Capital Research

Imputation Credit Redemption

ATO data 1988-2008

Neville Hathaway

July 2010

For all correspondence regarding the analyses and examples in this paper please contact

Neville Hathaway
Capital Research
Melbourne, Vic.
Ph (613) 9654 6277
Email: njh@capitalresearch.com.au

Version 9 July 2010

Contents:

Brief

Capital Research has been engaged by United Energy, CitiPower and Powercor, Jemena and SP Ausnet (*the Parties*) to analyse the Australian Taxation Statistics and conclude about their suitability for the Australian Energy Regulator (AER) to rely on them for the purposes of making decisions about the value of theta and gamma.

The AER has relied on a paper "*A Measure of the Efficacy of the Australian Imputation Tax System*" by John Handley and Krishan Maheswaran in its deliberations. This work attempts to derive an estimate for theta from Australian taxation statistics.

I have been asked by *the Parties* directly to comment on that paper and have done so in a separate report.

Here I have been explicitly asked through my own analysis as to how reliable are the ATO data for the purposes of making upper bound estimates for gamma and theta.

I have been provided with a copy of *Expert witnesses in proceedings in the Federal Court of Australia* and this report has been prepared in accordance with those guidelines. As required by the guidelines I have made all the inquiries that I believe are desirable and appropriate and that no matters of significance that I regard as relevant have, to my knowledge, been withheld.

My qualifications and experience in relation to this opinion are as set out in the attached CV[1] which sets out details of my formal qualifications and experience. In relation to the current matter, I note that I have conducted research, lectured, presented public seminars and appeared in court cases in matters involved in cost of capital and imputation tax over a period of approximately 25 years. I have been retained by major companies and the Australian Tax Office in relation to imputation issues. I am

[1] A copy of my CV forms Appendix 2 to this report.

involved in ongoing research into cost of capital and valuation issues including on the valuation of the franking credits attached to franked dividends paid by companies resident in Australia.

Documents

I have relied extensively of ATO publications and data. These are available on their website http://www.ato.gov.au for the years 2000 – 2008. Issues from previous years I have collected by purchasing CDs and printed copies. The most recent data available on their website (2008) also includes historical time series back, for some items, to 1988.

The principal source of historical data for companies from the most recent publication of the ATO is the spreadsheet cor0025078_2008COM6.xls which is supplied on their website.

In addition, I have collected data from the ABS and from APRA via their websites. These data are referenced in this paper.

Statement of Conclusions

I conclude that the ATO statistics cannot be relied upon for making conclusions about gamma and theta.

The ATO publishes data of taxation statistics which are a component of the filings by companies which are in turn calculated from the reported profit & loss of companies. After changes that were introduced from 1 July 2002, the income reported by companies now explicitly includes franking credits as well as cash dividend income. Companies receive a tax credit for the tax arising from their franking credit income. These data about franking credits flowing between companies are now visible whereas before they were hidden and this visibility is very helpful in understanding the overall flow of franking credits.

The ATO also publish data about company financials, this data is also reported on the Company Tax Form. Companies report their payments to investors of franked and unfranked dividends as well as the franking credits issued along with the franked dividends.

These two sets of data, taxation and financial, do not reconcile to the amount of $42.6 billion of franking credits over the period 2004-2008. In context, this is 27% of the reported distribution of $149 billion of credits.

I have explored the obvious sources for the discrepancy, such as non-resident investors and conclude that they are adequately accounted for in the reported data. Hence they are unlikely to be the source of the problem with the data. I have explored other issues such as under-estimates arising from zero tax companies. These are too small to account for this error.

Until that reconciliation has occurred or it can be explained to me how to account for those credits, I urge all caution in using ATO statistics for any estimates of parameters concerned with franking credits.

Summary of Numerical Estimates

For the whole imputation period 1988-2008 company net tax payments were $539 billion.

- About $174 billion remains undistributed within the Franking Account Balance (FAB) of companies.
- The net credits issued to all shareholders were $365 billion which represents 69% of the company tax paid.
- Under the Simplified Tax System (STS) introduced from 2002, the franked dividend and credit incomes by companies paid by other companies have been formally reported and no longer need be inferred. The financial year 2002 allowed for transition arrangements so estimates have been confined to the period 2004-2008.

For the period 2004-2008 company tax payments under the STS were $243 billion.

- Undistributed credits as recorded in the FAB increased by $75 billion.
- The timing drag caused by the FAB now operating on a rolling tax paid basis has reduced the tax payments credited to the FAB by an estimated $10 billion.
- The net credits issued estimated using tax payments data and FAB data were $158 billion.

For the period 2004-2008 the dividend payment data issued within the financial data indicate $149 billion of credits were distributed as fully franked dividends.

- $39 billion were reported as franking credit income by companies under the STS. Of this amount, $5 billion were received and redeemed by Life Offices companies, leaving a net $34 billion of credits recycled back to the FAB account within companies.
- $45 billion were by redeemed by persons.
- $20 billion were redeemed by super funds.
- $1.5 billion were refunded to charities and other designated organisations.
- About 65% of distributed credits are redeemed – the redemption proportion of net credits distributed to all shareholders outside of companies.
- Some 29% of the credits ($43.4 billion of the gross amount of $149 billion) are not recorded after being issued. This is approximately explained by the proportion of Australian equities held by foreigners.

There is an unreconciled $42.6 billion of credits difference between tax data, FAB data and financial data for the period 2004-2008.

- The tax and FAB data indicates a net $158 billion of credits have been distributed.
- The financial data indicates a net $115 billion of credits were distributed.
- This unexplained $42.6 billion equates to $99.3 billion of franking credits to be explained compared to the reported distribution of $348 billion of franked dividends.

1. Introduction

In a fully integrated company tax system, all income at the corporate level is attributed to the shareholder, regardless of whether or not it is distributed, and then taxed at the marginal income rates applying to each shareholder. Australia operates a lesser or partial version of this: only distributed profits in the form of dividends are attributed to shareholders. Company tax paid on these dividends is attributed to the shareholder as a withholding of personal tax due. A company is obliged to maintain a set of accounts to record how much company tax is available for crediting on future distributions (the Franking Account Balance or FAB) and each distribution has to have an accompanying statement about how much tax has been paid (credited) for that distribution.

As a consequence of the design of the system, all returns to shareholders are before personal tax and after company tax. Shareholders declare dividend income, franking credits plus any capital gains or losses (once realised) and then pay personal tax on these incomes. The company tax payment that they receive as a franking credit which can be used to offset their personal tax liability is thus a prepayment of their personal tax liability. Hence that part of the company tax they receive as a franking credit is a withholding of personal tax due.

Nearly all securities trade on markets with the tax status of after company tax and before personal tax. Not only is this true of securities like bonds and shares but it is also true for relatively simple investment income such as bank interest – no company tax is due on the account holders' interest income but personal tax is due.

Cost of capital estimates and corporate valuation exercises all use inputs that are taken from or estimated by market observations with the status of after company tax and before personal tax.

A dividend drop-off occurs on the date a stock goes ex-dividend which means a dividend has been declared and is being distributed. The drop of the share price when it goes ex dividend represents in part the removal of the capital value embedded in the share price for the value of the franking credit. This value of the credit is known as theta. The overall estimate of the capital value of the corporate tax payment ultimately captured by the shareholder is known as gamma. It depends on what fraction of the corporate tax payment is distributed as franking credits and then the capital value of that distributed credit.

In contrast, the tax data give an overall measure of redeemed credits. The ATO data ought to give an upper bound for the gamma value of credits. After all, the capital value estimate is a "pay now collect later" measure whereas the ATO data are a measure of the eventual "collect" value.

However, tax statistics represent the liabilities and claims by all taxpayers, both private and public. Presumably private companies are predominantly if not totally owned by resident tax payers who would fully utilise any distributed franking credit. This means that any benchmarking of a public company to estimates of theta and gamma obtained from tax statistics is likely to be biased high.

> *The importance of franking credits for the purposes of corporate valuation and cost of capital issues is that the net company tax paid on corporate income is not the headline statutory amount. It is that amount after deducting the franking credits that represent personal tax. We need estimates of franking credit usage and their value for the purposes of estimating net company tax liabilities.*

2. Background

Interestingly, this is not the first time Australia has had a type of integrated tax system. When company tax was first introduced in 1915 in Australia, companies were only taxed on their profits after deducting dividends paid out. This amounts to 100% credit for all company tax paid on distributed profits. The system also allowed for dividends being paid out of retained profits but this was cumbersome. In 1922 it was changed so that taxpayers on higher marginal rates than the company rate got a full rebate of the company tax paid (so effectively they only paid personal tax on the gap between company and their personal rate). Alas, as an historical echo of the more recent US President Bush Jnr dubious concept of giving the rich disproportional tax breaks and hoping for "trickle down", the Australian system then did not give individuals on lower marginal tax rates a rebate for the difference between their marginal tax rate and the company tax rate. This rebate system for higher marginal taxpayers was "suspended" in 1940 under pressure from funding war expenses so we then had the classical system of double taxation – first at the company level and then at the personal level. This system persisted up to 30 June 1987. Our modern imputation system has operated since 1 July 1987. It was substantially modified ("simplified") in 2002.

Prior to 1 July 2002, Australian resident companies upon receipt of a franked dividend only reported the non-credit or cash part of the dividend in their income, added the credit received to their FAB and received an inter-corporate dividend rebate (ICDR) for the company tax already paid. This avoided the imposition of multiple corporate tax payments on the original corporate income as it passed through a chain of companies. The inter-corporate dividend rebate was abolished effective 1 July 2004. There are a number of provisos in operation such as the franking credit must be held at economic risk (for instance, you cannot do a debt-equity swap over your shares and still expect to claim the franking credits) and there are sanctions for over- and under-franking a distribution.

At the same time, a regime for consolidated reporting for corporate groups was introduced. This means that for taxation purposes, only the head company needs to report to the ATO. Whilst the official start date was 1 July 2002, there were some transition arrangements that materially affect the data. The ICDR was available within consolidating groups until 30 June 2003 but even that was extended for groups with late reporting income years (for example, National Australia Bank's financial year ends September 30th). ATO data are best analysed for the years 2004-2008.

So we have to be very careful in analysing the Australian taxation data as there was much double counting in the flow data produced by the ATO and this problem persisted up to recent years. A company that receives a franked dividend and uses that income to pay out its own franked dividend will result in both sets of dividends and credits being recorded in the ATO statistics of dividends and credits issued. However, the Franking Account Balances (FABs) should reasonably accurately reflect the situation[2]. Whilst the FAB account of the paying company records a debit, the FAB of the second company will record both a credit for the franking credit received and an offsetting debit for any franking credit it paid out.

[2] The FAB account is now based on a rolling record of actual tax paid. The timing of these flows means that typically the tax credit to the FAB by year end will be *different* than the reported tax paid for that year because the entity established its final tax payment after year end. The fourth quarterly PAYG instalment is typically paid after the end of the tax year and a final tax return is lodged subsequently (some companies are early or late reporters eg banks.) Those payments will subsequently be credited or debited to the FAB in the year they are paid. As an approximation, the tax credit to the FAB is Q1 to Q3 PAYG instalments for current year plus the sum of last year's Q4 instalment and the residual tax payable/refundable of last year. This timing difference can be significant: $10 billion for 2004-08.

3. Company Tax Declarations

In this section I examine the fundamental source of ATO taxation statistics, the Company Tax Form. I explain how some recent changes have improved our understanding of national tax data but also that there are still limitations to its clarity.

In Figure 1 I have reproduced that part of the Company Tax Form that is used to declare profit and loss of companies. I have filled in some relevant entries for total company income and reconciliation items for the years 2004-2008. Some changes to this form have been made in recent years which reflect the changes to the system under the STS. All data are in $ billions. Bear in mind that these data will be revised from late entry of tax forms.

