal dollars)

Figure 8: Average total assessable assets for Age pensioners with non-ATE income streams by marital status as at the date of purchase (nominal dollars)

Figure 9 takes the analysis further by adding, for age pensioners with ATE income streams, the purchase price of their ATE income streams to their other assessable assets (as at the time of purchase of their ATE income stream). ATE income streams attract age pensioners with more assessable assets, which reflects the benefits of the asset test exemption.
ATE and non-ATE income stream numbers and average purchase price by source of income stream (SMF or non-SMF)

In this section, some differences are examined between age pensioners who have purchased their income streams from small-managed funds (SMF) and those who have not. SMFs are comprised of self-managed superannuation funds, small APRA superannuation funds, and other funds that have the same Centrelink reporting requirements (i.e. the requirement for an annual actuarial certificate). While age pensioners with income streams from SMFs comprise less than 2 per cent of the total income stream products, it is expected that this percentage will increase significantly in the future given the current popularity of SMFs, and possibly, as a result of the impact of the choice of fund changes from 1 July 2005.

We are only able to examine income streams purchased from SMFs from 1999-2000, the year that Centrelink began capturing this data. This highlights the fact that SMFs are a relatively new superannuation phenomenon.

Figures 10 and 11 examine the number and average purchase prices of ATE and non-ATE income streams purchased by current age pensioners through SMFs. Figure 10 also includes the average purchase prices for ATE and non-ATE income streams for comparison purposes.
Age pensioners with SMFs have invested significantly more in their income streams than those who do not have a SMF. It is interesting that those with an ATE income stream invest considerably more than those with a non-ATE income stream.

A possible explanation for the difference may lie in the control over investment choice and estate planning for income streams purchased from SMFs, which does not exist for income streams purchased from insurance companies. For example, when the member of an SMF dies, it is the remaining trustees (often family members) who decide how the deceased member’s remaining funds are distributed. There is also a perception that SMFs can reduce administration fees.

For non-ATE income streams, average purchase prices have dropped, which is consistent with the findings in Figure 2 for all age pensioners.
Figure 11 shows the numbers of ATE and non-ATE income streams purchased from SMFs by men and women. For both sexes, there has been an upward trend over the past 2-3 years. For ATE income streams, some of the increase may have been motivated by the changes in the asset treatment of ATE products which came into effect on the 20 September 2004.\textsuperscript{16}

Comparison of males and females shows that in all years males purchased more ATE and non-ATE income streams from SMFs. While the amount invested was higher for males for ATE income streams, it was virtually the same for non-ATE income streams.

\textsuperscript{16} For example, it may have been beneficial for some age pensioners to buy an ATE income stream before 20 September 2004 to be eligible for the 100 per cent asset test exemption. From 20 September 2004, purchased ATE income streams are only eligible for a 50 per cent asset test concession.
Multiple regression model

Methodology

A multiple linear regression technique was used to summarise, quantify and predict the causal relationship between the average purchased prices of income streams and age pensioners’ financial, demographic and other characteristics. The model used 283,016 unit records from Centrelink’s administrative data for age pensioners who had purchased an income stream from 1 July 1984 to 30 June 2004. The dependent variable in the model was the average purchased price for income streams and its explanatory variables were based on:

- pensioners’ demographic characteristics such as gender, age of pensioner when the income stream was purchased, and marital status (same groups were used as defined previously).
- total assessable assets as per the social security assets test.\(^\text{17}\)
- total assessable income as per the social security assets test.\(^\text{18}\)
- other variables, such as homeownership status, whether the income stream was ATE or non-ATE, whether the income stream was purchased from a SMF or non-SMF, and changes to the social security treatment of income streams.
- interactive terms, such as social-economic, demographic and financial indicators.

Due to the skewed distribution of the purchased price of income streams and its violation of the constant variance assumption, it was decided to transform the dependent variable into lognormal by taking the log of the purchased amounts.\(^\text{19}\)

Hypotheses

In light of the detailed examination and analysis of income streams in the previous parts of this paper, the model was used to test the following hypotheses:

- that the average purchase prices for non-ATE income streams are greater than for ATE income streams.

