Other base broadening and revenue raising ideas

Background paper for Session 3
of the
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CONTENTS

BACKGROUND

Purpose

There are a number of changes to the New Zealand tax system that could be made that would broaden the tax base and raise additional revenue. Some of these may be desirable in order to address medium-term revenue deficiencies (particularly in the context of tax rate reductions to achieve alignment) or to make the tax system more coherent and efficient.

Each percentage point reduction in the 38% top personal tax rate costs approximately $100 million and each percentage point reduction in the 33% personal tax costs around $90 million. Thus, dropping all marginal tax rates to no more than 30 percent costs roughly $1.1 billion.

Separate papers have been prepared that consider two of the most obvious base-broadening ideas – a capital gains tax (CGT) and a land tax. In addition, the main other revenue raising option of increasing the rate of GST was considered at the Tax Working Group's last session in July this year.

This paper considers several other base broadening or revenue raising options – namely:

- Introducing a risk free return method (RFRM) for taxing rental housing
- Placing depreciable buildings on revenue account
- Removing depreciation loading on new assets
- Removing the employer superannuation contribution tax (ESCT) exemption for employer contributions to KiwiSaver funds
- Increasing excise taxes on tobacco and alcohol
- Introducing an estate duty
- Introducing some form of environment tax

Some of these options may be incompatible with a CGT or substantial land tax and the paper indicates where this is the case.

The Group may wish to assess these ideas taking into account the objectives it has set to guide the design of a good tax system.[1] Specifically, the Group may wish to indicate whether the ideas are worth further development with a view to future implementation.

[1] These are:
- Growth and efficiency
- Equity and fairness
- Revenue adequacy
- Revenue integrity
- Simplicity of administration and compliance
- Coherence

Summary table

Idea	Pros	Cons	Revenue raised (pa)	Interaction with other taxes
RFRM on rental housing	• Approximates taxation of full economic income on rental housing • Relatively simple • Progressive	• May entrench tax preferred status of owner-occupied housing • Cash flow issues for loss making property • Debt may be tax preferred • Reduces property prices	$500m - $900m	Alternative to capital gains tax on housing
Depreciable buildings on revenue account	• Taxes full economic income on buildings • Allowing losses is consistent with other business assets	• Optional approach creates inconsistency	Difficult to estimate	Alternative to capital gains tax on buildings
Eliminating depreciation loading	• Better reflects economic life	• May introduce bias in favour of long lived assets	Around $500m per annum, varying each year	None
Removing ESCT exemption	• Removes an exemption that mostly benefits higher-income employees	• Reduces incentive to save in KiwiSaver • Tinkering with KiwiSaver could undermine its credibility	$170 million per annum	None
Increasing excise taxes on alcohol and tobacco	• May be justified on the grounds of negative externalities or	• May be seen as regressive	$140 million per annum if rates	None

Idea	Pros	Cons	Revenue raised (pa)	Interaction with other taxes
	inelastic demand		increase by 10%	
Estate duty	• Progressive	• Migration to Australia to escape estate duty	$200 million per annum	None
Environmental tax • Carbon tax	• Environment taxes can be justified on their own merits	• Except for carbon tax, environment taxes are not likely to raise significant revenue • Carbon tax should only be considered as alternative to emissions trading scheme		Carbon tax alternative to emissions trading scheme

RFRM on rental housing

A risk free return method (RFRM) on rental housing can be viewed as an alternative to imposing a capital gains tax on rental housing.

Under this proposal rental housing would be taxed under an RFRM method. Instead of taxing the owner on gross rents and allowing a deduction for expenses, imputed income for rental property would be calculated by applying a risk free rate to the net equity that the owner holds in the property each year. An RFRM on rental housing would, like a comprehensive capital gains tax on rental property, tax full economic income on rental housing.

The additional revenue that this proposal would generate will vary from year to year as land prices and rates of interest and (potentially) inflation change. Based on data from the last 10 years, an inflation-adjusted RFRM on rental property would raise an average of $0.5 billion per annum (or $0.9 billion if a nominal rate was used.).

The RFRM raises a number of economic efficiency issues. Applying RFRM to rental housing would not be ideal if owner-occupied housing continued to be outside the tax base. Consequently, one option would be to introduce RFRM to owner-occupied housing, with the rate gradually increasing over time. Another issue is that RFRM may change the relative incentives to invest via debt or equity.

The proposal and the policy issues that arise are discussed in more detail in Appendix A.

Depreciable buildings on revenue account

This proposal can be viewed as an alternative to a capital gains tax on the buildings component of real property.

Currently building owners can claim a deduction for depreciation on the value of the building that they own. The depreciation deductions are clawed back on sale to the extent that the sale proceeds exceed the acquisition cost. Unlike other depreciable assets, no tax deduction is allowed for losses incurred when the building is sold.

Under this proposal, building owners that claimed depreciation deductions on a building would be taxable on proceeds from the sale of the building that exceed the tax book value of the building. If the building was sold for less than the tax book value, the difference would be tax-deductible.

Combined with a small land tax, this proposal may be considered a more attractive option than a capital gains tax on real property generally. The revenue gain from this proposal is difficult to estimate.

The proposal is explained in more detail in Appendix B.

Eliminating or reducing depreciation loading for new assets

Under the current tax rules new assets (excluding buildings) qualify for a depreciation rate that is 20% greater than the depreciation rate that would apply based on the asset's economic life. Under this proposal, the 20% loading would be eliminated or reduced.

Without depreciation loading the current tax system would favour longer-lived assets such as buildings over shorter-lived assets such as plant and equipment. This is due to inflation-induced biases. The current 20% depreciation loading on non-building depreciable assets removes this bias to some extent. If the tax system were changed to tax buildings more heavily, there would arguably be less need to retain the current 20% depreciation loading.

The revenue gain from this proposal is likely to be in the order of $500 million per annum for eliminating depreciation loading and $120 million per annum for reducing the 20% loading to 15%. It should be noted that the revenue gain would reduce over time.

The proposal is explained in more detail in Appendix C.

Removing the ESCT exemption

Under the current tax rules there is an exemption from employer superannuation contribution tax (ESCT) for employer contributions to KiwiSaver schemes. This exemption is capped at 2% of the employee's gross salary or wages.

Under this proposal, the ESCT exemption would be removed. Removing the exemption would arguably make the tax system more efficient as a tax-induced distortion to receive remuneration in a particular form would be eliminated. It would also make the tax system more equitable as the current exemption benefits high income employees more than low income employees.

It should be noted, however, that removal of the ECST exemption would significantly reduce the savings incentives that underpin the KiwiSaver scheme. Changing KiwiSaver incentives after the scheme has begun with locked-in contributions could undermine its credibility and discourage people from joining KiwiSaver.

The revenue gain from the proposal is approximately $170 million per annum.

The proposal is explained in more detail in Appendix D.

Increasing excise taxes on tobacco and alcohol

Excise taxes on tobacco and alcohol could be increased. Any increase could be justified on the grounds of internalising negative externalities associated with consuming alcohol or tobacco (a "Pigouvian taxation" justification) or that the demand for consuming alcohol or tobacco may be relatively inelastic (a "Ramsey taxation" justification). There may be significant equity concerns with increasing excise taxes as lower income people are likely to pay a greater proportion of excise taxes in relation to their income than higher income people.

The expected revenue gains from a 10% increase to excise taxes on tobacco and alcohol is around $140m per annum after behavioural effects are taken into account. More revenue could be raised if rates were increased further.

The proposal is explained in more detail in Appendix E.

Introducing an estate duty

An estate duty is a wealth transfer tax that is levied on the estates of deceased people. New Zealand currently does not have an estate duty

Appendix F describes one potential estate duty design option that could be considered. It is based on the estate duty that was part of New Zealand's tax law until 1992. Essentially it would impose a 40% estate duty on estates above $1 million and would

target the wealthiest 2-5% of estates. The revenue gain if such an estate duty were introduced is approximately $200 million per annum.

Introducing a form of environmental tax

It would appear that the biggest potential source of revenue in the environment tax area would come from the introduction of a carbon tax. However, the introduction of a separate carbon tax in New Zealand would not appear necessary provided the proposed emission trading scheme is introduced as planned.

Other taxes on pollution could be considered but an efficient tax on pollution would not appear to raise significant revenue.

On the other hand, there could be a case for considering the removal of tax subsidies to activities which may create pollution. For example, one possibility would be to remove the tax concessions for petroleum mining.

The issues associated with various forms of environment taxes are explained in more detail in Appendix G.

APPENDIX A

RFRM on Rental Housing

Executive summary

This paper discusses the merits of applying a RFRM to property, in particular, housing. This would involve annually applying a risk-free rate of return to a taxpayer's equity in a property and taxing the result at the taxpayer's marginal tax rate.