Companies now show their franked dividends as both the cash dividend amount (Label 6.H of the income statement) plus the explicit franking credits accompanying those dividends at Label 7.J of the reconciliation section. Label 7.J is a new introduction of the STS and it helps a lot in understanding the double counting of dividends and credits flowing between companies. Unfortunately, this unbundling is not done for income received from both partnerships and trusts. These are entered as gross amounts including credits at Labels 6.D and 6.E of the income section respectively. These credits all contribute to taxable income. They are given an offsetting collective rebate in the Calculation Statement (CS) at Label C (denoted henceforth as CS.C) but they were bundled along with other items, such as (until 2003) the Inter Company Dividend Rebate (ICDR) where some companies still qualified for this rebate.

Figure 1: Profit & Loss Statement: 2004-2008, $bn

PROFIT & LOSS: 2004-2008

6 Calculation of total profit or loss

Income

Gross payments subject to foreign resident withholding	B	
Gross payments where ABN not quoted	A	
Other sales of goods and services	C	
Gross distribution from partnerships	D	19.0
Gross distribution from trusts	E	135.1
Gross interest	F	
Gross rent and other leasing and hiring income	G	
Total dividends	H	144.8
Fringe benefit employee contributions	I	
Assessable government industry payments	Q	
Unrealised gains on revaluation of assets to fair value	J	
Other gross income	R	
Total income	S	F

CODE

CODE

7 Reconciliation to taxable income or loss

Total profit or loss amount shown at T item 6		
Did you have a CGT event during the year?	G	Print Y for yes or N for no.

Do you need to complete a *CGT schedule 2007*?

Also print Y for yes at G if the company received a distribution of a capital gain from a trust.

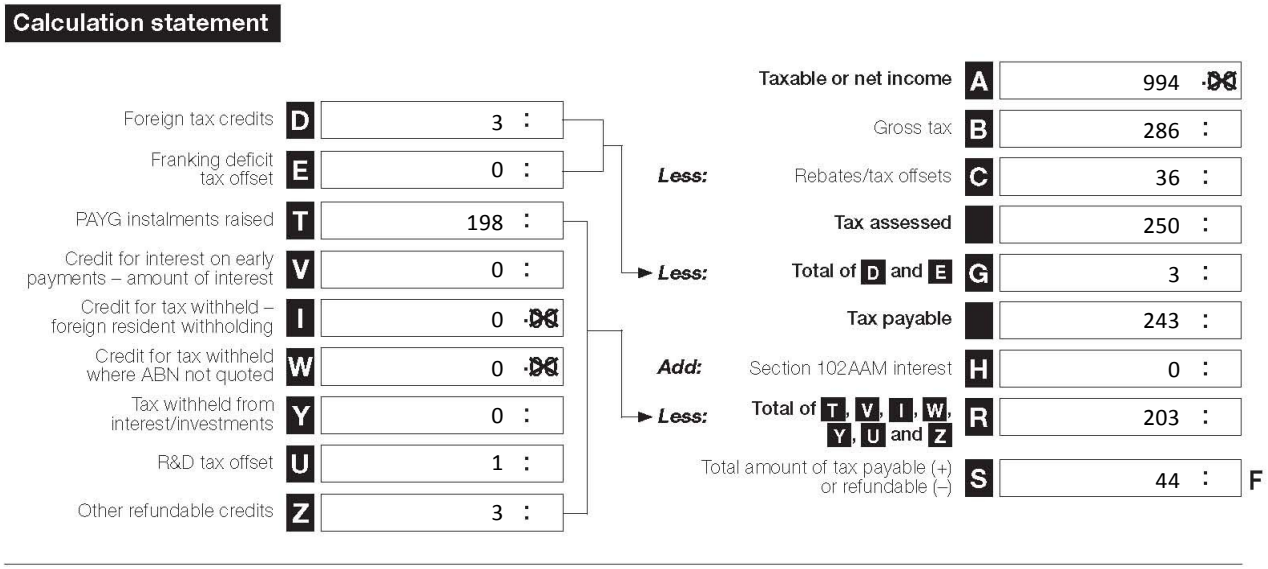
Add:

Net capital gain	A	
Non-deductible exempt income expenditure	U	
Franking credits	J	29.6
Australian franking credits from a New Zealand company	C	0.05
Other assessable income	B	
Non-deductible expenses	W	
Accounting expenditure in item 6 subject to R&D tax concession	D	
Subtotal		F

I have filled out the Calculation Statement for all Australian companies with ATO data for the period 2004-2008 which is shown in Figure 2. Charities and some other tax-exempt entities no longer need fill in a tax form. They can complete another required form as a classified entity, entering their simplified statement for claiming back their franking credits. In addition, some companies that

behave as if they were superannuation funds (typically Life Offices) can also claim the credits for their complying business. For all these reasons plus the zero tax company problem (described next), the label C data is not an accurate estimate of credit usage.

Figure 2: Calculation Statement: 2004-2008, $bn



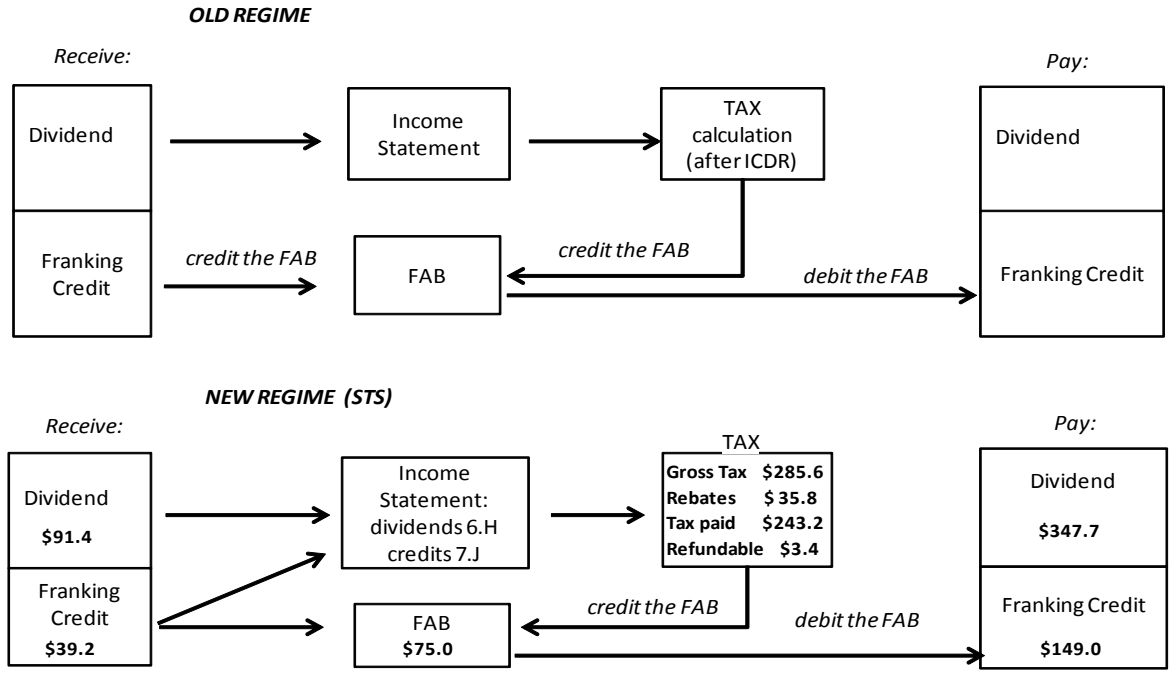
3a. Problems with Zero Tax Companies

A "zero-tax" is not the same as "non-taxable" company. A "zero-tax" company is one that simply does not pay tax for a particular year because it did not have a positive taxable income in that year. A "non-taxable" entity, in contrast, is exempt from paying tax regardless of its income, examples being a charitable company or a university.

Under the new simplified system, the recipient company not only credits their FAB but they also declare the credit as income. They receive an offset for the tax already paid (the franking credit) by the issuing company. The tax assessed after this calculation cannot be negative so that the claim for rebates at Label CS.C must be reduced in order to avoid negative tax assessed. This might mean claiming no tax offset for the franked dividend received if the tax loss before the offset claim exceeds the credit. Such offsets are not wasted however as they are available for future claims against taxable income. The repercussions for analysing the ATO data for estimating credits is that the data reported at CS.C already have the reduction for non-negative tax included. This means the offset data at CS.C *underestimates* the franking credits received by companies as income. Whilst they will report the direct credits they received as income, the total claim at CS.C which includes indirect credits will be reduced.

The following diagram sketches these changes. The data for the STS regime are the ATO data for 2004-2008 in $billions.

Figure 3: Treatment by Companies of Franked Dividend Income under the STS: 2004-2008



In national ATO statistics, the average company is sufficiently profitable so that "all the credits pass through". In practice this disguises differences between categories of companies. About 25% of franking credits are received by zero tax companies ($7.25 billion out of $29.6 billion, both direct dividends received – alas, indirect credit data are not reported by the ATO for zero tax companies). A zero tax company may have claimed just some or even none of their credit income as a rebate according to the difference between their gross tax (Calculation Statement Label B) and their rebate claim (Calculation Statement Label C). If their gross tax is already zero arising from negative taxable income, then they cannot claim any of the rebates at Label C. This is described in the ATO publication Taxation statistics 2007–08, NAT 1001-03.2010, table 3.12: Non-taxable companies, 2006–07 and 2007–08 income years, page 46, and reproduced here. It appears that few zero-tax companies are so by dint of credits offsetting their tax liability. Just 13.3% (=1.4%+11.9%) by number are of this type – franking credits are reported among reconciliation items.

Table 1: Zero Tax Companies

Zero Tax Companies	2006-07		2007-08	
	No.	%	No.	%
Trading at a loss	247,701	33.0	255,352	33.1
Reported zero trading profit and zero non-trading income	68,199	9.1	67,627	8.8
Reported zero trading profit, with some non-trading income offset by reconciliation items	10,295	1.4	10,695	1.4
Reported positive trading profit which was fully offset by reconciliation items	88,215	11.8	92,271	11.9
Reported a trading profit, but had other credits to offset their tax liability	9,900	1.3	10,357	1.3
Total	424,310	56.6	436,302	56.5

3b. Problems with Life Office Companies and Funds

The problem with identifying the credits received and redeemed by the Life Offices is that they operate as companies and are reported among company data. They are not separately identified. Hence I needed to obtain independent estimates for their data. I used data from APRA for this purpose. The details are presented below in Section 6b.

Another problem exists with the tax returns of Superannuation Funds. The ATO reports taxation statistics for two broad groups of such funds: non-regulated funds and regulated funds. Only regulated funds qualify as complying super funds for tax purposes and receive tax concessions, such as being able to get a refund for their credits. The regulated funds can be either regulated by the ATO - these are the self-managed super funds (SMSF), or by APRA. These comprise small APRA funds, corporate or employer-sponsored funds, industry funds, retail funds and public sector funds.

Dividends and franking credits received directly by Funds from "resident entities" are reported as separate items. Dividends from foreign entities are not included in the "dividend" data but instead included in the net foreign income item. This is helpful as it avoids foreign dividend income data from confusing the domestic dividend income data. Unfortunately, franking credits received by Funds as part of their investments via trusts are not separately identified but instead "the distribution is grossed-up to include any franking credits" – see *Fund Income Tax and Regulatory Return 2004 Instructions*, ATO, NAT 1601-6.2004, pages 20-21.

> *In this section I have demonstrated that the new tax form under the STS has allowed some clarity in exposing explicitly the franking income of companies. However problems remain with some items being entered as aggregates which includes credits. In addition, the incidence of zero-tax companies results in an under-reporting of indirect credits. There are also problems with identifying data for Life Offices and superannuation funds.*

4. Summary of ATO statistics

Here I give a high level summary of the flows of tax, dividends and credits for the years 2004-2008, both in tabular and diagrammatic form. The detailed data are presented in Appendix 1 of this Report.

There are three milestones in the life of imputation credits:

1. They are created when company tax is paid.[3]
2. They are distributed when franked dividends are paid to shareholders.
3. They are redeemed when shareholders lodge their personal tax claims.

These three events are analysed in order to establish the value of franking credits. The first two determine the access fraction and the second two determine the utilisation fraction. Obviously national statistics only measure the gross averages of all companies, whether private or public, listed or unlisted. The following table is a summary of these overall national ratios.