\(^{18}\) Ibid.
\(^{19}\) See Appendix B Figure 13 for more details.
that male age pensioners place greater amounts of their funds in non-ATE income streams than their females counterparts.

that there is no significant difference between male and female age pensioners in relation to the purchased prices for ATE income streams.

that single age pensioners and those in a marriage-like relationship place higher amounts in income streams than widowed age pensioners.

that a negative relationship exists between the total assessable income and the average purchase prices, due to income substitution effects and the impact of social security income test.

that a positive relationship exists between the total assessable assets and the average purchase prices.

that age pensioners with income streams from SMFs generally invested a higher amount in these products than pensioners who do not use SMFs.

that there is a difference in average purchase prices between homeowners and non-homeowners.

that an age pensioner’s age at purchase exhibits a non-linear relationship with average purchase prices.

Results

After a number of iterations of fitting of the data using a combination of different explanatory variables, a final model was achieved (see model specifications in Appendix B).

Overall, these explanatory variables explained about 53 percent of the variation of the average purchase price, and the model was significant at 95 per cent confidence level.

The sign of the coefficients of the estimated parameters were consistent with the above hypothesis. In this model, the most significant continuous independent variables were the age of pensioners at purchase date, the total assessable assets, and total assessable income (see Appendix C: results of multiple regression for further details).

The convex quadratic function of age at purchase showed the rate of decrease of the average purchase prices as the entry age increased until it reached the lowest average purchased price at entry age 77.2 years of age. This reflects the reduction of an age pensioner’s total assessable assets as they get older, hence reducing the age pensioner’s capacity to allocate more
assets to purchase an income stream. The average purchase price then increased after 77.2 years, reflecting the increase in the take-up of income streams by widows who may have inherited assets from their deceased partners’ estate, and use them to purchase complying income streams to ensure eligibility for a significant age pension as well as to obtain a regular non-pension income source.

The negative estimated coefficient of age pensioners’ total assessable income reflected a negative correlation between age pensioners’ total assessable income and the average purchased prices, which could be attributable to income streams being used to supplement disposable income. In terms of the social security income test, the higher total assessable income is, the lower the age pension rate would be. Therefore, if age pensioners have income from other sources then it is reasonable to expect that they would invest less in income streams as they would not need as much income from an income stream.

As expected, the estimated coefficient for total assessable assets was positive which indicated a positive correlation between the average purchase price and age pensioners’ total assessable assets.

In terms of the other variables, the negative (positive) signs of the estimated coefficients indicate that average purchase prices were less (greater) than their referenced categories. For example, holding other variables constant, on average, women purchased lower values of income stream than men; single age pensioners purchased higher value income streams either individuals in couples or widowed; homeowner age pensioners purchased lower value income streams than their non-homeowner counterparts.

The analysis of age pensioners who own their homes revealed that, on average, homeowner age pensioners have a higher level of assessable assets, higher assessable income and purchased income streams at older age than those who do not own their own home. When all these factors were taken into consideration, it does seem reasonable to expect that age pensioners who do not own their own home, on average, invest more of their assets into income streams to supplement their disposable incomes.

Another significant and interesting feature captured by the model was the difference in the average purchase prices between income streams purchased from SMFs and those purchased from non-SMFs.

Overall, given the limitation of choices of independent variables, the multiple regression fitted the data reasonably well and was able capture several
interesting characteristics of age pensioners who had purchased income streams.

**Application of model**

The results of the model could be used to as a tool for policy development and to quantify changes to income stream policy. For example, the model could be used to predict average purchase prices for age pensioners with certain demographic and financial characteristics.

*Table 1: Income streams purchased from Non-SMSFs*

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<td>Female</td>
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<td></td>
</tr>
<tr>
<td>Home owner</td>
<td>78,269.26</td>
<td>63,404.43</td>
</tr>
<tr>
<td>Non-Home owner</td>
<td>75,192.24</td>
<td>65,711.34</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home owner</td>
<td>79,753.06</td>
<td>66,650.82</td>
</tr>
<tr>
<td>Non-Home owner</td>
<td>94,105.90</td>
<td>69,536.58</td>
</tr>
</tbody>
</table>

Table 1 shows the predicted average purchase prices for ATE and non-ATE income streams for different categories of age pensioners (marital status, gender and home ownership status) using total assessable assets, total assessable income, and entry age.