This method was first suggested in the Tax Review 2001 as a way of rectifying what were perceived to be biases in the current income tax system (imputed rental income and capital gains not generally being taxed), thereby enhancing the overall coherence of the tax system. Because RFRM would result in an annual tax, it would avoid the problems associated with a realisation-based capital gains tax.

A key issue is what property should be covered – all property, including owner-occupied housing, or just rental property. The answer to this question depends on what is the key concern that the tax is intending to address. Is it the bias favouring owner-occupied housing or the lack of net revenue from taxing rental housing (overall tax revenue from rental property has been negative for the past two years)?

If the focus is primarily on rental housing, the RFRM could be considered as an alternative to taxing income from rental housing. Even in such limited circumstances a RFRM is estimated to raise substantial additional revenue (on average $0.5 billion annually based on the past ten years and using a real/inflation adjusted rate of return, or $0.9 billion if a nominal rate is used).

The RFRM raises several economic efficiency issues. Applying the RFRM to just one property segment would not be ideal if owner-occupied property continued to be tax-preferred. Consequently, one option would be to extend RFRM at a later date to owner-occupied housing, with the rate gradually increasing over time. This would also raise further revenue. There are also efficiency issues around some assets being taxed under an RFRM while others are taxed under the current rules. RFRM may also change the relative incentives to invest via debt versus equity (this would be less of an issue if a nominal rate of return rather than a real rate was used).

Overall, the method is considered to be relatively straightforward to apply and comply with. But this paper does note a number of administrative and compliance aspects that would need to be considered further, such as the mechanism for calculating the risk free rate, how to deal with part-year holdings, when the tax might be deferred and whether some debts secured over property would need to be excluded from the calculations.

In terms of wider macroeconomic implications, it is anticipated that the RFRM would reduce property prices which would, amongst other things, have implications for lenders who have secured their loans over property.

Background

The RFRM was discussed extensively in the Tax Review 2001, both in the context of a general application across a variety of types of investments and also specifically in relation to housing.

What is the Risk Free Rate of Return Method?

RFRM is an (ex ante) method of taxing all economic income. Taxation is annual, so is on an unrealised basis.

The tax base under the RFRM is the amount that would have been earned if:

- the funds invested in the asset had instead been invested in a "risk free" government bond; and
- the portion of the return on the bond that represented compensation for inflation was exempt from tax.[2]

The tax payable on the return to an asset would be calculated as:

Asset value at beginning of the year – debt over that asset at the beginning of the year (ie equity)

x

Inflation-adjusted risk-free rate of return

x

Investor's marginal tax rate

Income earned from an asset and the expenses associated with earning that income would be ignored for tax purposes. In relation to rental property, for example, interest, depreciation and repairs and maintenance would not be tax deductible and

[2] Choosing a real return rate rather than a nominal rate is consistent with the current treatment of other depreciable assets in the presence of inflation. Shorter lived assets receive accelerated depreciation to recognise the impact of inflation. Property improvements are also depreciable but, with inflation, that depreciation is often clawed back on sale. That deferral would not occur under RFRM that used a real rate. Given that many other investments are, however, taxed on a nominal basis, a case can be made for applying a nominal rate where RFRM is applied selectively. Accordingly, in this paper we refer to both options.

rental revenue would not be taxable income. The rationale is that the RFRM imputed rate of return is intended to proxy a net return after allowing for all expenses.[3]

Nor would capital gains be simultaneously taxed – gains or losses on the assets subject to RFRM would be excluded from any general capital gains tax.

Example

Kevin and Ruth own a house that is valued at $300,000 and have a $200,000 mortgage. Kevin's marginal tax rate is 38 percent, Ruth's is 21 percent. The risk-free return is 4 percent.

RFRM taxable income in respect of the house is:

($300,000-$200,000) x 0.04 = $4,000.

Assuming this taxable income is split equally between Kevin and Ruth, Kevin's additional tax bill is $760 while Ruth's is $420.

Rationale for RFRM

The RFRM overcomes various problems associated with the current income tax system. For example:

- Under the RFRM, the tax system would not sway taxpayers' decisions about whether to invest in "income" or "growth" assets since tax liabilities would be independent of the extent to which returns to an asset comprise cash or capital growth. There would be no advantage under the RFRM to be had from re-characterising "taxable income" as "capital gains".
- A widely applied RFRM would be fair in the sense that any two taxpayers with the same start-of-year wealth would face the same tax liability irrespective of any differences in the types of asset they invest in.
- The RFRM would provide a way of indexing part of the tax system for inflation, if an inflation-adjusted, rather than a nominal, risk-free rate of return was used in the calculation.
- It would provide government with greater certainty of tax revenue on certain items where income flows are volatile. Tax would be collected

[3] A tax of this type applies in the Netherlands as an investment yield tax (applying at a flat tax rate of 30%) on a taxpayer's net investments, including any housing (other than the taxpayer's principal residence).

in years when asset values fall and actual economic income is negative.[4]

Furthermore, because it would tax on an annual/unrealised basis it would avoid the problems associated with a realisation-based capital gains tax.

What assets should be covered?

A key issue is what assets an RFRM should apply to. The Tax Review 2001 acknowledged the complexities of applying an RFRM across the board, particularly to domestic shares given the interaction with the imputation system. But the Review considered that it was far more straightforward to apply to property. It was seen as a way to address certain biases in the tax system favouring property.

Owner-occupied property distortions

Income from owner-occupied property takes two forms: changes in the value of the property (or capital gain) and the consumption benefit (or "imputed" rental income).[5]

Owner-occupied housing is tax-preferred to the extent that it is not debt-financed. In the case of debt financed investment, payment of mortgage interest (which is not deductible for owner-occupiers) transfers part of the normally non-taxable investment return from housing to the lender who is subject to tax on the interest.

The economic consequences of not taxing owner-occupied housing are:

- It is likely to result in less investment in assets that generate taxable returns, and more in housing. This is economically inefficient to the extent that it results in greater improvements to land than would occur under a more neutral tax treatment.
- It is not horizontally equitable as two households with the same wealth and employment income are subject to different levels of tax if one has its investment in housing and the other lives in rental accommodation and has bank savings.
- It is regressive. Lower income households rely more heavily on rental accommodation. The regressivity is exacerbated by the likelihood that lower income households are likely to have a mortgage even if they own property.
- Older households are more likely to have paid off their mortgage so enjoy a larger tax benefit than younger households with similar incomes.

[4] The government's position would change from in effect being a silent equity partner under the current income tax to being more like a debt investor under RFRM. Currently, the government's share of the exposure to risk under the income tax is the investor's marginal tax rate. If the investment does well, the government gains say 38% of the return; if it does poorly, the government compensates the investor for 38% of the loss.

[5] The annual value of the consumption benefit is in principle equal to the rent that would have been paid if the household had instead rented accommodation of the same standard.

The Tax Review 2001 considered that applying RFRM to owner-occupied housing was preferable to trying to tax the imputed rental income (and capital gain) directly.

Rental property

The Review also recommended applying RFRM to rental property, to reduce boundary problems and because of the declining net tax being received from rental property.

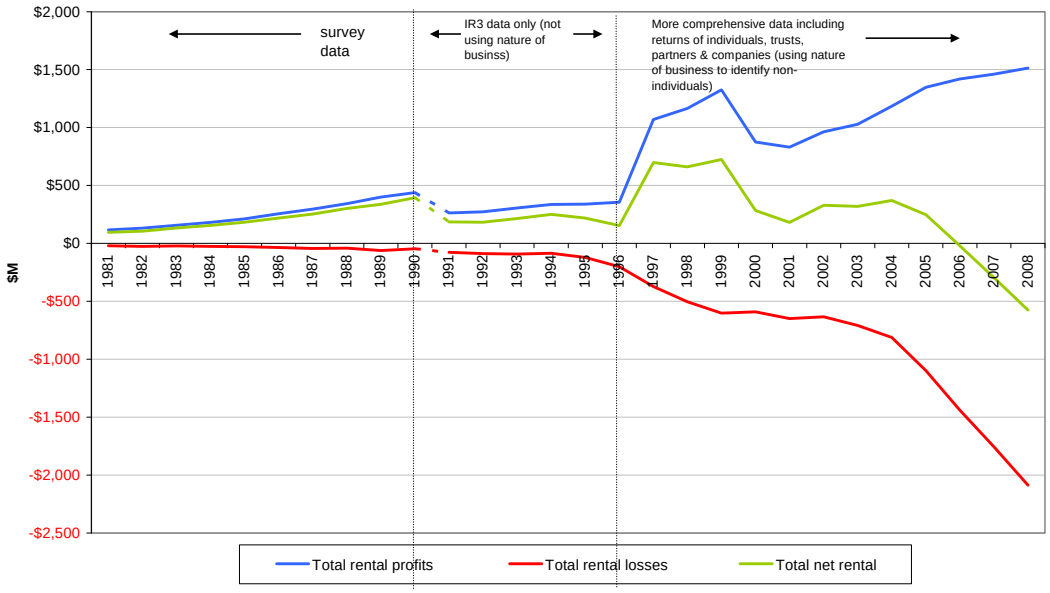
Like owner-occupied property, changes in the value of rental properties are currently generally not taxed, but rents are treated as taxable income and deductions are available for expenses, including interest and depreciation.