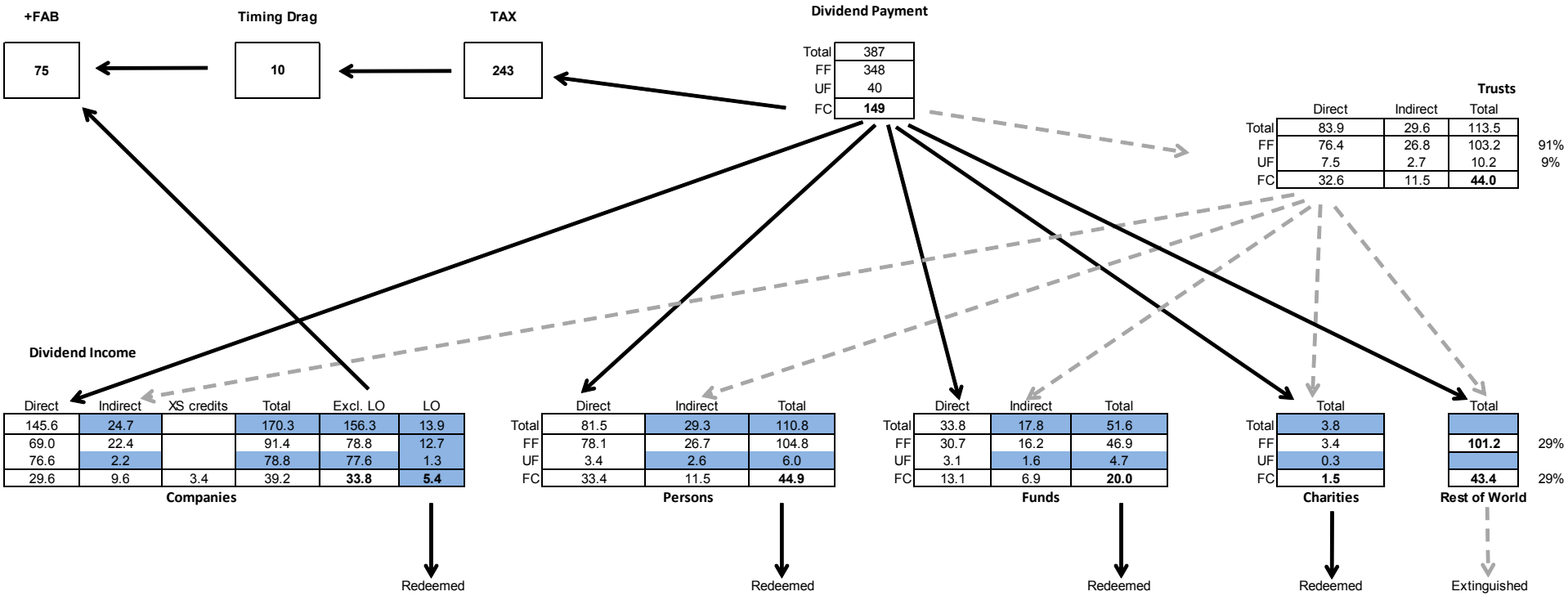
Table 2: Summary Ratios: 2004-2008

		$ bill			
				Distributed:	
Tax Data	Tax Paid	243.2			
	Timing drag	10.4			
	FAB Tax Credit	232.8			
	Reported incr. in FAB	75.0	31%		
	Net distributed	157.8		**69%**	average access fraction (=157.8/243.2)
				Redeemed:	
Financial Data	Distributed direct	149.0			
	Recycled	33.8	23%		
	Net distributed	115.3			
	Redeemed	71.9		**62%**	average redemption fraction of net *distributed* credits (=71.9/115.3)

The details of the flows of dividends and credits reported under the STS for the five years 2004-2008 are depicted in Figure 4. This is my analysis of ATO data that is published annually by the ATO, two years in arrears. The shaded areas represent estimated data. The ATO do not supply estimates of the share of unfranked dividends distributed from partnerships and trusts though this is not essential data for estimating the required franking ratios. In the tables of Figure 4, the unfranked dividends received from partnerships and trusts are allocated in the proportions of 10% unfranked to 90% franked – which is the overall proportion of partnership and trust payments. However, what is important but not reported by the ATO is the redemption of credits by Life Offices. Such complying funds are reported among companies and not identified within the Funds data. These are examined separately below.

[3] Either a PAYG instalment or income tax is paid or a liability for franking deficit tax is incurred.

Figure 4: Dividend and Tax Flows: 2004-2008



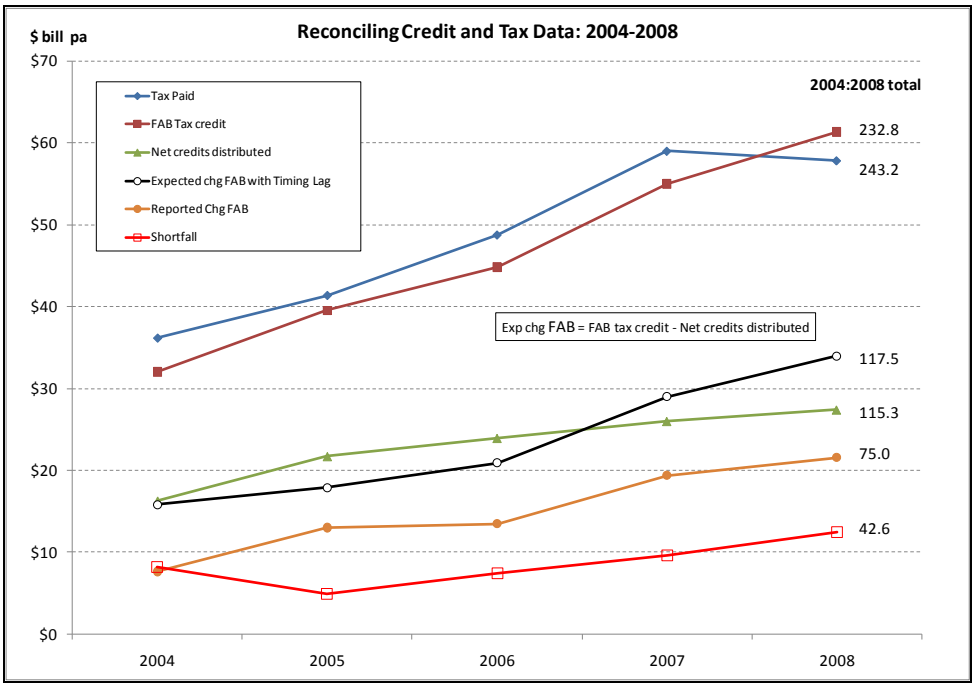
5. Reconciling the Data

In this section I discuss the lack of reconciliation within the ATO data. The ATO publish essentially three sets of data: credit creation via company tax payments, their distribution via franked dividends and their redemption via resident tax payers' claims. I point out that these data do not reconcile to the amount of $42.6 billion over the years 2004-2008. I examine various potential resolutions to the problem.

The tax paid and FAB data in Table 2 and Figure 4 indicate a net $157.8 billion of credits must have been distributed: an estimated tax payment of $232.8 was credited to the FAB but the FAB increased by just $75.0 billion. Presumably the difference of $157.8 billion was distributed net as franking credits. This implies 69% of the tax payment was distributed as credits. It is a believable datum as the payout ratio of large public companies is similar to this estimate of 69% and we expect such large companies to dominate the tax payment and credit creation data. However, the income data and financial data of the ATO indicates a net distribution of just $115.2 billion: gross distribution of $149.0 billion is reported along with net credits recycled back to companies of $33.8 billion, leaving a net distribution of $115.2 billion. Hence there is a major puzzle with the above data. – there is an irreconcilable difference of $42.6 billion of credits within the data published by the ATO. This "missing" $42.6 billion of credits is 27% of the total of $157.8 billion of credits distributed according to the tax paid and FAB data.

A plot of the reconciliation of the FAB data showing reported and expected flows is presented in Figure 5. The FAB is expected to change each year by the sum of the tax paid (after subtracting the timing drag[4] caused by actual payments) plus the credits received with franked dividends minus the credits paid out as franked dividends. The data as its stands does not do this. The FAB increases much less than expected.

Figure 5: Attempting to reconcile the ATO data: 2004-2008



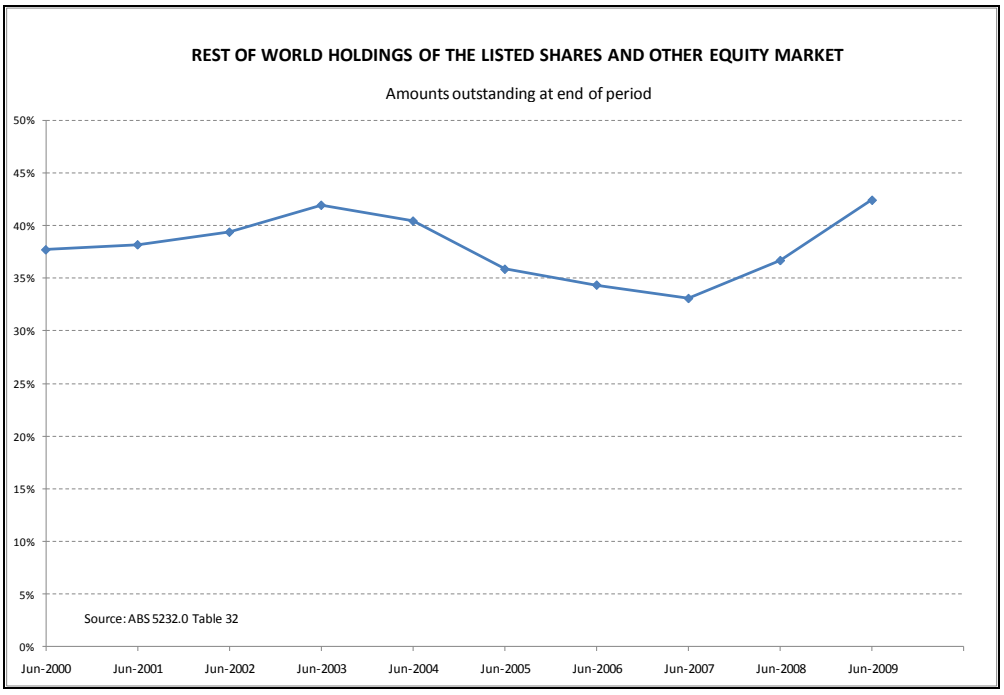
[4] It could be a positive contribution to the FAB instead of a negative drag if, as in 2008, the June quarter payment of 2007 which is credited to the FAB in 2008 is greater than the June quarter payment in 2008 which would not be credited until 2009.

Over the period 2004-2008 the expected increase in the FAB was $117.5 billion: the contribution to the FAB of tax payments of $232.8 billion minus the net $115.3 billion of credits distributed. It is reported to have increased by only $75 billion. This is a discrepancy of $42.6 billion.

5a. Are International Investors the answer?

While the Rest of World receives the residual 25% of franked dividends in Figure 3 and they are not seen in ATO data, it is consistent with international investments in Australia as measured by the ABS – 5232.0, Table 32. This ABS data series is plotted in Figure 6. We observe that the Rest of World ownership averages about 40% of Australian listed equities. The difference between their 40% ownership but receiving just 25% of franked dividends is consistent with international investors receiving a higher proportion of unfranked dividends than do resident investors.

Figure 6: Foreign Ownership of Listed Australian Equities



Technically the "Rest of the World" is all the residual which includes any data errors and any other categories not quantified so it need not be only thought of as foreigners, though we expect them to be the dominant component of this group.

The ATO publish data for credits received indirectly through partnerships and trusts. These are dominated by trusts so henceforth they will be referred to simply as "trusts". The trusts in turn are dominated by financial trusts – these are the large investment trusts, many of them public investment trusts, through which many billions are invested on behalf of their beneficiaries. The investors in trusts are in many cases superannuation funds as well as direct personal investors. Credits received indirectly by way of trusts are now called a "share of franking credits" whereas previously they were called "secondary credits" to distinguish them from credits received by direct share ownership which were called "primary credits". We have no data on how charities received their credits – direct or via trust but they are a small component overall and the absence of their data is not likely to much distort the estimates.