The average purchase price for non-ATE income streams for single, married and widowed age pensioners who do not own their home was, on average, $4,600, $10,200 and $11,300 more than for their homeowner counterparts, respectively. It is also shows the same result for ATE income streams but the magnitudes were smaller relative to non-ATE ($4,900, $7,100 and $5,200).
Again for non-ATE products, in terms of marital status, the difference in the average purchase price between single and married categories were approximately $4,000. While the difference between married and widowed was approximately $9,400. For ATE income streams, the differences were insignificant.

Average purchase prices for non-ATE were greater than ATE products for all categories. For example, on average a married man who purchased a non-ATE income streams, and does not own his home, allocated around $26,400 more than other age pensioners who purchased ATE products with the same characteristics.

Table 2: Income streams purchased from SMFs

<table>
<thead>
<tr>
<th>Non-ATE</th>
<th>ATE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Single</strong></td>
<td></td>
</tr>
<tr>
<td>Home owner</td>
<td>119,900.59</td>
</tr>
<tr>
<td>Female</td>
<td>119,645.40</td>
</tr>
<tr>
<td>Non-Home owner</td>
<td>135,699.37</td>
</tr>
<tr>
<td>Male</td>
<td>141,545.22</td>
</tr>
</tbody>
</table>

| **Married** | | |
| Home owner | 120,722.87 | Home owner | 121,874.55 |
| Female | 127,630.38 | Female | 125,297.86 |
| Non-Home owner | 152,899.23 | Non-Home owner | 139,141.00 |
| Male | 159,952.06 | Male | 141,593.27 |

| **Widowed** | | |
| Home owner | 119,286.38 | Home owner | 121,286.88 |
| Female | 114,437.41 | Female | 123,362.76 |
| Non-Home owner | 124,345.29 | Non-Home owner | 137,114.95 |
| Male | 147,934.31 | Male | 138,317.17 |

Table 2 shows the average predicted prices for income streams purchased from SMFs. In general, the average purchase prices for income streams purchased from SMFs are higher than those purchased from non-SMFs for both ATE and non-ATE products. However, the model understates the average purchase prices for age pensioners with ATE income streams purchased from SMFs because of their entry age and incomes were higher than average compared to other categories.
Conclusion

Over the past 20 years, there has been considerable growth in the number and value of income streams purchased by age pensioners. This has been the case for both men and women. This would seem to indicate that increasing numbers of people are taking advantage of the incentives and rewards for ensuring a regular, gradual and sustainable draw down of assets through their retirement. However it would be surprising if this had not occurred due to the likely impact on retirement savings of the introduction of the superannuation system.

Also, this paper did not examine the wider issue as to whether income streams were increasing in popularity compared to other retirement funding avenues. This is an interesting question that deserves further investigation.

There is still a gap between men and women in terms of numbers of products purchased and average purchase prices. However, overall the gap is narrowing, with women in recent years purchasing more ATE products than males. Also, the Government’s recent changes to allow all Australian residents, irrespective of their work status, to contribute to superannuation and the concessions provided for spousal contributions should help to further narrow the gap.

For age pensioners with SMFs, there is a significant difference in average purchase prices for both ATE and non-ATE products.

Given the limitation of choices of explanatory variables and the cross sectional nature of the data, the model fitted quite well. The signs of the estimated coefficients were as expected, the model met all of the assumptions under multiple linear regression, and was quite robust in terms its predictive power. However, the model could be improved further if other relevant variables were included.
History of the means test treatment of income stream

It is important to note that for income streams, the development of social security policy has been influenced by developments in the taxation treatment and regulation of income streams. The information below primarily focuses on the social security aspects.

Over the past 20 years, the social security treatment of income streams has changed significantly, reflecting the growing complexity of this particular segment of the finance industry. For this paper, the history starts with the changes introduced in August 1989 to the assets test treatment of annuities.