For highly geared investors, the ability to deduct expenses often produces losses in the early years of investment, which can be offset against other income. There has been some public debate about whether this is appropriate. There is, however, no distortion from the current tax treatment of debt versus equity financed rental property. The incentives to invest in rental property are the same for the investor who invests their own capital as for the investor who borrows 100 percent of the rental property. If less than full economic income is taxed, highly geared investments will generally make tax losses.

What is, however, of concern from a revenue perspective is the fact that the overall tax gathered from rental property is negative. Figure 1 highlights that this has been the case over the past two years. The normal pattern would be that although losses are made initially, in the long-term rental investors pay tax. Consequently, if the new investors of the past few years continue to hold their properties net revenues from property may eventually turn positive. However, given the trends in Figure 1, we cannot be confident that the net negative revenue is a temporary phenomenon and just a function of the recent property boom and associated expectations of large capital gains.

Figure 1

Rental income time series - Value $M chart



Conclusion

The answer to the question as to the appropriate assets to cover depends on what is the key concern that the tax would be intending to address. Is it the bias favouring owner-occupied housing (which is very difficult to fix) or the lack of net revenue from taxing rental housing?

If the focus is primarily on rental property, the RFRM could be considered as an alternative to taxing income from rental property. If so, a further question would be whether it should apply just to rental housing or to all rental property, including commercial property? A downside of including commercial property is that such property could be used by companies as part of their more general business activities.

Applying the RFRM to just one property segment would not be ideal particularly if owner-occupied property continued to be tax-preferred. Consequently, one option would be to extend RFRM to owner-occupied housing (at a later date), with the rate gradually increasing over time.

How to treat builders, developers and other dealers in property?

Another issue that would need to be considered is whether the RFRM should apply to builders, developers and other dealers in property.

Under current tax law, income tax may apply to gains on realised land (and any improvements) sold in a range of circumstances:

- When land has been acquired with the purpose or intention of sale or disposal.
- A disposition by a dealer in land, a land developer, a subdivider or a builder.
- Amounts arising from rezoning or similar occurrences.
- Land developments or subdivisions undertaken within 10 years of acquisition or as a result of schemes or undertakings not falling under other categories.

A transaction caught under one of these categories may not be taxable if it qualifies for one of the exemptions, the key ones being in respect of owner-occupied residential land and land that comprises business premises. The effect of these exemptions is that the current rules are more focussed on business-like transactions than one-off sales of owner-occupied dwellings.[6]

On the face of it, it seems appropriate that these rules continue to apply to builders, developers and dealers in property given that the current rules already endeavour to

[6] This does not mean, however, that the taxpayer has to be in the business of property development to be caught. The sale of a residence would be subject to income tax if the taxpayer has established a regular pattern of buying and selling the properties in which they reside, as would any profits on the sale of an individual investment property purchased with the intention of resale.

treat all gains in these circumstances as being on revenue account. This would therefore mean explicitly excluding these taxpayers from any RFRM. This may give rise to some boundary issues.

Should there be any grounds for deferral?

An implication of the RFRM not being transaction-based is that, irrespective of its scope, there would inevitably be situations when the annual tax liability exceeded the annual cash flow. This could be particularly problematic for those on low incomes but with high valued properties, which is likely to arise more for the elderly.

In these circumstances, consideration would need to be given to whether any relief would be required and if so how targeted should it be.

The Tax Review 2001 was of the view of that there was not a strong case for allowing widespread deferral just because of a mismatch of cash flows. Instead, the Review considered that deferral should be targeted at instances of genuine hardship, with interest being charged on liabilities carried forward.

Hardship will not arise when the asset is readily marketable and is divisible. However, property (particularly owner-occupied) is not divisible so that genuine hardship could arise in some instances. Moreover, we would expect an RFRM to reduce the market value of property, on the assumption that buyers will deduct the capitalised value from the amount they are willing to pay. This effect is likely to be disproportionately higher at the upper end of the housing market where buyers are generally less highly geared.

Other

Impact on banks' lending

Given that the RFRM would be expected to impact on property values[7], there would be implications for lenders who have secured their loans over property. This would be particularly so if the proportion of assets forming the RFRM base represent a high proportion of a bank's total lending/investment portfolio. In these circumstances, borrowers may be required to provide additional security, or lenders may have to raise additional buffer capital or to reduce their lending. This would have wider economic consequences.

Public reaction

As in 2001, there is likely to be significant negative public reaction to applying RFRM to property, including from rental property owners no longer able to claim interest, depreciation and repairs and maintenance deductions. This may be tempered

[7] Price reductions may be less if the RFRM were applied only to rental housing. If owners of rental property increase rents in response to the tax, some renters will instead buy houses, helping to underpin market prices.

by the fact that there has been over recent years material publicity and calls for some action on rental property.

Economic efficiency

The RFRM raises several economic efficiency issues, depending on coverage.

By addressing the non-taxation of capital gains on rental property, it would bring the tax treatment of rental property more in line with the tax treatment of other assets where the full economic income was taxed.

Applying the RFRM to just one property segment, however, would not be ideal if owner-occupied property continued to be tax-preferred. Further investment could be driven towards owner-occupied housing,[8] or rental property owners may try to recoup the tax through increasing rents. The tax could also act as a disincentive to use housing assets partly for owner-occupation and partly for rental income. The option noted earlier of extending RFRM to owner-occupied housing at a later date, with the rate gradually increasing over time, would reduce this inefficiency.

There are also efficiency issues around some assets being taxed under an RFRM while others are taxed under the current rules. This could create biases depending on how different the tax result proved to be from the tax treatment applied to other asset classes. For example, because the RFRM would tax income on a real, or inflation-adjusted basis, returns to assets subject to RFRM would generally be taxed more favourably than returns to assets, such as bank deposits, that fall outside.

RFRM would also change the relative incentives to invest via debt versus equity, in favour of equity investment. This would be removed, or at least substantially lessened, by using a nominal rather than a real interest rate.

Equity

Targeting a single asset class also raises equity issues, including what in effect amounts to a wealth transfer between current property owners and prospective property owners, and between those holding different mixes of assets.

The tax would be progressive because wealthier households own more assets/valuable housing stock and the calculated amount would be taxed as income at ordinary marginal rates.

Any increase in rents would impact relatively more on low income earners as they are more likely to be renting.

[8] This could be in the form of either new housing or improvements to existing housing. Although there may be increases in the value of the underlying land too, there would be no efficiency effects from this given that the supply of land is fixed.

Revenue implications

Estimates show highly variable positive revenue flows. This is because of the volatility of the risk free rate of return from year to year and also variability in property prices impacting on people's equity in their properties (see Figure 2). Nevertheless substantial addition revenue could be generated by applying an RFRM to even just rental housing – at least half a billion dollars.

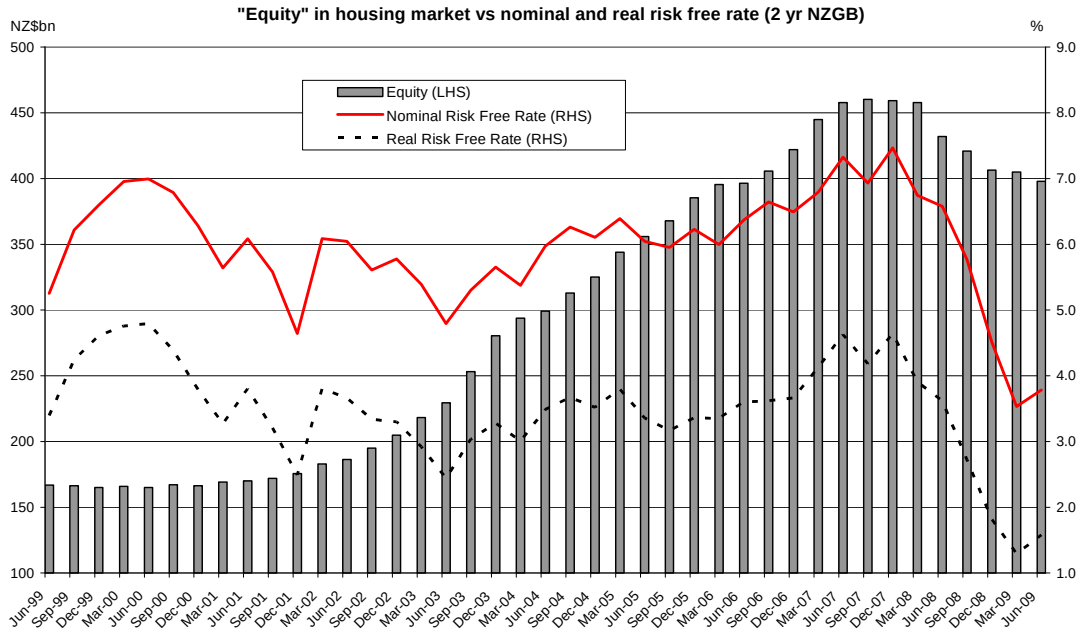
Estimated average annual revenue from an RFRM on housing

	Rental housing	All housing
Current treatment	-$0.15 bn	-
RFRM real *	$0.4 bn (ie gain of $0.55 bn)	$3.1 bn
RFRM nominal *	$0.7 bn (ie gain of $0.85 bn)	$5.4 bn

* If had applied RFRM over the past 10 years, using equity and interest rates over that period.