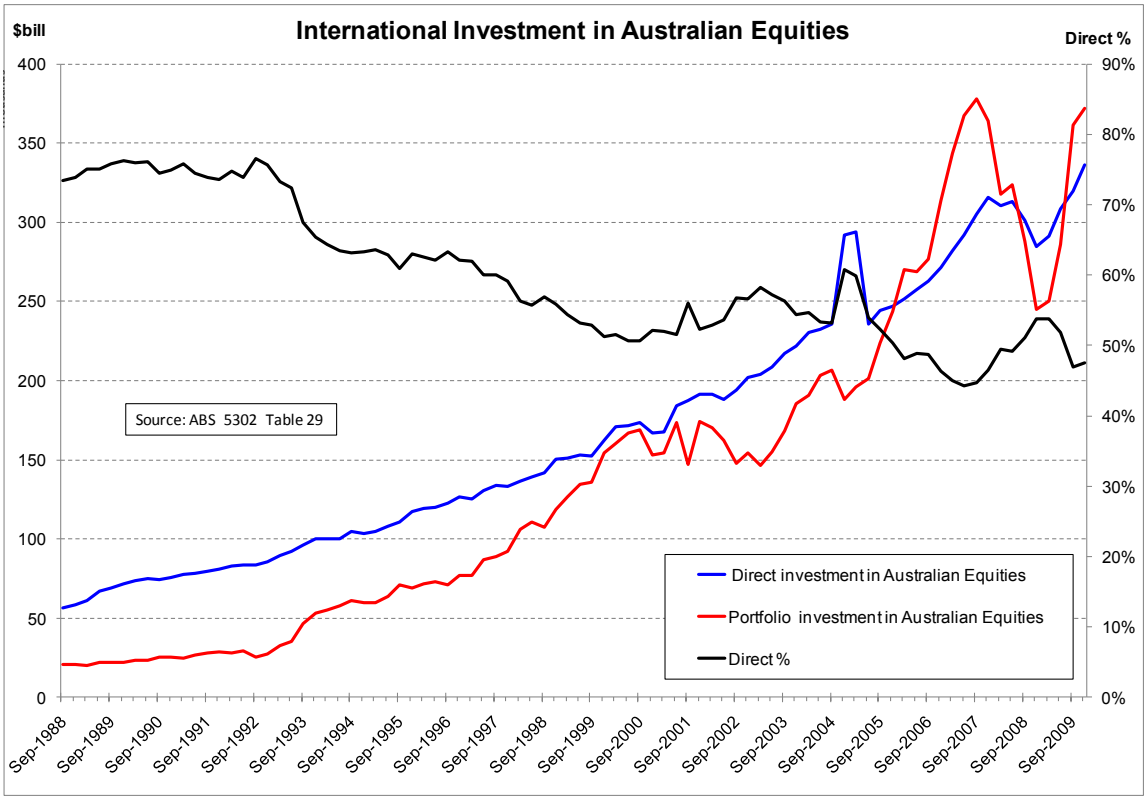
We first examine the partnership and trust data itself. The aggregate distributions across all groups are as follows (only unfranked totals are available – the allocation in Table 3 of unfranked dividends is done across sectors by the 90%:10% franked to unfranked ratio. It is not important to the allocation of credits which is reported by ATO statistics.) Trusts are pass through vehicles so they can only distribute that which they receive direct. Trusts distributing to other trusts is a form of double counting so only the credits received direct are the relevant ones for analysing trusts.

Table 3: Indirect credits in Partnership and Trust distributions: 2004-2008

	Companies	Persons	Super	Life Offices	**Sub-Total**	Trusts	**Rest of World**	Rest %
Total	24.7	29.3	17.8	4.8	76.7	83.9	7.3	8.7%
FF	22.4	26.7	16.2	4.4	69.7	76.4	6.7	8.7%
UF	2.2	2.7	1.6	0.4	6.9	7.5	0.6	8.6%
FC	9.6	11.5	6.9	1.9	29.9	32.6	2.6	8.0%

This indicates only a modest component of credits is flowing to foreigners of about 8%-9%. This is however a believable datum because foreign investment in Australian equities is approximately half direct and half portfolio investment as we see in the following Figure 7 of ABS data about the mix of direct versus portfolio investment in Australian equities. The proportion of direct investment relative to portfolio investment has been falling over the years. Over 20 years, it has fallen from about 75% in 1988 to about 50% in 2008. Thus we observe that for the relevant period of 2004-2008 about 50% of foreign investment has been by way of portfolio investment and 50% by direct ownership.

Figure 7: Mix of International investment in Australian equities



Portfolio investment typically would be from large international fund managers buying Australian shares. Our experience with international funds and fund managers investing into Australia would indicate that many invest in Australia by buying shares in their own name and not via an Australian investment trust. So of the 40% Rest of World investment in Australia, half would be by portfolio investing and half by direct investment. This means 20% of international investment is via portfolios (50% of the 40% international ownership) and of these portfolio investments, less than half are via Australian investment trusts – 8.7% out of 20%. So the trust data residual of 8.7% being classified as Rest of World is a creditable datum. Bearing in mind that Rest of the World data is all the residual and need not be only foreigners, the true estimate for international investment via Australian trusts is probably less than 8.7%.

If we take the combined direct and indirect dividend and credit data of the ATO at face value as reported in Figure 3 then we have the following summary:

Table 4: ATO Credit data: 2004-2008

Distributed		*Net*	*Detailed source*
Gross	149.0		Appendix 1a
Retained	33.28	**115.2**	
Redeemed			
Persons	44.9		Appendix 1c
Funds	20.0		Appendix 1d
Life Offices	5.4		Appendix 1e
Charities	1.5	**71.9**	Appendix 1f
Wasted			
Rest of World		**43.4**	

The residual amount allocated to "Rest of World" includes credits paid to foreigners - $43.4 billion out of a total of $149.0 billion. This represents 29% of all credits paid by Australian companies. This group will be mainly foreign investors but it also includes any data errors and all credits received by Australian resident taxpayers who for one reason or another do not claim their credits. This 29% is very much in line with international holdings of Australian shares – see Figure 4. Even though it is less than the overall international holdings of 40% in Australian equities, we would expect international investors to favour unfranked dividends over franked dividends as paying out franking credits to non resident investors wastes the credits. This comment would mainly apply to direct foreign investors as they can presumably influence the payout policy of their Australian companies. International portfolio investors would have to accept the distribution policy of their Australian companies into which they had invested as the anti-streaming provisions of dividend payments preclude differential crediting. But even in this case, the Boards of Australian companies would be cognisant of to whom they were paying dividends and tailor their dividend policy accordingly. Hence a 29% datum for franking credits received and wasted by non-resident investors is a quite reasonable estimate.

> *I conclude that the incidence of international investments is adequately catered for in the published data and so it is not likely to be the source of the discrepancy of $42.6 billion.*

5b. Is the problem due to Zero-Tax companies?

Under the STS, franking credits received as income are still credited to the FAB account of the receiving company. But they must also pass through the profit and loss calculation - see Figures 1 and 2. Franking credits are declared as taxable income and tax is paid on the aggregate which includes these credits. The claim for an offsetting credit is made in the Calculation Statement at Label C but this claim cannot make the tax liability less than zero. The claim must be reduced in order to enter a non-negative number at Label C. This means that Label C under-estimates the franking credit claims by companies that have a zero tax liability. The credits not claimed by this process of reducing the claim at Label C are not lost forever as they are carried forward. A zero tax company is one that makes no taxable profit in one year but it may make a profit in a future year and at that time claim the credits carried forward. Any credits so carried forward and claimed up to 2007-2008 will be included in the existing ATO data.

The question arises, could these zero-tax companies be the source of the problem? I will demonstrate that it is highly improbable for this to be the answer.

Companies report explicitly their direct dividend and franking credit income. They do not report their share of credits received indirectly. Instead they report the gross amounts received which includes any credits. I have calculated their indirect credit income by subtracting direct credit income from the total rebate claim at the Calculation Statements Label C and Label Z. This latter is the claim for excess refundable credits, for those that can so claim these as refunds. If the rebate claim at Label C is reduced by zero tax companies in order to not have a negative tax liability then my estimate of indirect franking credits is an under-estimate.

For the $42.6 billion amount to be reconciled over the 5 years of 2004-2008 we must have on average an extra income of $8.5 billion per annum to be attributed.

The estimated indirect franking credit income by *all* companies over *all* five years is $9.6 billion out of their total $29.6 billion of credit income. In addition, the $42.6 billion to be reconciled exceeds the *total* distribution by trusts of $32.6 billion to *all* investors and it is these distributions by trusts that are being measured with indirect credits.

From Table 1 above it is seen that zero-tax companies comprise about 56% by number of all companies (for the period 2006-2008). These companies received 25% of all direct franking credits (indirect credit income is not published for zero-tax companies) for the period 2004-2008: $7.3 billion out of a total $29.6 billion. It is highly improbable that non-tax companies which represent about 25% of credit income by all companies will receive sufficient indirect franking credit income that explains the $42.6 billion amount which is 340% more than the estimated total indirect income for all companies.

> *I conclude that it is extremely unlikely that the impact of zero-tax companies on the estimates of indirect credit income is the source of the discrepancy of $42.6 billion.*

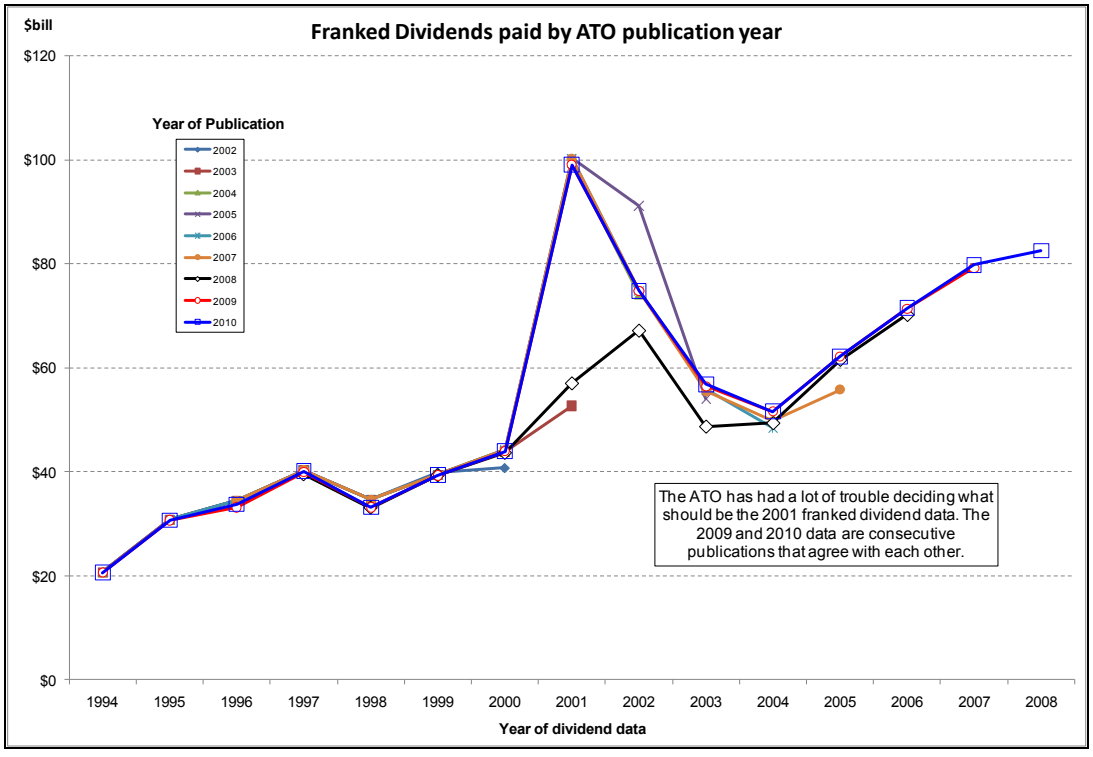
5c. Is the problem due to ATO data errors?