Pre-April 1990

Before 15 August 1989, all income stream products were exempt from the assets test. However from 15 August:

- ordinary immediate annuities purchased on or after 15 August were asset tested. The asset value less any residual capital value was reduced on a straight-line basis for each completed year of the term.

- ordinary immediate annuities purchased prior to 15 August were exempt from the assets test only if they could not be sold, surrendered, borrowed against, or where there was no residual capital value. In effect there was a grandfathering provision for those products where the purchaser had no access and no monies were returned at the end of the product's term.

- roll-over immediately annuities purchased on or after 15 August were asset-tested. The asset value less any residual capital value was reduced on a straight-line basis for each completed year of the term.

- allocated pensions and annuities continued to be exempt from the assets test.

Under the social security income test, the total income paid from superannuation pensions and annuities were fully assessed. This assessment was consistent with the common law definition of annuities. Baron Watson in *Foley v Fletcher* said that ‘an annuity means where an income is purchased with a sum of money and the capital has gone and ceased to exist, the principal having been converted into an annuity’. That is, the amount used to purchase the annuity is no longer considered capital, but solely income that is distributed to the purchaser over the annuity’s term.

The assessment of income under the social security income test differed significantly from the approach taken by the Australian Taxation Office.

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20 (1858) 28 LJ Ex 100.
Taxable income comprised the amount of income actually received by a taxpayer less a 'deductible amount'. The deductible amount concept recognised, despite the strict legal definition of an annuity, that capital is in fact returned to an investor over the term of an income stream. If a deductible amount were not allowed, taxpayers would be double taxed on the part of their income stream investments purchased from after-tax money (i.e. money that has already been taxed).

April 1990

The pre-April 1990 income testing of income streams was considered to pose several problems:

- the means test created a disincentive for people to invest in superannuation pensions and annuities contrary to the Government's retirement incomes policy.
- differences between tax and social security rules were confusing for pensioners and their advisors.
- income test did not recognise that part of each income stream payment represents a return of capital'.

From 26 April 1990, the income test for income streams was changed to replicate, as far as possible, the tax treatment of income streams. Gross income from superannuation pensions and ordinary immediate annuities was to be reduced by a 'deductible amount', which was the amount that could be claimed for income tax purposes. The income test deductible amount for income from rollover immediate annuities comprised the deductible amount for tax purposes plus an additional component to reflect the tax rebate for rollover annuities.

July 1992

The next major round of changes occurred as the Government sought to apply tax and social security rules consistently to allocated pensions and annuities, which had developed as an alternative to traditional income streams in the latter half of the 1980s.

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23 Pursuant to section 3(1) of the Social Services Act (SSAct), the deductible amount for income from superannuation pensions was the amount that could be claimed as a deduction for income tax purposes under the Income Tax Assessment Act (ITAA). The calculation for the deductible amount in respect of ordinary immediate annuities was contained in the SSAct but had the same effect as the ITAA calculation.
On 1 July 1992, the Minister for Social Security announced changes to the means tests for allocated pensions and annuities. Previously, allocated pensions and annuities were exempt from the assets test, and were income tested as superannuation pensions and rollover annuities respectively.

The amending legislation provided for allocated pensions and annuities to be means tested under the rules for managed investments.24 As such:

- balances in allocated pension or annuity accounts were to be fully assessed under the assets test; and
- income was to be calculated as the product of the account balance multiplied by the fund's earning rate.

The amendments received royal assent on 24 December 1992. They were to take effect on the date of a report to the Senate by the Senate Select Committee on Superannuation. However, the Government decided to delay the implementation of the changes until the Committee’s report was released. These changes were never implemented.25

**July 1994**

In March 1994, the Senate Select Committee on Superannuation provided the Minister for Social Security with a preliminary paper on tax and social security issues surrounding allocated pensions.26 The Committee had not reported to the Senate at that time and allocated pensions and annuities were still means tested as superannuation pensions and rollover annuities, respectively, which means that they were exempt from the assets test.