These estimates are also very sensitive to assumptions about average equity. In the case of rental property owners, we have assumed that on average they have only 30 percent equity in their properties, whereas owner's average equity in all housing is over 60 percent. For every additional 10 percent equity, the estimated revenue gained from applying an RFRM to rental property increases by $0.1-$0.2 billion.[9] A major part of the gain from applying an RFRM to rental property comes from denying deductions which means that there are no losses.

Figure 2



[9] For example, assuming instead an average equity of 40 percent increases the estimated revenue from an RFRM to $0.5 billion (if a real rate is used) and to $0.9 billion (if a nominal rate is used).

Revenue integrity

There would be an incentive to split the RFRM income between household members, trusts, etc. to take advantage of lower marginal tax rates but this seems to be no different than for other forms of income.

There are already precedents in the Income Tax Act to help deal with asset transfers; for example, there is an interest income rule for dealing with the problem of selling a house to children.

An alternative would be to apply a flat rate of tax irrespective of the investor's marginal rate.

If, as suggested, the base would be net equity, then issues around the appropriate debt allocation would need to be addressed. It would be necessary to devise rules for the apportioning of debt between the rental property and other uses, which would include the acquisition of ordinary income generating assets and non-taxable assets. For example, should "business" debt secured against property (the interest on which may be deductible to the business) be able to be taken into account? Apportionment rules have been acknowledged in the past as problematic given the fungibility of money.

Also there would be boundary issues if the RFRM were applied to just one type of property, eg what is owner-occupied versus rental, or commercial versus residential, and what about mixed uses? How should a holiday home rented out when not occupied by the owner be treated?[10] Similar problems, however, currently arise in respect of determining what is private or domestic versus income earning expenses.

Some of the anti-avoidance precedents from the fair dividend rate on FIF interests may have application to property.

Integrity / impact on overall coherence of tax system

Depending on coverage, the RFRM would:

- Tax significant economic income that is not currently being taxed.
- Address concerns around rental properties creating overall negative tax revenue.
- If applied also to owner-occupied property, it would contribute to coherence by in effect taxing imputed rental income of home owners.

The Tax Review 2001 noted that if an RFRM were to be introduced it should preferably apply to a wide range of assets because:

[10] Arguably, these mixed-use housing assets should be included within the RFRM base to avoid distorting decisions about their rental use.

- Interfaces between different tax regimes inevitably result in both a more complex tax system and in unintended consequences, both favourable and unfavourable for taxpayers. It is therefore desirable to minimise the number of instances where a taxpayer has to move between regimes.
- Applying the same regime to a wide range of assets makes it as clear as possible to taxpayers that tax effects are consistent across assets.

Administration and compliance

The annual opening value of the property for RFRM purposes could be based on property valuations undertaken for rating purposes. The taxable value would be reduced by the value of any mortgages and other debt secured over the property. As noted earlier, there would likely be a need for debt apportionment rules.

If the RFRM is treated as an income tax line item then it can be dealt with through the income tax return.

If the RFRM were applied to owner-occupied property, it would result in a significant increase in income tax filers, which would be a reversal of efforts over the past decade to reduce the number of return filers.

Calculating the Risk Free Rate of Return

The Tax Review 2001 suggested the rate be calculated annually by Inland Revenue at (or toward) the beginning of an income year, and that it be based on government debt with a one-year term to maturity, adjusted for expected inflation over the coming year. The inflation adjustment means taxpayers would be taxed on the "real" risk-free rate of return to their investment. The Tax Review 2001 envisaged this being around 4%.

Example

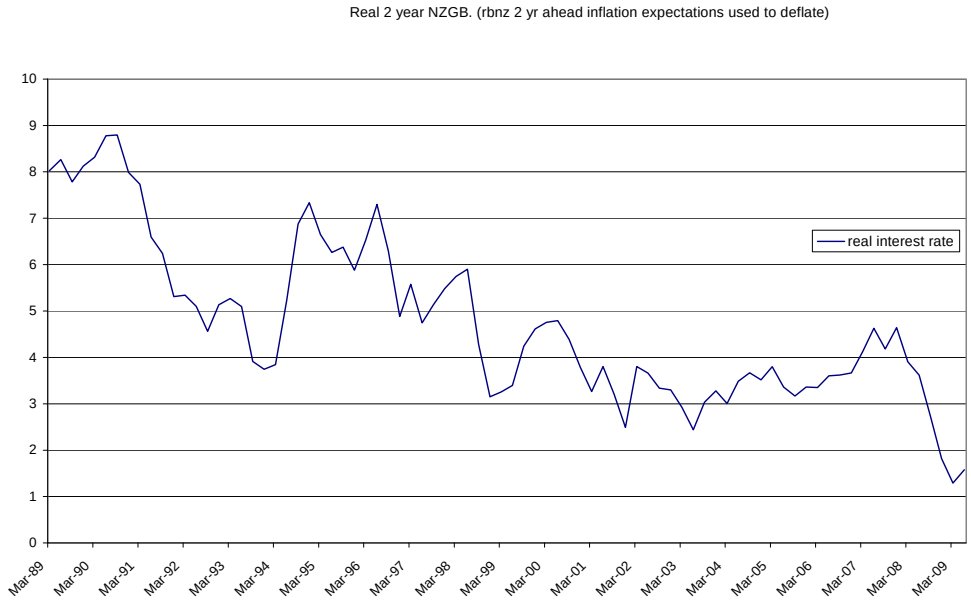
On 1 April 2009, the interest rate on Government stock with a 1 year term to maturity was 3.0 percent. The forecast of inflation for the coming year is 2.0 percent. $1 held at the start of the year will have to increase in value to $1.02 merely to maintain its initial purchasing power, while $1 invested in government stock will increase in value to $1.03. The expected real rate of return on the government stock over the next twelve months is therefore:

1.03/1.02 -1 = 0.98%

The Tax Review noted that, in practice, the uncertainty surrounding inflation forecasts is such that, for modest rates of inflation, the simpler approach of setting the RFR equal to the reported return less the expected inflation (ie 3%-2% = 1%) would probably be sufficient.

Figure 3 indicates that this methodology would have resulted in a highly variable real rate (and hence revenue flows) over the past decade given the variation in nominal interest rates and inflation expectations over the period.[11] An alternative, to try to get a less volatile outcome, would be to take a longer-term average rate and to review the rate less frequently.

Figure 3



Part-year holdings

Consideration would need to be given as to whether to exclude or include part-year holdings in the tax calculation. They could be simply ignored so that the tax was based only on the start-of-year investments and assuming that the investment is held for the full year. Alternatively, the calculation could take account of part-year holdings through say an investment held for 6 months in the year being taxed on the opening value of the investment multiplied by 6 months worth of interest.

Recognising part-year transactions would provide an incentive to hold onto profit-making investments and to realise loss-making investments, another form of "lock-in" effect although this is only for the period until year-end. Conversely, ignoring part-year purchases could result in under or over-taxation depending on how the funds are taxed for that part of the year when they are outside of the RFRM base.

[11] Given that a one year government bond rate is no longer available, Figure 2 uses a two year government bond rate. The two year rate has also been used in the revenue estimates.

APPENDIX B

Taxing Gains on Depreciable Buildings

Proposal

Building owners that claim depreciation deductions on a building will be assessable on all gains made from the disposal of the building, including recovering previous depreciation deductions. The proposal would allow for losses realised from the disposal of a building.

This proposal only applies to the value of buildings and not the value of the building and land. The proposal has been expressed as optional as taxpayers currently have the option of claiming depreciation deductions or not. This aspect of the proposal could be changed so that the new treatment was made compulsory

Current tax treatment

At present, building owners can claim depreciation on the value of the building. However, if the building is sold, or otherwise disposed of, for more than the acquisition cost, then the current tax rules recover depreciation deductions allowed from the date of acquisition to the date of disposal. This is standard depreciation treatment. No tax deduction is allowed for losses incurred when the building is sold. This is unusual, because a deduction is allowed for losses arising from the disposal of other types of depreciable property.