The tax data of the ATO is the most likely to be accurate – after all what other data is there but tax collections by the ATO. Hence looking for the source of the "missing" $42.6 billion means examining either the FAB data and/or the dividend and credit data. The FAB data is the most likely of these two to be reliable. Companies have to record flows into and out of their FAB according to distributions and receipts. One company's credit to a FAB from a franked dividend income is another company's debit.

On the other hand, dividend data by the ATO can be an unreliable quantum. The ATO has had a particularly hard time deciding what the dividend distributions were for the transition years 2000-01 through to 2003-04. Figure 8 is a plot of the ATO franked dividend data per year plotted by year of publication.

We expect to see some revision in past data as updates are included. However the range of revisions for the 2001 data is about $35 billion which is a bit more than an update. This is another good reason to only use the data from 2004 for analysing the STS and franking credits.

Figure 8: ATO franked dividend data



This major revision cannot be a major contributing source for the "missing" credits of $42.6 billion described in Figure 5. The data used for this estimate are only based on the latest data from 2004 onwards and this data includes the ATO's highest estimate for franked dividend data, apart from the 2005 publication of the 2002 data which was $17 billion higher. As we will see below in Figure 9, there has been no major disruptions to the FAB series. It has grown more or less in line with the net tax payments which would be consistent with a reasonably steady payout ratio, except for the 2001-2002 period. The conclusion is that if we accept the tax payment and FAB data as given, then the problem is in the data for dividend payments.

In addition, the $42.6 billion of tax credits represents $99.3 billion of franked dividends using the prevailing corporate tax of 30%. From Figure 3 it is seen that the total franked dividend payment over the period 2004-2008 was $348 billion so the unreconciled credits equate to 29% of the reported total franked dividend payments.

> *I tentatively conclude that the discrepancy is to be found within the dividend data of the ATO. It is unlikely to be found in the FAB data as these ought not to admit any double counting.*

In summary, the discrepancy is not easily explained. The obvious sources of the problem have been examined but they do not readily supply an explanation for the problem. It remains unresolved. It cannot be due to foreigners else the $42.6 billion would have to be added to their already identified $43.4 billon. This would allocate to them credits of $86 billion out of a national total of $157 billion, a proportion which is far too high. This total would imply that these international investors were receiving 55% of all Australian franked dividend shares. This vastly exceeds their total proportionate holding of 40% of all Australian shares and, further, they are expected to favour unfranked shares over franked shares.

It certainly is not caused by zero-tax companies as their size and claims are far too small to explain it. It could be due to problems with the ATO data and there is some evidence that they have had trouble reconciling their data after the STS was introduced. However, explaining a further $42.6 billion of credits means explaining a corresponding $99.3 billion of franked dividends and this is a very large proportion of the already published data. It is indeed 29% of the already published $348 billion of franked dividends and so it is a very large portion of the total that still needs adequate explanation.

6. Summary

The ATO data are our primary source of franking credit creation, payment and redemption data. They provide an insight into the aggregate level of tax payment by companies, their distribution of franked dividends along with their accompanying franking credits and the redemption of these credits by various classes of investors.

The ATO data give no insight into payments of franking credits to foreign investors. The ATO data naturally only record the declaration by resident tax payers upon the filing of their claims. The franking credits received by non-resident investors, which are wasted, have to be estimated as residuals. The estimated residuals are consistent with ABS estimates of equity holdings by non-resident investors.

The change to the system whereby companies declare franking credits as income and claim the franking credits as pre-payment of tax has meant that the claims have under estimated the total franking credits received by companies. This occurs because companies cannot report less than zero tax liability. They have to reduce their claims for credits to meet this requirement. The credits not claimed by this reduction are not lost, they are just in suspension until the company makes a profit and can utilise these unused credits.

Unfortunately, there are too many unreconciled problems with the ATO data for a reliable upper bound estimates to be made about theta and gamma. About the only consistent measure is the overall distribution fraction of 69%. This is the long term average estimate. The more recent estimate is 68%, the reduction caused by a change to the FAB being operated on a rolling tax paid basis. Gamma is the product of this distribution fraction and the value of a distributed credit, theta, and as theta is very unclear from the ATO data then so is gamma unclear.

Neville Hathaway
Capital Research
July 2010

njh@capitalresearch.com.au

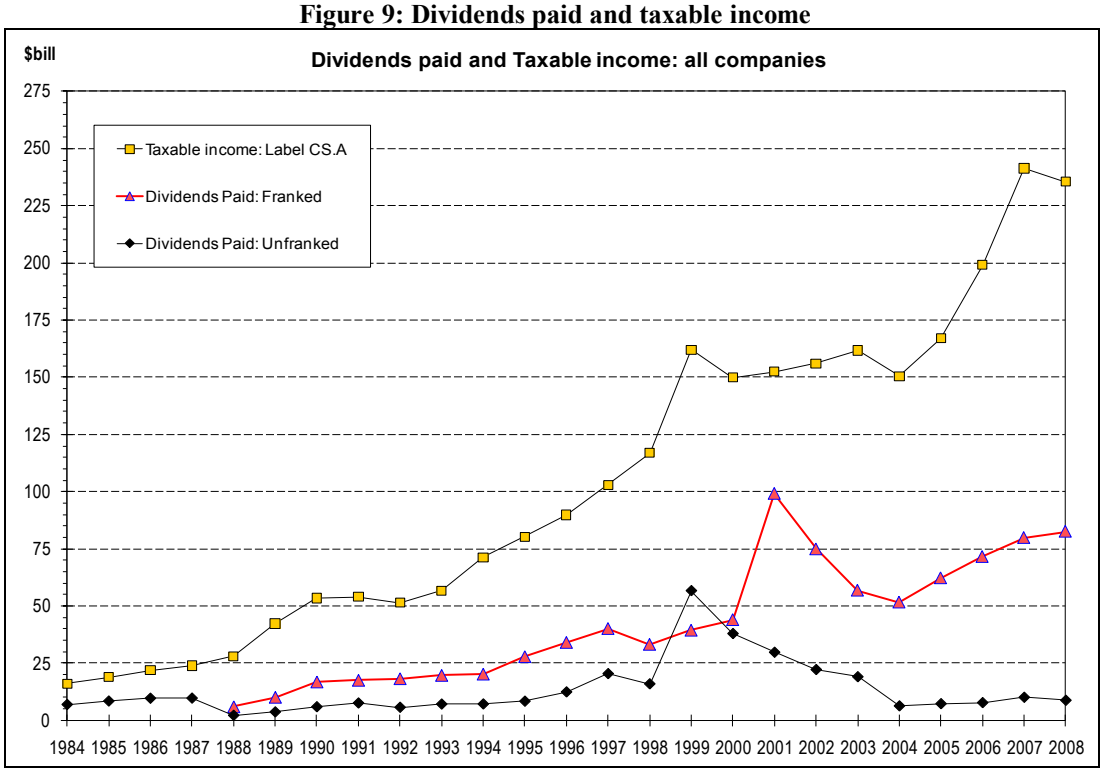
Appendix 1: Detailed Data

In this section I describe the details of the creation of franking credits over time, their distribution to resident investors and their redemption by these resident investors. The disruption to the flows caused by the introduction of the STS along with the abolishment of the Inter Corporate Dividend Rebate will be obvious. The flows in the new STS system post the adjustment period are in some cases quite different from the past.

Appendix 1a. Credit Creation

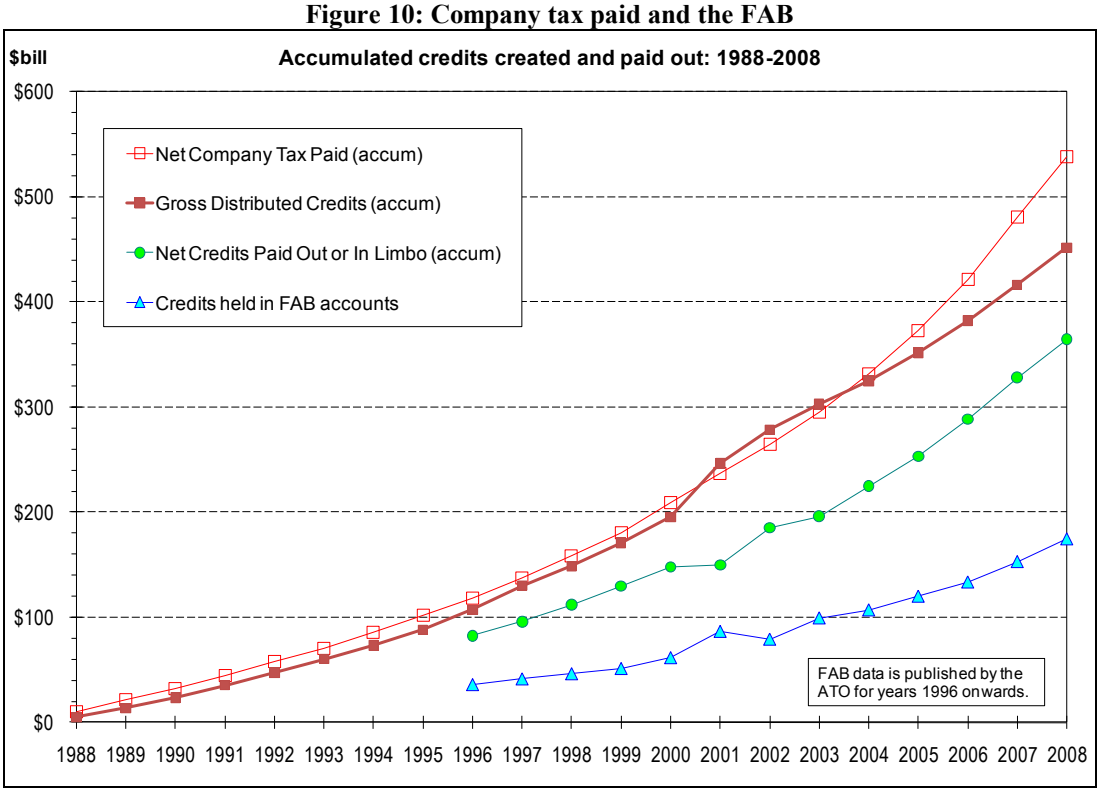
There is a lot of double counting within the past ATO data for dividend payments and receipts as well as their accompanying franking credits. The introduction of the consolidation regime has mitigated this problem but it still exists. In contrast, there is no apparent double counting of company tax collections. The dividends paid data is presented in Figure 9 and the company tax paid is presented in Figure 10.

Figure 9: Dividends paid and taxable income



In Figure 9 we can observe the response of companies to the announcement in the late 1990's that the inter-company dividend rebate would be abolished under the STS. This was eventually legislated to begin on 1 July 2002. The surge in payout of unfranked dividends in 1999 created a surge in taxable income which itself generated tax payments and a subsequent burst in franking credits, though these franked dividend data need to be treated with caution because of the problems the ATO has had with this series as seen in Figure 8. These events look to have substantially washed out of the system by 2004.