On 23 May 1994, the Minister for Social Security announced the repeal of the legislation to allow allocated pensions and annuities to be assessed as managed investments (As indicated previously, this legislation had never been implemented).

This legislation was replaced by new legislation, which received royal assent on 12 July 1994.

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24 The relevant bill is the *Social Security Legislation Amendment Bill (No 3) 1992.*

25 In the area of taxation law, the Treasurer announced new minimum standards that superannuation pensions and annuities needed to meet to attract tax concessions on 30 June 1992 (Treasurer, Press Release, *Taxation Treatment of Superannuation Pensions and Annuities*, December 1992. Also see *Security in Retirement*, p.60). Until this time, allocated pensions and annuities were treated in the same way as traditional superannuation pensions and annuities. Under the new rules only pensioners and annuitants who made drawdowns within prescribed minimum and maximum annual amounts would receive tax concessions.

Under the new legislation, allocated pensions and annuities purchased from 1 July 1992 were asset tested.\textsuperscript{27} However, there were inconsistencies under the income test, as allocated pensions were treated the same as ordinary immediately annuities while allocated annuities treated the same as rollover immediately annuities. This treatment favoured allocated pensions over allocated annuities and added to pressure to undertake the major income streams review that culminated in the 1998 changes.\textsuperscript{28}

An amendment to the income tax law definition of undeducted purchase price (UPP) came into effect on 1 July 1994. UPP is a component of the deductible amount calculation also used in the pensions income test. The change was made to provide greater consistency in the tax treatment of pensions and annuities.\textsuperscript{29}

The May 1994 decision not to change the income test for allocated products meant that the social security definition of UPP was not amended in line with tax. While that decision related only to allocated investments, the income tests for other income streams were left unchanged in the interests of equity.

**September 1998**

During 1996, there was steadily increasing pressure for a general review of the social security rules for income streams. The rules were generally viewed as being inadequate for assessing the broad range of products sold to increasing numbers of retirees with substantial retirement savings.

As previously noted, there was a sizeable difference in the treatment of pensions and annuities in the legislation, which may not have been as visible when there was only a small number of customer with these products. However as the number of customers with income streams grew, the inequity grew to the point that changes were necessary.

There were significant inconsistencies and inequities in the assessment of some pensions and annuities despite there being no essential difference in their characteristics. There was also a range of loopholes that were being actively marketed as arrangements that could increase a person’s social security entitlement without the customer relinquishing control over the assets.

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\textsuperscript{27} Allocated pensions and annuities purchased before 1 July 1992 continued to be exempt from the assets test.

\textsuperscript{28} Further changes to the income testing of income streams were to be considered after the final report of the Income and Assets Test Review. The review was conducted by Ageing Agendas - Barber, J., Moon, G. and Doolan, S., 1994, *Targeting for Equity: Final Report of the Strategic Review of the Pensions’ Income and Assets Tests*, AGPS, Canberra.

\textsuperscript{29} From 1 July 1994, UPP comprised a taxpayer’s undeducted contributions (that part of an ETP representing an employee’s own contributions out of after tax money). Before this date, UPP comprised the pre-July 1983 component of an ETP and undeducted contributions.
backing the income stream.\textsuperscript{30} The rules also allowed certain ‘1 year duration' annuity products to qualify for a full exemption from the assets test despite there being ready access to the capital at the end of each year.

A reform framework was development by the Department. In essence, the approach taken was to classify income streams according to their characteristics, rather than the name of the product, or who the product provider was.\textsuperscript{31}

In December 1996, the framework was presented to various industry and retiree groups including ARISA, IFSA and APSF. The framework was refined as a result of the consultations and other inputs into the policy development process, but its essential shape remained in the final policy and in the legislation that came into effect on 20 September 1998.

The final framework was announced by the Government in 1997 and was included in the 1997-98 Budget Papers. It formed the basis for the \textit{Social Security and Veterans’ Affairs Legislation Amendment (Budget and other Measures) Bill 1997}, which outlined three broad categories (see Figure 1):

- asset-test exempt income streams – these products must satisfy a range of criteria which includes non-commutable, no residual capital value, etc.
  - asset test treatment – exempt from the assets test.
  - income test treatment – gross income less a deduction based on purchase price. For defined benefit income streams, the deduction is based on tax-deductible amount.