Buildings are generally long lived assets, with relatively low depreciation rates applying to a significant capital value. Deductions are usually for a significant amount of money, but are small when compared to value of the building. There can be short-run volatility with the value of buildings. Factors driving this volatility include expectations around returns from renting and changes to building costs.

Comment

Economic efficiency

Impacts on efficiency are ambiguous. There is likely to be a small improvement in efficiency because the proposal would allow losses on buildings (currently not allowed). This would also remove an investment asymmetry that arises when a building is sold for a higher price than it cost. In such cases, the new building owner gets to depreciate the building for a higher amount even though the vendor is not taxed on the amount received. However, realised capital gains tax may impede efficient transactions from taking place (this is known as the lock-in effect).

The option to elect may mean that some taxpayers are over taxed. This can occur if a taxpayer elects not to depreciate a building and eventually sells the building for a loss. Conversely, others could be under-taxed under this proposal. This could occur if taxpayers elect not to depreciate the building and sell the building for a gain. Election would allow taxpayers to pick whichever of the tax treatments is more favourable. An alternative would be to make this treatment compulsory.

Equity

The impacts on equity are ambiguous. The proposal allows the government (on behalf of other taxpayers) to share in the upside gains from income arising from the sale of buildings. Any realised capital gains tax on property owners and not on other types of assets may change equity. This raises the question of why this approach would not be applied to all types of depreciable property.

Revenue

It is extremely difficult to estimate the revenue implications of this proposal as it will depend on a number of assumptions – including the extent to which people decide not to depreciate buildings. At the extreme, if all taxpayers chose not to depreciate buildings, there would be a revenue gain of approximately $1.3 billion per annum (this is the total annual amount of depreciation deductions on buildings). Clearly, this assumption is unrealistic and any revenue gain would be substantially less than this.

It should also be noted that taxpayers that chose to continue to depreciate buildings would be able to claim any losses on the disposal of the building. Assuming now that 100% of taxpayers choose to continue to depreciate buildings, if .5 to 1 percent of the depreciated value of buildings is scrapped in any year the cost of allowing deductions on scrapping might be between $300 million and $600 million per annum (this is in addition the depreciation deductions that would continue to be claimed). This would be offset by taxing any gains on disposal, but we have been unable to determine the likely net fiscal impact.

Integrity

This proposal will enhance the integrity of the tax system in relation to taxpayers that sell appreciating assets to an associated party in order to get larger depreciation deductions. The proposal may also reduce sale and lease back arrangements that use buildings. It will also reduce instances of black-hole expenditure – for losses arising from the disposal of a building.

Impact on overall coherence of tax system

The proposal is unlikely to have much effect one way or another on the overall coherence of the tax system.

Compliance and administration costs

The proposal would result in a slight increase in compliance costs, as taxpayers will need to elect whether to depreciate or not depreciate the value of the building in the year that it is acquired. Taxpayers will need to keep a record of the election they have made. There would also be a one off cost on implementation for valuing buildings to get the correct base value (assuming that the change applies to gains or losses arising after implementation).

There would be a slight increase in administration costs for Inland Revenue as it would need to monitor or track elections.

APPENDIX C

Reducing or Eliminating Depreciation Loading For New Assets

Proposal

The proposal is to reduce or remove depreciation loading for new assets. The two options considered are to completely remove loading or reduce loading from 20 to 15 percent and these proposals apply to all future acquisitions.

Current treatment

New assets, including assets used for the first time in New Zealand, qualify for an additional 20 percent loading on the relevant economic depreciation rate – for example, an economic depreciation rate of 20 percent with the loading would increase to 24 percent.

Comment

Economic efficiency

It is difficult to determine the overall impact of the proposals on efficiency.

Removing depreciation loading appears at first examination to lead to depreciation rates better reflecting an asset's economic life, therefore increasing efficiency.

However, retaining the loading reduces the potential effect that inflation would otherwise have on investment decisions (favouring long-lived assets over shorter-lived assets). Even minor rates of inflation can provide a bias favouring investment in longer-lived assets.

An unattractive feature of any loading is that it can make investments profitable even when their pre-tax rate of return is less than the cost of funds to the economy. Accelerated depreciation (in this case the 1.2 times the economic depreciation rate) means that it is still profitable, after taxes, for investors to invest in projects that have a lower rate of return than the post-tax interest rate. Removing the loading completely would increase the cost of capital to the economy overall.

Revenue gain

The revenue gains associated with each proposal are estimated to be[12]:

	2012	**2013**	**2014**
Removing 20% loading in full	$290	$490m	$600m
Reducing 20% loading to 15%	$70m	$120m	$140m

[12] It should be noted that these revenue figures include a growth assumption.

APPENDIX D

Removing the ESCT Exemption

Proposal

That the exemption from employer superannuation contribution tax (ESCT) for employer contributions to employees' KiwiSaver schemes (and complying superannuation schemes) be removed.

Current tax treatment

Generally employers are required to pay ESCT (previously known as specified superannuation contribution withholding tax or SSCWT) on the contributions they pay to registered superannuation schemes on behalf of an employee.

However, employer contributions to KiwiSaver schemes are exempt from the ESCT, subject to a cap of the lesser of the employee's contribution or 2% (reduced from 4% to 2% from 1 April 2009) of their gross salary or wages.

Comment

A view that New Zealand's rate of household saving has been consistently low compared to other OECD countries prompted the last Government to introduce generous savings concessions through the KiwiSaver scheme. KiwiSaver provides two major tax incentives intended to encourage private savings for retirement:

- The member tax credit which matches a member's contribution dollar-for-dollar up to about $1,042 per year; and
- An exemption from ESCT for the employer's matching contribution of up to 2% of salary per year.

There is robust debate on whether the Government should provide incentives or concessions to encourage savings. Some people argue that individuals act rationally and save an appropriate amount to fund their retirement. However, in recent years Treasury has expressed concern that individuals could be under-saving relative to what is desirable over the longer-term and has indicated that stronger pro-saving policies may be justified on a least regrets approach.

Higher income individuals are in a position to save more than lower income individuals. Therefore, even if it can be argued that tax concessions for savings are necessary, a tax concession is probably less effective at encouraging higher income individuals to save than those on lower incomes.

The member tax credit is a capped dollar-for-dollar credit for member contributions to KiwiSaver. This means it has both a stronger incentive effect for lower-income KiwiSaver members, and it has a progressive effect on the tax system. For example, if an employee contributes 2% of their salary to KiwiSaver, the effect of the member tax credit is a 100% matching government contribution for salaries up to $52,100 ($1,042 contributed by the employee, $1,042 matched by the government). For a person with a salary of $104,200, the effect of the member tax credit is a 50% government match ($2,084 contributed by the employee, $1,042 matched by the government).

The ESCT exemption, by contrast, is regressive because it provides a higher tax benefit for a higher income employee.

For example, in the case of an employee with a salary of $52,100, the effect of the ESCT exemption is 21% of the contribution of $1,042, or $219. For an employee with a salary of $104,200, making double the KiwiSaver contribution ($2,084), they also get more than double the tax benefit of the ESCT exemption ($687).

The ESCT exemption is not targeted as effectively as the member tax credit and removing it would result in a revenue gain (indicated in the table below). Therefore, even if it can be argued that tax concessions for savings are necessary, there are arguments to remove the ECST exemption. It should be noted, however, that the removal of the exemption would significantly reduce the saving incentives underpinning the scheme,[13] as the employer's contribution would decrease and the member tax credit would remain as the primary subsidy. Tinkering with KiwiSaver after it has been running and people already have locked-in savings in it may undermine the credibility of KiwiSaver and discourage new people from joining or new contributions.

At the end of 2008, it was announced that the employer contribution level would not be increased from 2% to 4% as previously planned.

Equity

Removing the exemption would improve vertical equity as currently high income earners benefit more from the exemption as it is based on a percentage of the employee's gross salary.

[13] The ESCT exemption is currently the second largest government incentive behind the member tax credit. Over time the $1,000 KiwiSaver kick-start is expected to become a small proportion of a member's fund.

Revenue

Removing the exemption would have the following revenue gain:

	2012/13	2013/14	2014/15
ESCT revenue $m	171	175	180

Integrity and impact on overall coherence of tax system

Removing the exemption would improve the integrity and coherence of the tax system. The current ESCT exemption is an explicit tax concession and removing the exemption would be consistent with a broad base/low rate tax system.

Compliance costs

Removing the exemption would reduce compliance costs because there would be one treatment for all employer contributions. Currently, if an employer's superannuation contribution exceeds 2% of an employee's salary or wages, part of the contribution will be subject to ESCT and part of the contribution will not be.

Administration costs

Removing the exemption would simplify administration and therefore reduce administration costs by removing the boundary between exempt and non-exempt contributions.