Figure 10: Company tax paid and the FAB

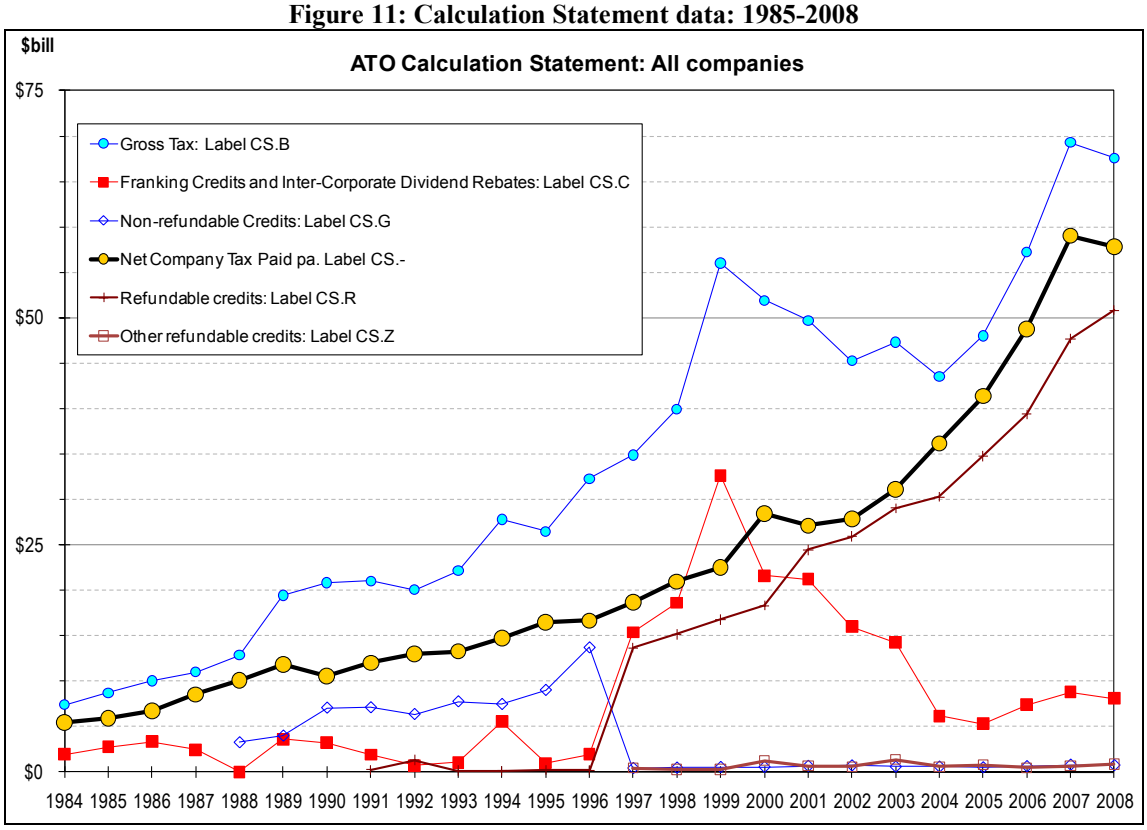


From Figure 10 we note that the gross distribution of franking credits approximated the net tax payments until the announcements of the coming STS. This does not mean that companies had an approximate 100% payout ratio. It just means the double counting of dividends and credits prior to the STS gave the illusion of 100% payout. Many dividends and credits were double counted as subsidiary companies and their head companies were included in the data. Under the consolidation required under the STS only the head company reports the consolidated group data. We can see the effect of this as the gross franking payout begins to fall behind the total tax payments from 2004.

All of these data flow through the calculation statement of company returns. In Figure 11 I have plotted the major items of the Calculation Statement since 1988. We can see immediately the changes that have been engineered in the company tax regime.

The change to PAYG instalments occurred in 1997 along with change from non-refundable to refundable credits. The PAYG instalments have largely kept pace with net tax payment - it does seem to have fallen behind in absolute levels, though not in the proportion collected as instalments. The difference between the PAYG instalments and the net tax payment will be collected as a final payment. This will have an effect on the FAB account as it only gets credited for tax payments when payments are actually made to the ATO. The burst in 1999 of unfranked dividends paid out by companies to other companies is echoed in the gross tax due and the offsetting claim for inter-corporate dividend rebates (ICDR). This burst of income created its own net taxable income echo for the following period. The ICDR has disappeared by 2004 leaving essentially franking credits as a claim at Label C.

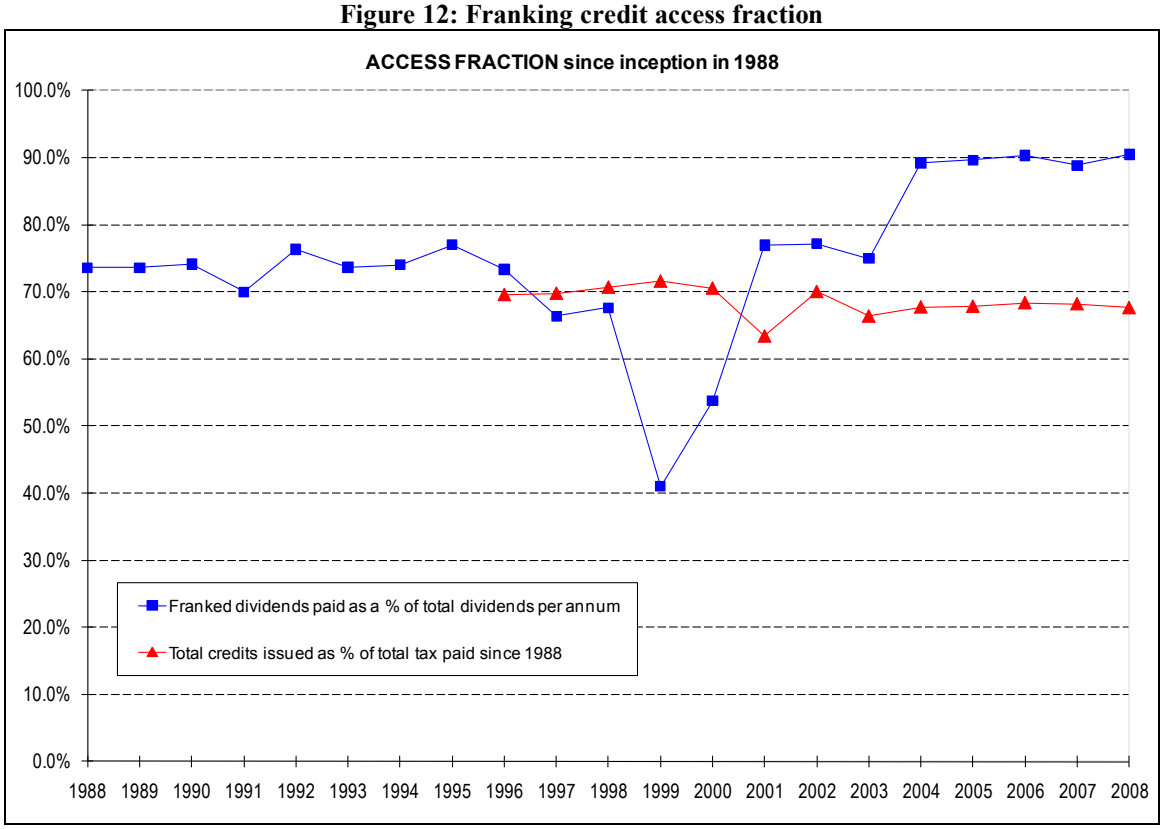
Figure 11: Calculation Statement data: 1985-2008



Since the introduction of imputation tax credits on 1 July 1987, $538 billion of company tax has been paid by companies and $174 billion remain within the FAB accounts of companies. This represents a 68% payout fraction for all franking credits. Under the ATO data, it does not matter whether or not the retained credits are held by the originating company or paid out to another resident company. The ATO data effectively treats these as the same situation – they are retained within the company system. Figure 12 plots this data along with the franking distribution percentage. This latter data shows a jump in 2004 but this is most likely artificial. The presence of multiple counting of dividends (typically unfranked) flowing between companies within a group depressed the percentage of dividends recorded as franked. One could think of the STS as a means of exposing the underlying net flows with these intercompany flows stripped out.

Prior to the STS the distribution fraction averaged 70% whereas after the STS and its transition adjustments (2004 onwards) it average 68%. This 2% drop amounts to $11 billion of the total tax payments to 2008, that is, under the new STS there is $11 billion less credits distributed than would have been the case if the previous distribution rate had been maintained. This amount is substantially explained by the timing drag: the system now works on a rolling tax paid basis so only tax paid within the year is credited to the FAB even if it was from a prior year liability. With generally increasing company tax payments and the final payment usually being paid sometime in the next tax year, the FAB is often credited by less than the tax liability for the year.

Figure 12: Franking credit access fraction



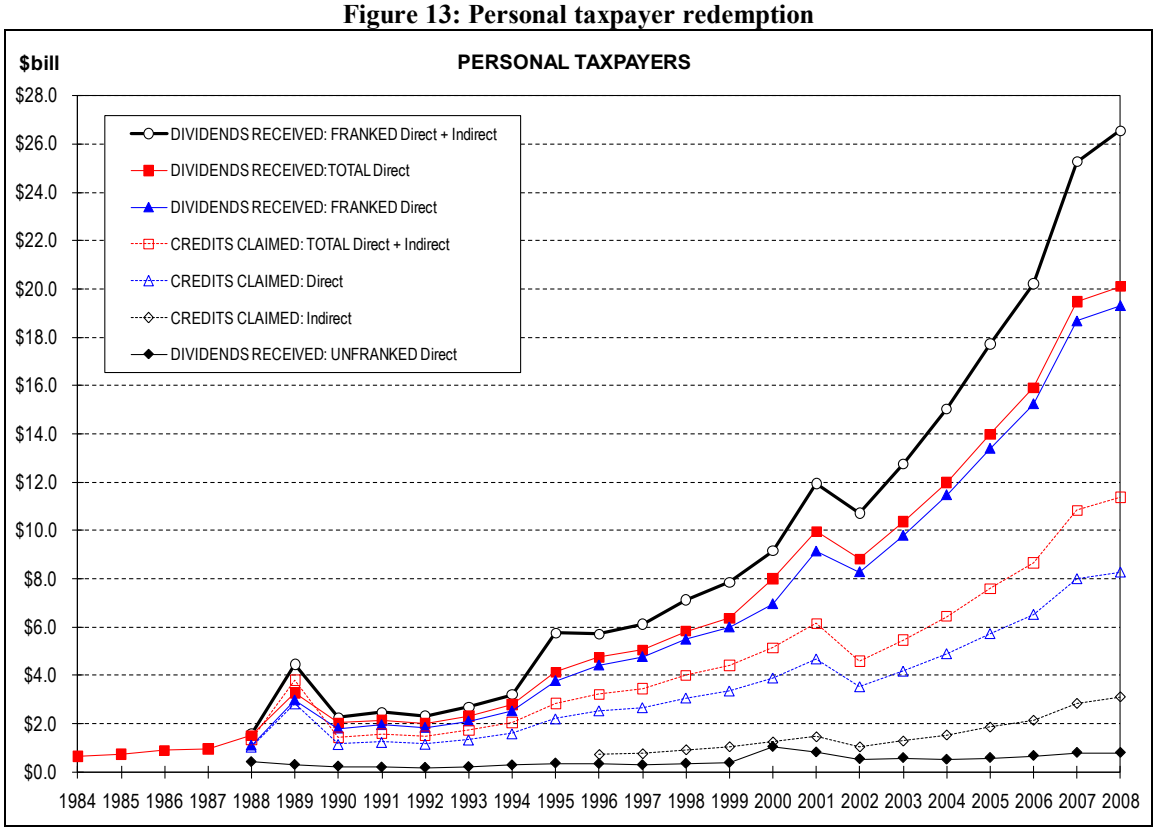
Appendix 1b. Credit Utilisation

We now turn to estimating the utilisation factor for Australian franking credits. Four groups can utilise the credits. These are personal tax payers, super funds, some finance companies that have businesses behaving as super funds (typically the complying businesses of life offices) and some tax exempts such as charities and universities. Not all of these are individually identified in the ATO statistics.

Appendix 1c. Australian resident personal taxpayers

Australian resident personal taxpayers are the dominant group whom redeem credits. In 2008 they redeemed $11.4 billion of credits. These came to them directly as investors (primary credits) or indirectly through trusts and partnerships (secondary credits or their attributed share of franking credit) – see Figure 13. Personal taxpayers have a strong appetite for credits, to such an extent that they demonstrate a strong clientele effect for franking credits. In 2008 their franked dividends were 96% of their total dividends whereas overall the market delivered 90% of dividends as franked – see Figure 14. This apparently was a substantially up on the long term average of 75% franked. However, the inclusion prior to 2004 of all dividends flowing between companies within the one group meant an over-representation of unfranked dividends so this long term average of 75% disguised the underlying franked dividend proportion.