- asset-tested income streams (long term) – these products do not meet the requirements for asset test exemption, and have a term greater than 5 years or the term is 5 years or less but is equal to the purchaser’s life expectancy at purchase.
  - asset test treatment – fully assessed under the assets test. The asset value is either: account balance; or original purchase price depleted on a straight-line basis over the product’s relevant number. For defined benefit income streams, the original asset value is determined according to pension valuation factors, and this value is depleted on a straight-line basis over the product’s relevant number.

\textsuperscript{30} The Explanatory Memorandum to the \textit{Social Security and Veterans’ Affairs Legislation Amendment (Budget and other Measures) Bill 1997} outlines a few of the loopholes, such as the offering of “private annuities” where there is no effective surrender of an asset in exchange for a non-commutable income stream', or a superannuation pension with a residual capital value, which were both exempt from the assets test.

\textsuperscript{31} The Explanatory Memorandum to the \textit{Social Security and Veterans’ Affairs Legislation Amendment (Budget and other Measures) Bill 1997} explained that ‘the amendments will ensure that income streams are classified for means testing purposes on the basis of their characteristics, rather than on arbitrary factors such as where an income stream is paid from.’
income test treatment – gross income less a deduction based on purchase price. For defined benefit income streams, the deduction is based on tax-deductible amount.

- asset-tested income streams (short term) – these products do not meet the requirements for asset test exemption, and have a term less than 5 years.
  - asset test treatment – fully assessed under the assets test.
  - income test treatment – deemed on asset value as for other financial investments.

Figure 12: Treatment of income stream products

These changes effectively discontinued the relationship between the social security and tax treatment of income streams.32

An important aspect of the changes was that they applied to all income streams irrespective of when the income stream was purchased or acquired (i.e. no grandfathering of previous arrangements). This meant that allocated pensions and annuities purchased prior to 1 July 1992 were asset-tested for the first time.

The Minster had the power to exempt specified financial investments for particular individuals from the new means test rules where the new rules created significant financial disadvantage. The person had to be a social

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32 Although the income test treatment for defined benefit income continued to apply the same deductible amount as for tax purposes.
security recipients, and be unable to escape the arrangement without causing the person severe detriment.

**September 2001**

In September 2001 a range of minor amendments to the SSAct were made the 1998 changes. These involve minor technical amendments to close off some loopholes and provide clearer guidance to the intent of the 1998 rules. They came into effect on 20 September 2001, and include:

- required characteristics that must be met by an income stream if it is to remain an asset-test exempt income stream,
- limits to the ability of a person to circumvent the requirement that cash commutations occur only within the first 6 months of an asset-test exempt income stream,
- easing of provisions to permit commutation for hardship purposes, and
- asset test exemption to be retained by all jointly owned lifetime income streams when one of the owners dies.

**December 2002**

In 2002, the Family Law Act was changed to allow superannuation to be split following marriage breakdown by the Family Court or a superannuation agreement. The SSAct was also amended to ensure that the social security means test is applied consistently and fairly to customers who have their superannuation entitlements split as part of a property settlement on marriage breakdown. These changes came into effect on 28 December 2002.

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33 The *Family and Community Services Legislation (Simplification and Other Measures) Act 2001*.
34 The *Superannuation and divorce - Family Law Legislation Amendment (Superannuation) (Consequential Provisions) Act 2002*. 