APPENDIX E

Increasing Excise Taxes on Tobacco and Alcohol

Historically, excise and customs duties have been an administratively efficient means of collecting tax revenue. The Tax Review 2001 (the McLeod Review) noted that "prior to the 1970s, excises and duties were seen as revenue raisers and it appears likely that the very significant contribution of excises to revenue is a major explanation for their persistence." In 2008/09, excise duties on tobacco and alcohol (including excise equivalent taxes and the GST on these excises) were forecast at just over $2 billion. This equates to roughly 4 percent of New Zealand's total revenue collections.

Today excise taxes are often justified on Pigouvian or Ramsey taxation grounds.

Pigouvian taxation

The negative externalities from the over-consumption of alcohol and tobacco provide a rationale for Government tax, regulatory and spending interventions in these markets. Pigouvian taxes are one potential method to correct for market failures. Pigouvian taxes are used to encourage the efficient use of resources. An optimal per unit Pigouvian tax is defined as a tax that would provide an incentive for each consumer to consume that consumer's socially optimal quantity of a good.

In the case of alcohol and tobacco, there would be a justification under a Pigouvian framework for excises on alcohol and tobacco when the social benefits of consumption are outweighed by the social costs. From an economic perspective, in the case of alcohol, an optimal tax system would be where taxes were levied progressively based on consumption levels to ensure that for each consumer the marginal social cost is equal to the marginal social benefit at the consumer's given level of consumption. However, within the information constraints of the current tax system it is impossible to discriminate based on an individual's level of alcohol and tobacco consumption.

Within existing constraints then, the best proxy for progressive Pigouvian taxes are excise rates that are based on a weighted average of each consumer's optimal tax. Using alcohol as an example, a 2002 study published by the Treasury found that the $580 million in revenue collected from the alcohol excise in 1999/00 was roughly equivalent to the mid-point of the study's estimated bound of external tangible costs of alcohol ($608 million).[14] The study concluded that the current excise rate on alcohol could be justified on externality grounds, based on the assumption that an optimal uniform tax would collect revenue at least as large as the total externality. However, there may be justification to increase the excise on externality grounds if we accept that marginal social costs increase at a faster rate than the marginal costs of

[14] Barker, F., 2002, *Consumption Externalities and the Role of Government: The Case of Alcohol*. http://www.treasury.govt.New Zealand/publications/research-policy/wp/2002/02-25

the individual.[15] Since this study was published, the alcohol excise has adjusted in line with the CPI each year.[16] In comparison, the associated costs borne by Government of excess consumption of alcohol, such as health and law and order costs, have increased at rates faster than the CPI. This may provide further scope to raise the excise on alcohol on externality grounds.

Excise taxes on alcohol are levied at different rates depending on the per unit level of alcohol. Currently alcohol containing more than 14 percent alcohol by volume is taxed at a rate 82 percent higher than alcohol containing less than 14 percent alcohol by volume. Under this practice, a consumer of low strength alcohol (such as beer and wine) can consume almost twice as much alcohol as a consumer of high strength alcohol (such as spirits) for the same tax burden. From a social costs basis, there is no justification for differential rates per unit of alcohol that leads to such an outcome.

Ramsey taxation

The Ramsey theory of taxation recommends higher tax rates on goods with the most inelastic demand as a means of raising revenue in the most efficient way possible. This is based on the assumption that taxes on goods with inelastic consumer demand would have small distortions relative to goods with more elastic consumer demand, and therefore lower dead weight costs.

The McLeod review found that in the New Zealand context, where tobacco and beer are thought to have the most inelastic tax bases, while the demand for wine and spirits are more elastic, it was not possible to justify the then levels of excises and duties on Ramsey taxation grounds.

Revenue implications

The table below shows the expected change in revenue resulting from a 10 percent increase in the excise rate on tobacco and alcohol. The "Direct Increase" column indicates the amount of revenue that can be expected in the absence of behavioural responses to price increases. The "Expected Increase" column indicates the amount of revenue that is expected once behavioural responses (elasticities) are factored in. The table also shows the revenue gain associated with raising the excise rate for low volume alcohol by 82 percent, to match the rate on high volume alcohol.

[15] This is because the optimal excise rate will provide revenue equal to the externality when the marginal social cost curve is increasing at a rate equal to the marginal cost curve. When the marginal social cost curve increases at a faster rate than the marginal cost curve, revenue in excess of the externality will be collected at the optimal excise tax rate.

[16] Note that given the 2002 study used 1999/00 data, there is scope to update this study to see whether/how the costs of alcohol consumption have changed during that period. Updating this study may be particularly useful given that the data in the last study would not have taken into account the reduction in the drinking age in New Zealand from 20 to 18.

Table 1: Increases in Tax Revenue as a result of Increases in Excise Tax Rates

	Increase in Excise	Direct Increase ($m)	Expected Increase ($m)
Low volume alcohol	10%	75	60
High volume alcohol	10%	25	10
All Alcohol	10%	100	70
Tobacco	10%	115	70
Low volume alcohol	82%	620	395

Equity concerns

As noted in the McLeod Review, many New Zealanders of modest means pay as much or more indirect tax via alcohol and tobacco excise as they pay in GST levied on all of their spending.

As an example, a full time employee that earns $25,000 per annum and spends 100 percent of income on GST liable products would have $18,322 after PAYE ($4,060) and GST ($2,618). If this consumer is an average smoker, their current tobacco excise is around $1,950 per annum. Overall, the individual pays $8,628 per annum in taxes. In the absence of behavioural responses to reduce consumption following an increase in excises, a 10% increase in the tobacco excise will increase the total tax liability by a further $195 per annum. Such an increase would see excise taxes on tobacco equivalent to 8.6 percent of the individual's income and 24.3 percent of their total tax liability.

APPENDIX F

Introducing an Estate Duty

Introduction

To the extent that bequests are unplanned and arise because people die before they expect, estate duty could be a relatively efficient tax. However, estate duty has some important disadvantages. For example, it could encourage some people to emigrate from New Zealand. Consequently, New Zealand may lose people with valuable knowledge and skills. It would also mean that New Zealand ends up losing the income tax revenue and GST that these people would otherwise pay. Against this, the amount of public services consumed (especially health services by elderly migrants) is likely to reduce. Furthermore, an estate duty would provide incentives for those who choose to stay in New Zealand to spend their savings rather than leave bequests even though, taxes aside, they may prefer to leave bequests. Such distortions are inefficient.

An estate duty is categorised as a wealth transfer tax which is levied on the estates of deceased persons. Extensive estate planning reduced the effectiveness of New Zealand's previous estate duty regime. If New Zealand were to reintroduce an estate duty, it would be important to remove any deficiencies in the former tax. This paper considers an estate duty based primarily on New Zealand's previous estate duty regime but with modifications to make it more effective.[17] Other designs would also be possible.

Design of a feasible and effective estate duty

The estate duty proposed in this paper is primarily based on the estate duty regime that was in force in New Zealand before December 1992. The ability to re-enact previous legislation instead of having to write new legislation from scratch is an advantage. A reintroduced estate duty would apply to the estates of persons who die on or after the date of commencement of the new estate duty legislation.

Estate planning

It was common under the previous regime for taxpayers to arrange their affairs to minimise their liability for estate duty. As estate duty was charged on the value of the estate of a deceased person, the main principle of estate planning involved reducing the value of an estate as at the date of death.

Estate planning typically involved individuals selling appreciating assets at market value to family trusts. The purchase price was left owing as an interest-free, on-demand debt. The debts were taken back from such sales and generally progressively

[17] Further consideration could be given to adjusting the rates and thresholds of gift duty; however, this paper primarily considers estate duty.

forgiven in annual instalments (of $27,000 or less if there was to be no gift duty liability). Where an amount owing under a financial arrangement was forgiven by a natural person in consideration of natural love and affection, the amount forgiven was deemed to have been paid. This meant that under the financial arrangement rules there was also no income tax liability on the debt forgiveness.

This estate planning had two main components: forgiveness of debt programmes, and the use of on-demand loans which were either interest-free or with interest payable only if demanded.

To limit the ability for individuals to reduce their liability for estate duty through gifting programmes, the natural love and affection exception in the financial arrangement rules should be substantially reduced or removed (for example, by leaving only a de minimis exemption). This would counter a main estate planning technique by ensuring that debt forgiveness would give rise to assessable income to the debtor (trustees).

In order to reduce the practice of using on-demand loans, Inland Revenue could assess gift duty on the interest foregone on an annual basis. That is, if an on-demand loan, either interest-free or with interest payable only if demanded, is not demanded in a particular year, the interest at market rates that would have accrued that year would be assessable as a gift.

Rate and threshold

An estate duty would tend to increase the progressivity of the tax system. To achieve its equity objectives, a reasonably high exemption threshold, such as $1 million, would be necessary to target only the wealthiest 2 to 5 percent of estates, thus preventing the estates of lower- and middle-income families from being liable for estate duty.

A flat 40 percent rate on the value of an estate over the exemption threshold of $1 million would be consistent with a policy objective of raising significant revenue from only the wealthiest estates. The simple threshold and rate design makes the objective clear. The effective marginal rate of estate duty increases with the size of the estate, as more wealth exceeds the exemption threshold. As such, a flat rate scale will still be progressive. In addition, the Group could also consider different rates and thresholds.