Figure 13: Personal taxpayer redemption



Appendix 1d. Super funds

Super funds are another group making extensive use of franking credits. The ATO report that funds redeemed $4.6 billion of credits in 2008, $2.8 billion direct in their own name and $1.8 billion indirectly via trusts – see Figure 15. They redeemed these $4.6 billion of credits from receipt of $6.4 billion of franked dividends direct and an implied indirect ownership of dividends of $4.3 billion. They also directly received $0.7 billion of unfranked dividends which is very much in line with the market distribution of 90% franked for 2008 (though Self Managed Super Funds (SMSFs) dividends were 92% franked and big funds were 87% franked indicating the hardly surprising result that the clientele effect in the SMSF sector is biased towards the individual clientele effect.) If some group is above average (personal investors and SMSFs) then the collective others must be below average. On the whole, super funds are investing in Australian shares with no bias towards franking credits, unlike personal investors whom show a very strong bias to shares with franked dividends.

Figure 14: Clientele effect of taxpayers

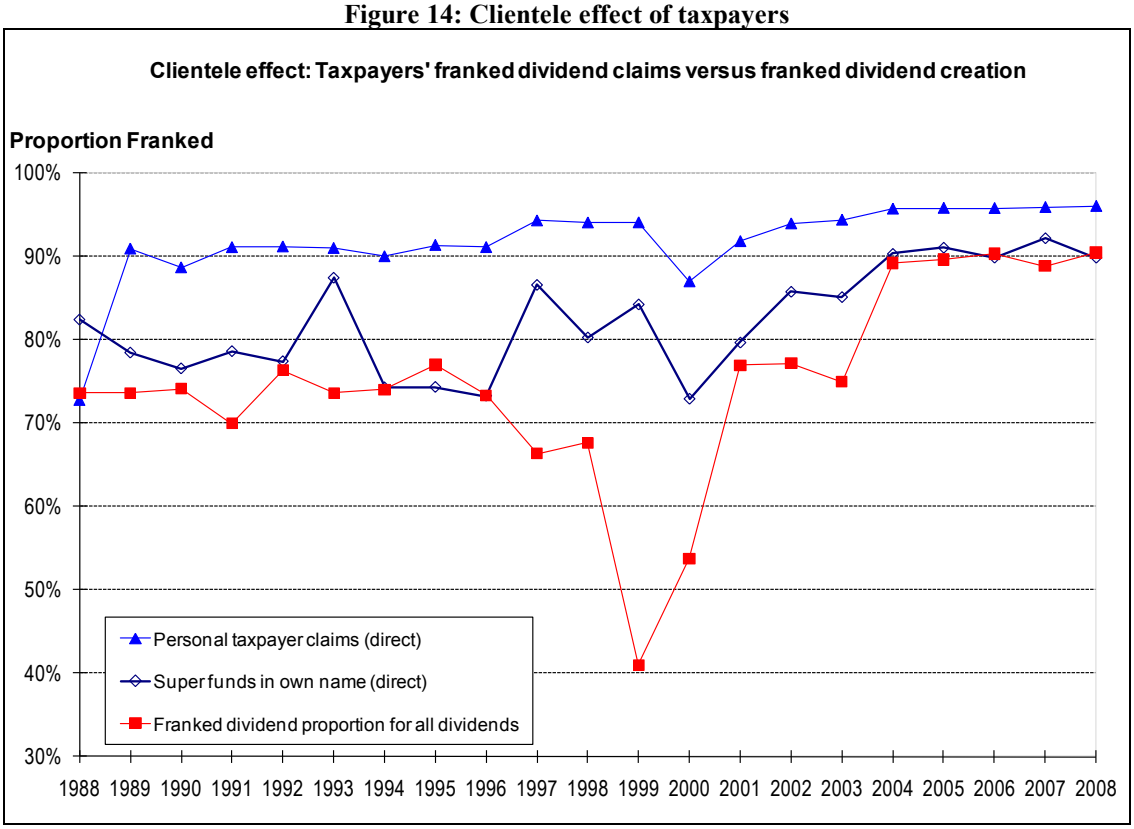
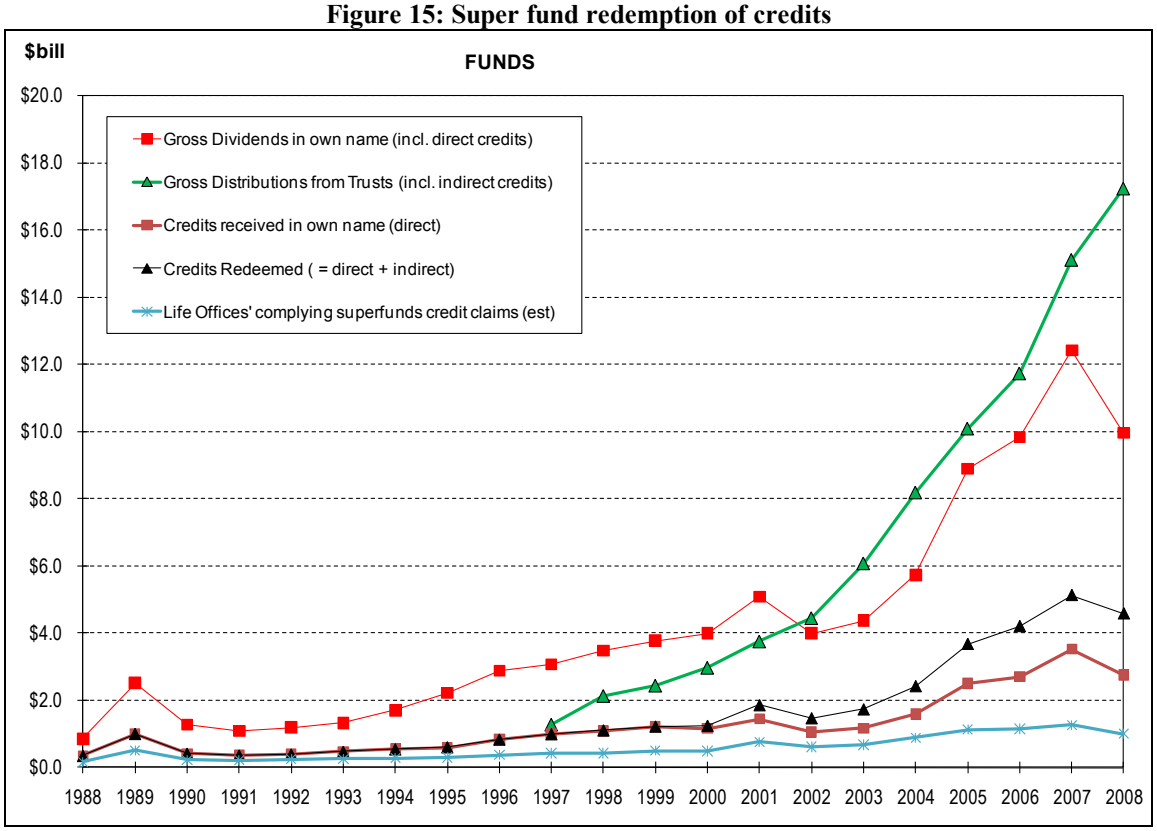


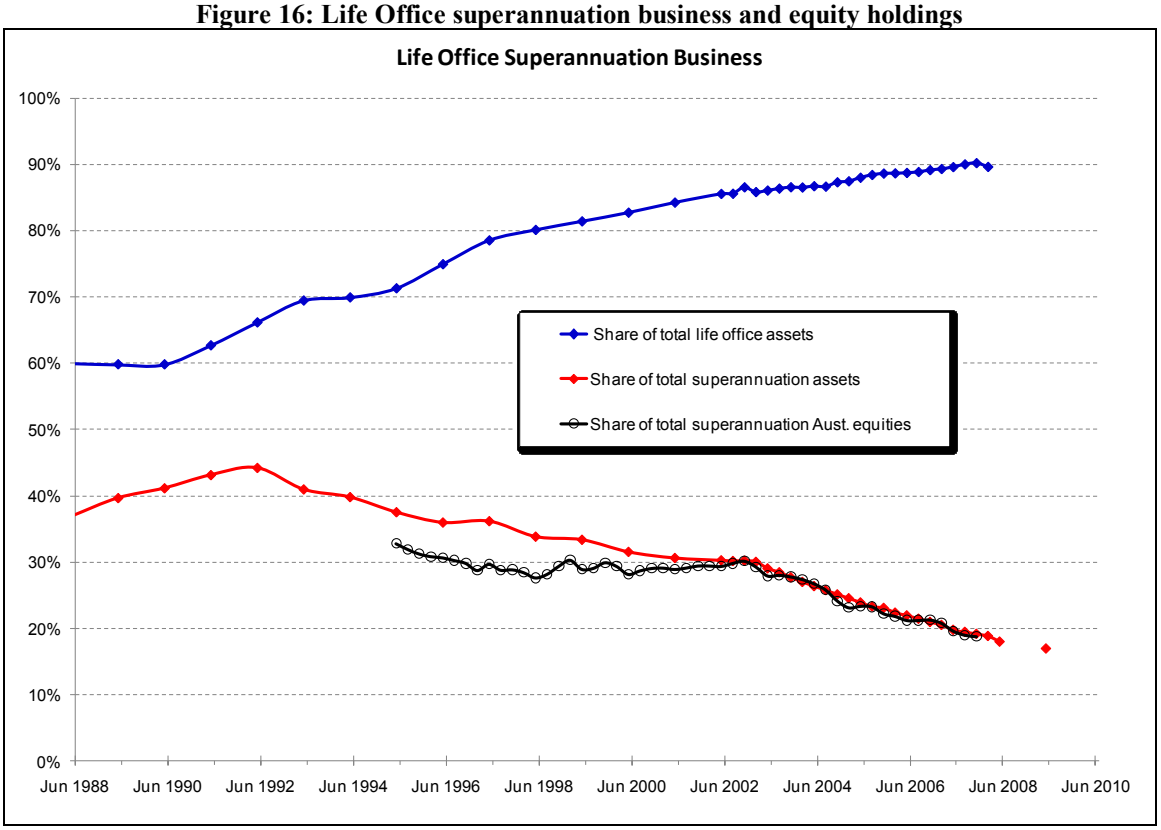
Figure 15: Super fund redemption of credits



Appendix 1e. Life Offices

Life Offices with their complying super funds are a group of funds we cannot observe openly in the ATO data. They are allowed to redeem credits as if they were a superannuation fund but they report among company data. The superannuation business of Life Offices is the dominant part of their business (about 90% - source APRA statistics) but they are a reducing part of the whole superannuation business. Most importantly, their holdings of Australian equities are now very much in proportion with their share of the superannuation business. Accordingly, we make the assumption that Life Office superannuation businesses will have the same allocation as big funds to franked and unfranked Australian shares. We apply the fraction of Life Office superannuation funds in the total to the grossed up claim by funds. For example, if Life Offices hold 18% of Australian Superannuation equities then the other visible funds hold 82% so if the credit claim by the other funds was $4.6 billion then the estimated claim by Life Offices was 0.18($4.6/0.82) = $1 billion.