Printed: 1:20 PM 6/07/2005 31
Specifications for multiple linear regression model

\[
\text{LogPurchamt} = \text{Intercept} + \beta_1 \times \text{Totass} + \beta_2 \times \text{Inctest} + \beta_3 \times \text{Entryage} + \beta_4 \times \text{Sqage} + \\
\beta_5 \times \text{Sex} + \beta_6 \times \text{Marstatus} + \beta_7 \times \text{HomeID} + \beta_8 \times \text{SMF} + \beta_9 \times \text{ProType} + \\
\beta_{10} \times \text{AgeGroup} + \beta_{11} \times \text{Case} + \beta_{12} \times \text{Totass} \times \text{Entryage} + \beta_{13} \times \text{Totass} \times \text{sex} + \\
\beta_{14} \times \text{Totass} \times \text{Marstatus} + \beta_{15} \times \text{Totass} \times \text{HomeID} + \beta_{16} \times \text{Totass} \times \text{SMF} + \\
\beta_{17} \times \text{Totass} \times \text{ProType}
\]

Where:

- **Intercept** = Intercept term
- **AssTest** = Total assessable assets
- **Entryage** = Age of an age pensioner when purchased an income stream
- **Sqage** = Entryage*Entryage
- **Marstatus** = Marital status (married, single and widowed)
- **Sex** = Male and Female
- **HomeID** = Homeownership status (homeowner or non-homeowner)
- **SMF** = Small Managed Funds and Non-Small Managed Funds
- **ProType** = Asset test exempt income stream and asset test stream
- **AgeGroup** = Entry age less than 80 years and entry over 80 years
- **Case** = Four periods of major changes to the social security treatment of income streams.

Figure 13: Distribution of purchased prices for ATE and Non-ATE income streams
## Table 3: Result of multiple regression

| Parameter                     | Estimate  | Standard Error | t Value | Pr > |t| |
|-------------------------------|-----------|----------------|---------|-------|---|
| Intercept                     | 15.0401064| 0.12295372     | 122.32  | <.0001|
| Totass                        | 0.00000729| 0.00000016     | 44.58   | <.0001|
| Inctest                       | -0.00000409| 0.00000047    | -8.59   | <.0001|
| Entryage                      | -0.11164567| 0.0036076     | -30.95  | <.0001|
| Sqage                         | 0.00072322| 0.00002689     | 26.89   | <.0001|
| SEX: F                        | -0.1579654| 0.00368005     | -42.92  | <.0001|
| Marstatus: Married            | -0.03038303| 0.00514752    | -5.9    | <.0001|
| Marstatus: Single             | 0.03265604| 0.00651715     | 5.01    | <.0001|
| Marstatus: Widowed            | 0         |                |         |       |
| HomeID: Home Owner            | -0.13106737| 0.00360253    | -36.38  | <.0001|
| HomeID: Non-Home owner        | 0         |                |         |       |
| SMSF: N                       | -0.47320098| 0.01738972    | -27.21  | <.0001|
| SMSF: Y                       | 0         |                |         |       |
| ProType: ATE                  | -0.06133217| 0.0038408     | -15.97  | <.0001|
| ProType: Non-ATE              | 0         |                |         |       |
| AgeGroup: 80 and over         | 0.0841834 | 0.01044618     | 8.06    | <.0001|
| Case: 1994 - 1998             | 0.16272293| 0.00356382     | 45.66   | <.0001|
| Case: 1998 - 2001             | 0.22251288| 0.00341832     | 65.09   | <.0001|
| Case: after_2001              | 0.28270032| 0.00350206     | 80.72   | <.0001|
| Case: before_1994             | 0         |                |         |       |
| Totass*entryage               | -0.00000005| 0            | -22.22  | <.0001|
| Totass*SEX: F                 | 0.00000023| 0.00000002     | 11.01   | <.0001|
| Totass*SEX: M                 | 0         |                |         |       |
| Totass*Marstatus: Married     | 0.00000003| 0.00000003     | 9.89    | <.0001|
| Totass*Marstatus: Single      | -0.00000049| 0.00000004    | -13.44  | <.0001|
| Totass*Marstatus: Widowed     | 0         |                |         |       |
| Totass*HomeID: Home Owner     | 0.00000042| 0.00000002     | 20.8    | <.0001|
| Totass*HomeID: Non-Home owner | 0         |                |         |       |
| Totass*SMSF: N                | 0.00000055| 0.00000008     | 7.02    | <.0001|
| Totass*SMSF: Y                | 0         |                |         |       |
| Totass*ProType: ATE           | -0.00000092| 0.00000002    | -41.52  | <.0001|
| Totass*ProType: Non-ATE       | 0         |                |         |       |