Implications

Equity

Estate duty could be an important tool in reducing inequalities in the distribution of wealth. It targets inherited wealth, which some would argue is the least justifiable cause of inequality. Inherited wealth is generally the result of the donor's efforts rather than the recipient's. At the same time, however, it would mean a lower tax

impost on those who spend their wealth on themselves or those who choose to emigrate from New Zealand. This could be regarded as unfair.

The proposals to counter the main techniques of estate planning should ensure that the primary equity objective of an estate duty is achieved.

Economic efficiency

Avoidance of estate duty through estate planning was the main reason why the old duty was a relatively inefficient source of revenue. Reducing the ability for planning will increase the efficiency of an estate duty.

People may make bequests not because they have been accumulating wealth with this intention, but because they are providing for the expenses of a longer life than actually eventuates. In this case, bequests are largely unplanned and estate duty would typically result in fewer disincentives to work, save and invest than an equivalent-yield income tax increase. The revenue yield from an estate duty which helps fund a reduction in marginal income tax rates could therefore result in a higher incentive to work and save.

At the same time, as noted above, an estate duty could encourage talented and skilled people to emigrate from New Zealand. This would result in both a loss of skills and of potential income tax and GST revenue to New Zealand

Integrity

An estate duty would have little effect on the overall integrity of the tax system. However, a tax on wealth would reduce the ability for individuals to avoid tax by accumulating non-taxed assets. To the extent that estate duty remained avoidable, it would not contribute to the integrity of the tax system. However, we consider that the proposals in this paper to counter the main estate planning techniques would preclude wide-scale circumvention.

Coherence

An estate duty would also have little effect on the overall coherence of the tax system. However, estate duty is a tax on the transfer of wealth, and therefore can bring into the tax base amounts that are otherwise untaxed by income and consumption taxes. The introduction of an estate duty in New Zealand would broaden the tax base but, to the extent that it causes wealthy residents to leave, could also reduce income tax and GST revenues.

Administrative costs

Estate duty would only be payable on a person's death and would be integrated with the current legal process on death. The costs of collection would not be significant; before abolition, they were estimated to be one-third of the average tax collection costs.

Compliance costs

The compliance costs of estate duty are to some extent incidental to the costs normally incurred in winding up and dividing an estate. The design of the proposed estate duty means that potentially significant amounts of tax would be paid by relatively few estates – this minimises overall compliance (and administration) costs.

Revenue estimates

Assuming that estate duty would be levied at a rate of 40 percent on the value of an estate in excess of the exemption threshold of $1 million, the revenue estimates are:

	2012	**2013**	**2014**
Revenue yield from estate duty	192	197	202

These revenue estimates are based on BEFU09 forecasts of significant reductions in wealth as a result of the international financial crisis and recession. They ignore any revenue loss which might be caused by the emigration of wealthy New Zealanders. The above estimates would be higher if wealth levels recover more quickly than initially forecast. For example, assuming that 2007 aggregate housing values were the same in 2011, the 2012 estimated revenue take would increase to $358 million.

APPENDIX G

Environmental Taxes

Executive summary

Environmental policies are generally targeted at four main areas - pollution abatement, conserving nature and biodiversity, managing water resources, and waste management. Economic instruments, including tax measures (at local or national level) can be used to advance environmental objectives in these areas.

Environmental taxes should only be used where they are an appropriate policy response to particular environmental issues. The specifics of how and where taxes, as one choice of policy tool, could best assist environmental outcomes, is largely an area of environmental policy and therefore beyond the scope of the Group. Environmental taxes that are fiscally motivated could run contrary to the principle of a broad based-low rate tax system, will require the administering of a new tax base, and therefore are unlikely to be a least-cost source of new revenue.

The paper suggests a framework that could be used to help evaluate whether taxes could be an appropriate mechanism to achieve a defined environmental objective. Analysis would include consideration of the environmental effectiveness of the tax, itself dependent on factors such as targeting, ability to set an appropriate tax rate, and the market characteristics of the products or activities taxed. Also considered would be other factors familiar to tax policy analysis in other subject areas, such as fiscal impacts, effects on economic efficiency, distributive impacts, and simplicity and operational feasibility. Any evaluation requires an assessment of how environmental taxes stack up against other policy choices, for example, regulation. The interaction of policy instruments, if more than one is in place to address an environmental concern, also needs to be assessed.

While taxes on pollution could be considered, they are unlikely to raise much revenue. However, a working assumption of revenue-neutrality suggests that if environmental taxes are implemented, any revenues raised from them could be used to fund reductions in other taxes, rather than increased expenditure (or deficit reduction).

Additionally, because environmental taxes are generally not introduced in an ad hoc way but as part of a reform process, as well as considering new taxes, there could be a case for removing financial support for certain economic activities that might have detrimental environmental impacts. Within the tax system this could occur if there are biases in the current tax structure, such as the existence of any subsidies or concessions favouring activities that are environmentally damaging

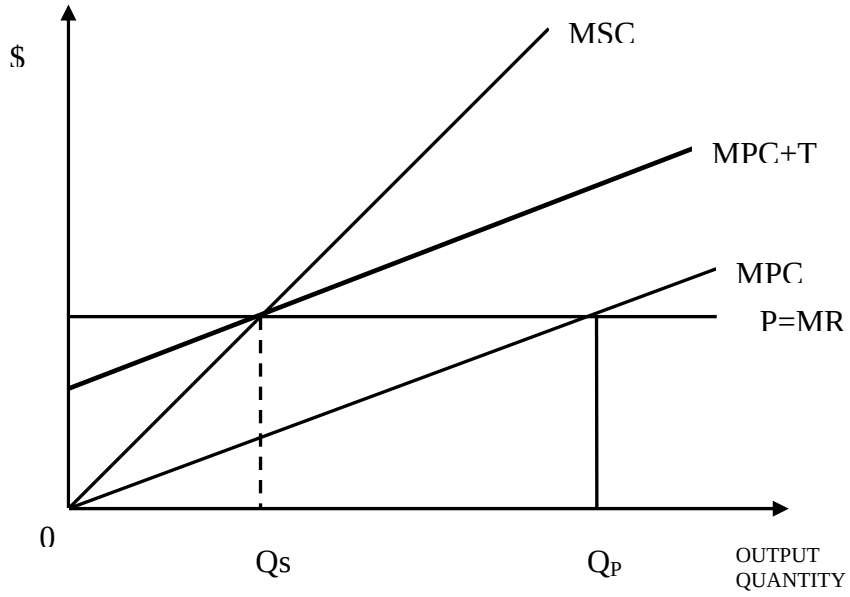
How environmental taxes work

Environmental taxes are one of a number of options available to address economic issues. Others include command-and-control options, and economic instruments such as the Emissions Trading Scheme. Those other options should be considered before any decision is taken to introduce an environmental tax.

The main reason for using taxes in environmental policy is to bring the costs of pollution and other externalities into the prices of goods and services that are produced. The term "environmental tax" is used here to describe a tax levied to correct a negative environmental externality of a market activity.

The imposition of a tax is justified on the basis that the market mechanism fails to factor in the total costs to society, and thus output decisions are flawed, resources are allocated inefficiently, and social welfare is reduced. Negative externalities lead to an over-production of those goods that have high social costs. For example, the logging of trees for timber may result in society losing a recreational area, a habitat for rare wildlife, and air quality, but this loss is not normally quantified and included in the cost of the timber from the trees. As a result, individual logging companies have no incentive to factor in these external costs.

Illustration of how an environmental tax works in relation to emissions of a type of pollution:



The tax shifts the marginal private cost curve (MPC) up by the amount of the tax (T) to MPC + T. The rate of T is set so that MPC+T is equal to the marginal social cost (MSC). When this occurs, the full costs of production are internalised at the producer level. Faced with this cost increase, producers have an incentive to reduce emissions to the socially desirable level (Q_S).

Evaluating Environmental Tax proposals

Efficiency

An environmental tax could be considered efficient if the overall costs of implementing the tax are minimal compared with the environmental gains. This criterion considers the impact of the tax on the overall allocation of resources in the economy and whether the tax will impact on international competitiveness.

One of the biggest problems with environmental taxes is a lack of knowledge where intervention might be effective. Effectiveness depends on having the ability to calculate the level of tax that will result in the desired change in behaviour and accurately monitor or measure the level of pollution.

Equity and fairness

Fairness relates both to the distributional impacts of a tax and to where the tax burden lies. In line with the polluter pays principle, it is generally considered fair that polluters bear the tax burden. In addition, taxes should not affect or benefit certain taxpayers or sectors disproportionately. These considerations need to be part of tax design.