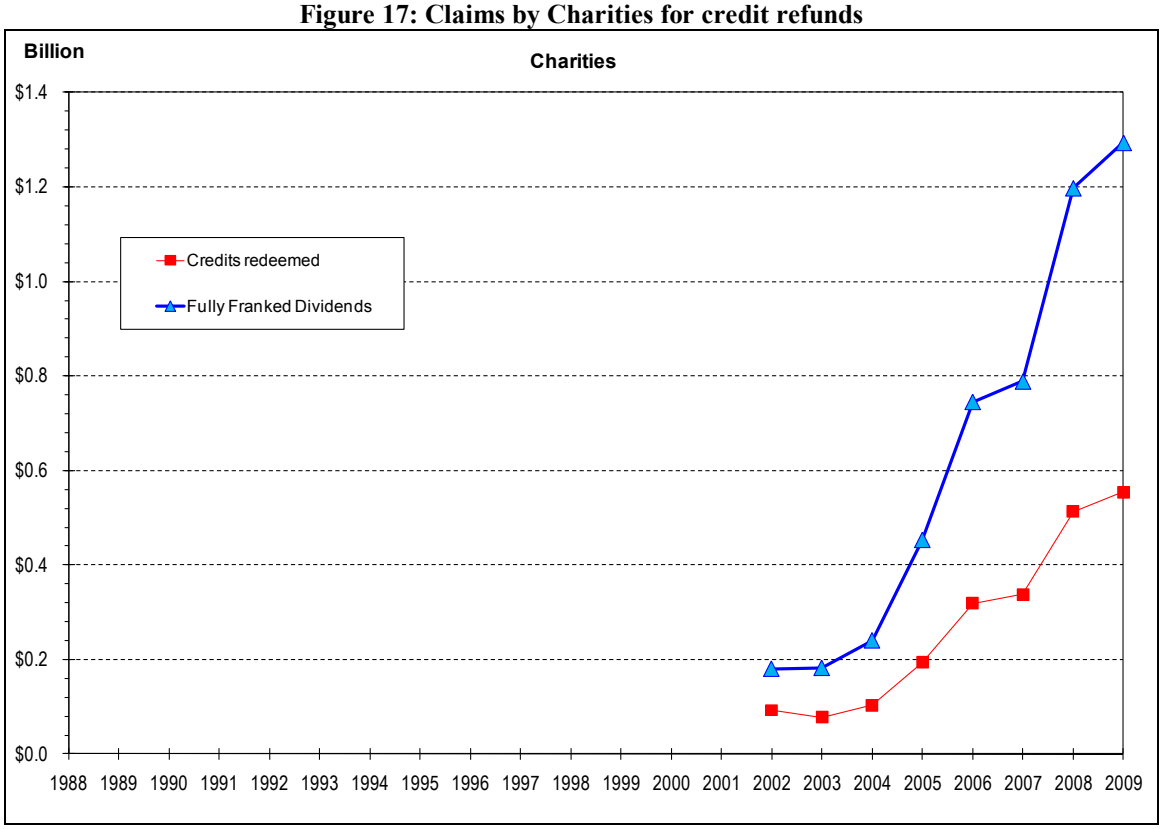
Figure 16: Life Office superannuation business and equity holdings



Appendix 1f. Charities and other designated exempt organisations

Charities and other designated exempt organisations such as universities can now get a refund for their credits. This group are growing fast as claimants of credits, albeit from a low base. In 2008 they claimed refunds for $0.5 billion of credits. Over the period 2004-2008 they claimed $1.5 billion of refunds for credits. These are non-taxable entities, not to be confused with zero-tax companies.

Figure 17: Claims by Charities for credit refunds



Appendix 2: Resume of Neville Hathaway

Experience

INVESTMENT COMMITTEE, LEGALSUPER
2009 –

I am an adviser to the investment committee of Legalsuper, which is an industry superannuation fund, managing approximately $1.4 billion of members funds, derived mainly from the legal industry, including legal services. The role includes all the facets of allocating assets and choosing managers.

HEAD OF INVESTMENTS, INTRINSIC VALUE INVESTMENTS LTD
2005 –

I am head of the investment team at IVI, being a boutique international funds management company with approximately $330 million under management. My role includes liaising with all the major research houses and investment platforms. Also conduct all the trading of the listed securities (OPALS) and the FX hedging for the fund.

PRINCIPAL, CAPITAL RESEARCH
2003 –
Capital Research is a specialist consulting firm in corporate finance and investments. The business was started in 2003 by Neville Hathaway and builds on the extensive experience and skills of the principals in the areas of investments valuation, and acting as expert witnesses.

Consultant, STRUCTURED INVESTMENT GROUP (SIG), INVESCO (AUSTRALIA)
2002 – 2003

Developed a new investment product (an enhanced index product) for INVESCO Australia. This involved all aspects of original design, logical rationale for why it should work, specification of the product, collection of data and product testing.

HEAD, STRUCTURED INVESTMENT GROUP (SIG), INVESCO (AUSTRALIA) previously COUNTY INVESTMENT MANAGEMENT,
2001 – 2002

At that time, SIG managed about A$3.5 billion of INVESCO Australia's A$11 billion of FUM. Investments were made in three main areas; Passive Overlays (A$2.7 bill), Protection (A$400 mill) and Indexation (A$400 mill) plus some others. The business was principally focussed on risk management. My responsibilities included client and consultant relationship management, compliance oversight, interaction with rating agencies and development of the business, both for the domestic and the Asian markets. The business was transferred from Sydney to Melbourne in May 2001 with a substantial restructure of the team at the same time as I was appointed the new Head. My immediate role was to interact with clients and asset consultants to ensure them of continuing commitment to the business. We were successful in retaining nearly all of the FUM over the transition period.

HEAD, INVESTMENT SOLUTIONS GROUP, COUNTY INVESTMENT MANAGEMENT,
1998- 2001

Responsible for product development, process improvement and client consulting. Major achievements of my team included designing a new investment process for the Active Australian Equities team (Top 100) and a new indexation process for the Fixed Interest team.

Assembled the management data and business cash flows for the sale of County to INVESCO.

ASSOCIATE PROFESSOR OF FINANCE, MELBOURNE BUSINESS SCHOOL, 1991 – 1997

Taught in the MBA and executive programs. Taught subjects in funds management, corporate valuation and corporate finance. Delivered a number of courses to the Australian financial community: regular ones included Cost of Capital and Dividend Imputation, Small Firm Funds, Derivative Securities, others on a one-off basis, such as "Small Firm Effect" for Securities Institute of Australia. Upon leaving MBS for County in 1997, The University of Melbourne granted me a further rolling appointment as a Fellow (Assoc. Professor).

Other appointments included :
Associate Professor Of Finance, University Of California, Berkeley, USA 1988,
Senior Lecturer, Melbourne Business School, 1984-1991.
Lecturing and adviser to Securities Institute of Australia (FINSIA) masters programme.

CONSULTANCIES:
Through the professional relationships I have built up, we have received numerous requests for assistance. Some examples include:

Expert witness for the Buchanan Borehole Collieries vs NSW DPI in the Land and Environment Court, NSW.
Due diligence for the potential acquisition of a Melbourne-based fund manager and responsible entity.
Advised on EquipSuper Fund performance including full attribution analysis.
Review of ACT Super re its business structure and operations.
Expert witness (Norman O'Brien QC) re Administrative Appeal Tribunal of an insider trading case.
Expert witness for the Idemitsu-Pacific Coal case in Queensland Supreme Court. Valued damages due to break up of a joint venture (exploration and development rights).
Expert witness for an appeal to the ATO re the sale of Weight Watchers.
Advised boutique Melbourne Australian equity fund re its investment process.
Developed an imputation-based investment strategy for local investment fund.
Strategic business plan for the Anglican Superfund of Australia.
Advised on the value of a trust of aged care facilities prior to its listing on the ASX.
Valued the management rights for managing this trust.
Valued the Valley Power gas-peaker electricity plant in the La Trobe Valley for attempted purchase.
Valuation advice for purchasing Loy Yang B power station for a prospective buyer.
Valued embedded derivatives for Zinifex Ltd re its electricity supply contract.
Advised SAPEX Ltd on valuation of executive options.
Advised Affiance Group Ltd for the value of its employee options for ATO purposes.
Valued the executive options for Lion Selection Group for its prospectus issue.
Advised St George Bank in matter vs ATO as expert witness.
Advised Rio Tinto for its dispute with the ATO re its franking credits.

Expert witness for NSW Coal Compensation Board for several cases involving valuation compensation claims.
Advised Grand Hotel Group with its asset sale and counterparty compensation.
Advised AAPT re Telstra's ACCC submission on ULLC.
Advised Freehills (representing Channel Seven) re FOXTEL's special access undertaking as expert witness
Advised Prime Infrastructure for the Dalrymple Bay Coal Loader return determination by the Queensland Competition Authority.
Advised BHP re its valuation of plant closure.
Advised Hong Kong Electric Company for its regulated business required return.
Advised Lend Lease Corporation for its dispute with the ATO re its structured transaction of its Westpac share holdings.
Valuation of Optus Vision.
Valuation of Australia Post.
Cost of capital for each of the NSW GBEs (for NSW Treasury).
Advised ATO on changes to imputation tax laws.
Gas transmission access pricing; for AGL Ltd, re Sydney gas market.
Value of Commonwealth Bank imputation credits for sale of stock by the Federal Government.
Value of a large commodity project in South America (for RIO/CRA Ltd).
Valuation of some gold companies for Grant Samuel (Normandy Mining et al merger).
Valuation of the capital of ANZ Bank Ltd.
Advice on domestic versus foreign capital costs for BHP Ltd.
Valuation of a resource project for RIO/CRA Ltd.
Advised on negotiations for the Colonial/State Bank of New South Wales merger.
Valued a $multi-billion, multi-stage project for Comalco.
Costed the capital for the bid for the Victorian electricity distributor, United Energy Ltd for Westpac - bid by the French company EdF, subsequently by AGL Ltd.
The cost of capital (company-wide and divisional) for WMC Ltd.
Costed the capital for the sale of the State Bank of NSW - for CS First Boston.
Cost of capital for various listed companies: including WMC, CRA, FBG.
Advised the NSW Pricing Tribunal on price-setting for Government Business Enterprises.
Valued a company for the ATO with respect to potential litigation.
Valued the employee share option scheme for McIntosh Securities Ltd.
Analyse and made recommendations for a new ASX derivative product - Share Price Ratios. This appeared as an ASX publication: Hathaway Report on Share Ratios.
Report on Asset Allocation for Potter Warburg Private Clients Services.
Valuation of and recommendations about the 530+ million derivative securities involved in the Elders/Harlin restructure into Fosters Brewing Group.
Corporate valuations for potential takeover offers.

PREVIOUS APPOINTMENTS:

FAY, RICHWHITE: 1993 - 1994: ASSOCIATE DIRECTOR

Responsibilities: Undertook commissioned research and consulting upon request as both a team member and as a sole agent. Guided and assisted the investment banking staff of the Bank in developing and conducting their analyses for clients.
Developed a new risk management process for the Australian Loan Council in order to handle the States' involvement in infrastructure projects. The implementation involved extensive liaising with Treasury staff, both Federal and State.

Developed and advised on the introduction of Economic Rates of Return for Federal Government Business Enterprises (GBE's - eg Federal Airports Corporation). Liaised with the heads of the Federal GBE Policy Advisory Committee concerning the changes induced by placing economic rates of return targets on GBEs.
Analysed and costed the State of Victoria's commitment to the Portland and Point Henry aluminium smelters. My Report was used in both the Nicol's Committee of Inquiry and

the Victorian Audit Commission Report.

Member, University of Melbourne Investment Committee.
This Committee acted as a fund manager for the many millions of dollars of endowment funds that the University of Melbourne has under investment (approx $500 million when I departed upon my resignation from MBS). It oversaw all aspects of these funds and made all investment decisions. There were five university appointees and five outside appointees to this committee, as well as support staff. The management of this fund is now out-sourced (to VFMC). The fund has now grown to over $1 billion.

Member, ASX Committee on Australia's Competitive Position in World Resource Stocks.
This group of people was assembled in order to design a large project to examine all aspects of how Australia's market position for resource stocks can be protected and enhanced within the world. It was envisaged that this project would be a very long one, taking many years and made up of a wide number of projects all with the strategic aim of furthering the market position of the ASX and Australia.

Member, Advisory Panel to Companies & Securities Commission Advisory Committee.
This committee reported to the Attorney General in regards to the regulation of derivative securities within Australia.

Member, Advisory Panel to Finsia.
This committee is responsible for the design and content of the Masters Program course M01, Applied Quantitative Methods in Finance. I also delivered the course as the principal leader.

Education

Ph.D	University of Melbourne,	1980.	(Maths/economics)
M.Sc	University of Melbourne,	1978.	(Applied Mathematics)
B.Sc (Hons)	La Trobe University,	1974.	(Mathematics)

(Took a two year break, 1974-1975, worked in London /travelled world.)

Personal

Born November, 1951. Married, 1972, to Dianne. We have two adult children Mark and Jane. Pastimes include walking the dog, swimming, reading, gardening and home maintenance (including both off-springs' properties).