In terms of environmental taxes, most studies on income distribution show that the direct effects of environmentally related taxes, and especially energy taxes, have a regressive impact on households. However, there is some evidence that suggests the degree of regressivity decreases once the indirect distributional effects, such as from price increases on taxed products and from the use of environmental tax revenues, are taken into account.

Further, evidence suggests that by taking into account mitigation or compensation measures, the regressive impact of environmentally related taxes can in most cases be softened and the net effect of the environmental policy can even end up being progressive.

In the case of regressivity, governments should seek direct measures if impacts on lower-income households are to be alleviated. These measures can be delivered through the social security systems and tax systems, rather than giving exemptions from the pollution tax. This ensures that the price signal of the tax is maintained whilst reducing the negative impact of the tax on household income.

Relief from an environmental tax through a personal income tax system can include the introduction of fully refundable tax credits or tax rebates that offset an individual's tax liability. Tax rebates are attractive, relative to refundable credits, because they avoid inter-actions with the tax rate structure. However, rebates do not deliver in full the intended amount of tax relief where an individual has insufficient income to fully absorb the tax rebate.

Administration and compliance

Design issues, such as clear definitions of the product or activity to be taxed, the means of measuring and monitoring the quantity of pollution on which the taxed is based, and the collection mechanism, are all relevant to administration and compliance. A new environmental tax which could not be grafted onto the existing income tax or consumption tax mechanisms could, for example, prove more complex and costly than one which could be integrated easily into the tax structure. Exemptions from a new tax, because of distributive or competition-related issues or compliance costs, would also start to complicate matters and compromise the taxes purpose.

Revenue implications

The impact of a new tax on total revenue should be assessed. The impact will be dependent on the nature of the proposals. Tax incentives (i.e. subsidies) will reduce revenues, sometimes in unpredictable ways, if the actual target of the incentive can not be tightly defined. Tax disincentives could raise revenue, either for the consolidated fund, for tax reductions elsewhere, or to fund other environmentally positive projects.

Environmental taxes are generally not introduced in an ad hoc way but as part of a reform process. The OECD recommends that as well as considering new taxes, financial support for certain economic activities that might have detrimental environmental impacts should be reviewed. This is on the basis that providing financial assistance may maintain activity at a level that is higher than without support, and it also conflicts with the polluter pays principle.

Within the tax system, this might occur where there are subsidies; for example, on production inputs which can have environmentally damaging side effects or tax exemptions, concessions or preferential tax rates exist for environmentally damaging activities.

Fiscal environmental taxes, or ecological fiscal reforms, may generate revenues that can be used to reduce some other existing tax burdens, for example, taxes on labour. This could result in both less environmental damage and other economic and social benefits. For example, globally Europe took the lead in this area in the 1990s by levying “green” taxes on polluters and using revenues to lower taxes. What to do with any funds raised from a new tax is likely to be an important political issue.

One area where the government could potentially take the lead and which is recommended as a forerunner to any attempt to “green” the tax base to raise revenue, is reviewing existing tax legislation to identify whether there are biases or implicit subsidies currently embedded in the tax Acts which might run counter to environmental policy settings and sustainability objectives more generally. Possible examples of tax biases that might run counter to environmental policy settings include:

- a review the petroleum mining rules to remove any concessionary tax treatment for the petroleum mining sector
- whether fringe benefits are being comprehensively taxed. For example, car parks provided by an employer to an employee is currently exempt from fringe benefit tax regime if the car park is on land that is owned or leased by the employer or a group company.
- inaccuracies with useful life estimates used for depreciation rate calculations. For example, the asset category "transportation", or explicit concessions, such as accelerated depreciation on aircrafts.

Other issues

Political issues

Public acceptance of an environmental tax seems to be related to the degree of awareness of the environmental problem the instrument is aimed at. It can be more difficult, for example, to obtain acceptance for instruments that address problems where the impacts are not so directly felt by the public at large – like climate change, ozone layer destruction or pollution of distant waterways.

The so-called PETRAS project[18] studied the attitudes of business and the general public towards environmental tax reform, which combined increases in environmentally related taxes with reductions in other taxes, on labour for example, in five EU member states (Denmark, France, Germany, Ireland and the United Kingdom). Some of the relevant findings from this project include:

- people did not trust assurances that the revenues will be used as promised by the government
- they also had difficulty in understanding the purpose of increasing taxes on energy while lowering taxes on employment
- people expressed a preference for a mix of incentives and penalties.

The OECD has considered the implications of these findings. It suggests that it is advisable to prepare the ground for environmental tax reform by providing correct and targeted information to the public on the causes and impacts of relevant environmental problems. In addition, the purpose of a new tax, or a tax rate increase, should be made clear from the outset, with the focus on solving an environmental problem, rather than the tax simply being a revenue-raising exercise.

In general, the OECD suggest that political acceptance may be strengthened by creating a common understanding of the problem at hand, its causes, its impacts, and the impacts of possible instruments that could be used to address the problem.

[18] J. Peter Clinch and Louise A. Dunne (2002), Environmental and Wider Economic Implications of Modifications to Environmental Tax Reform, *Environmental studies research series working papers* 2002.

Competitiveness issues

It is often argued that economic instruments, whether taxes or emissions charges, will reduce firm competitiveness. The reason for this is that the key determinant of competitiveness for firms is the price that they are able to charge for output. Taxes or other charges increase costs – competitiveness therefore diminishes when firms are operating in the same market but are faced with different cost impacts from environmental regulation.

Where to from here?

Moving forward

New Zealand has set in place a programme of action, articulated in a number of government strategies and action plans, to improve environmental outcomes in areas such as climate change, transport, energy, biodiversity and waste management. Climate change initiatives have been the most visible recently, such as, the emissions trading scheme, and a range of other complementary measures, both regulatory (improved vehicle emissions standards) and incentive based (loans schemes for energy efficiency improvements).

The introduction of an emissions trading scheme[19] in New Zealand, recognises the environmental and economic consequences of climate change. The scheme introduces a price on greenhouse gases to provide an incentive for people to reduce green house gas emissions and enhance forest sinks. The scheme provides flexibility in how participants comply with their obligations, enabling a least cost response.

Emissions trading is considered to be lower cost and more flexible than a tax. Under the scheme, the aggregate quantity of net emissions is set and then the market determines the price of emission units, and therefore the cost per unit of emissions that firms and individuals will face. A tax however, sets the price emitters have to pay per unit of emissions and leaves firms and individuals to determine how much to reduce their emissions. It would be difficult to set a tax at a level that ensures appropriate emissions reductions, and from an environmental perspective, certainty about quantity is considered important.

The specifics of how and where national taxes, as one choice of policy tool, could best assist environmental outcomes would require a detailed assessment of environmental priorities and policy mixes currently in place, in conjunction with other departments actively working on different aspects of environmental sustainability. If a policy "gap" can be identified, an evaluation could be undertaken of whether a tax might be appropriate, and a better tool than other instruments, such as regulation, user charges, product charges or tradable permit schemes.

[19] The Emissions Trading Scheme Review Committee has reported back on its recommendations and the Government will take time to consider the recommendations before making any announcements on the future of New Zealand's ETS.

While taxes on pollution could be considered, environmental taxes are unlikely to raise much revenue. Nonetheless, it is important to consider the approach to the treatment of revenue raised from any well-founded taxes (if they are implemented) or from the emissions trading scheme (currently not a feature of the scheme). As part of the government's broader growth policy, any revenues raised from environmental taxes could be directed towards funding the reduction of other taxes such as income tax reductions. An approach where any revenue raised is returned to the public through environmentally-related expenditure is not favoured. This approach raises the potential for poor quality government expenditure as environmental initiatives are not tested against other government expenditure opportunities. Instead, any revenues raised by environmental taxes should be used in a way that is most efficient and meets government priorities – this may or may not necessarily relate to expenditure on environmental initiatives.

Environmental taxes should only be used where they are an appropriate policy response to particular environmental issues. They should not be motivated by fiscal or revenue purposes. Environmental taxes that are fiscally motivated could run contrary to the principle of a broad based-low rate tax system, will require the administering of a new tax base, and therefore are unlikely to be a least-cost source of new revenue.

However, determining what and where environmental taxes are appropriate is largely an issue of environmental policy rather than tax policy and therefore beyond the scope of the Group. However, a working assumption of revenue-neutrality suggests that if environmental taxes are implemented, the revenues raised from them could be used to fund reductions in other taxes, rather than increased expenditure (or deficit reduction).

The discussion above has attempted to set out at a high level some of the issues associated with environmental taxes and has outlined some of the important criteria that could be used to undertake such an assessment.

Taxes could be worth considering where:

- the objective of the tax is to internalise a negative externality
- the tax targets the source of the pollution so that the polluter pays
- a price based mechanism will change behaviour (there must, for example,) be substitute products or abatement opportunities available
- the targets of the tax can be accurately defined, measured and monitored at reasonable cost
- the costs and benefits indicate that taxes are a better tool than other policy instruments.