# *Would a* Financial Transactions Tax *be more efficient and equitable than the Goods and Services Tax?*

An Analysis of the Alliance's Proposal
to Replace GST with FTT

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# EXECUTIVE SUMMARY

- The Alliance proposes to replace the goods and services tax (GST) with a financial transactions tax (FTT). This report examines whether FTT should be preferred to GST on efficiency and equity grounds. It also analyses whether FTT would be a desirable tax if GST were retained.

- FTT would apply to bank debits (withdrawals). Banking-type functions performed by institutions other than registered banks would be subject to the tax while daily transactions relating to inter-bank settlements and foreign exchange transactions that do not involve New Zealand dollars would be exempt.

- FTT would be applied to the value of each taxable financial transaction. The initial rate of FTT is to be 0.1 percent. The Alliance has not indicated the rate of tax required to enable GST to be replaced. There is considerable uncertainty about the size of the tax base.

- Broad-based consumption or expenditure taxes, such as GST, command substantial academic support. They are often preferred on efficiency grounds to income taxes and have become the most common form of new taxation within the OECD. No recognised economic literature could be found which advocated the adoption of a FTT-type tax in preference to a consumption or an income tax.

- FTT would apply to a single activity - the withdrawal of funds from certain accounts. While the FTT base might be large, because there is an immense volume of financial transactions in a modern economy, it does not constitute a broad-based tax.

- A narrow tax base leads to large distortions where taxable activities are relatively sensitive to taxes. Consumer preferences are biased. Activities that are lightly taxed, or not taxed, are encouraged. Such a tax base creates incentives for lobbying aimed at shifting the boundary between taxable and non-taxable activities. This wastes resources from a national viewpoint. A narrow base encourages tax avoidance.

- FTT would impose a variable effective marginal tax rate (EMTR) on activities. GST imposes a uniform EMTR on almost all activities.

- Relative to GST, FTT would discourage the use of taxable accounts, savings, exports, investment, and goods and services which incorporate high levels of financial transactions.

- FTT would encourage activities that involve few taxable financial transactions, and imports.

- Although a number of countries impose taxes on financial transactions, most notably stamp duties, no comparable country raises a significant proportion of its total revenue through such taxes. Taxes on financial and capital transactions levied by OECD countries yielded revenue equal to 2.1 percent of their GDP in 1993. The equivalent taxes in New Zealand raised the same amount of revenue relative to GDP. Some countries, including New Zealand, have abolished or reduced stamp duties recently.

- FTT would be substantially easier than GST to avoid in respect of high value transactions where the potential gain is large. The tax authorities have little hope of controlling the jurisdiction of such transactions. The application of FTT to sophisticated financial instruments is far from straightforward. Financial markets have a long history of innovation for the purposes of tax minimisation.

- The compliance and administration costs of a comprehensive FTT that replaced GST are unlikely to be low. They would be concentrated on the financial sector.

- FTT is a non-transparent tax as the amount paid by each taxpayer is impossible to determine. Although GST can also be criticised in this regard, it is more transparent than FTT.

- The Alliance claims that GST is a highly regressive tax. This reflects a static analysis and it is misleading. GST is a broadly proportional tax because each household consumes its entire income over the lives of its members if gifts and bequests are small relative to lifetime income.

- On a lifetime basis GST is vertically equitable (in that it falls more heavily on people with higher incomes) whereas FTT is not. Because GST is an established tax, to which people and firms can be expected to have adjusted, its replacement by FTT would generate horizontal inequities (people in like circumstances would pay a different amount of tax).

- The analysis in this report suggests that there are no compelling efficiency and equity grounds for replacing GST with FTT as a source of government revenue.

- A few researchers have suggested that a selective tax should be imposed on certain financial transactions to address perceived efficiency concerns. Their arguments rest on questionable theories and lack empirical support. The feasibility and efficacy of such a tax are doubtful.

- This literature focuses on the taxation of transfers of publicly traded equity, debt and related securities. It does not provide general support for FTT as proposed by the Alliance. The advocates of such a tax do not

expect it to raise anywhere near the amount of revenue (relative to GDP) that would be required to replace GST.

- The Alliance's statements on FTT reveal confusion about the ultimate incidence of FTT, the lifetime incidence of GST, present income tax rules and their application to financial transactions, and the impact of FTT on exports, imports, spending, investment and saving.

- FTT would be a poorly targeted instrument to address perceived inequities in the distribution of after-tax income, income tax avoidance and speculation in financial markets.

- The Alliance appears to have little appreciation of the complex practical issues that would need to be addressed if FTT were to replace GST.

- In summary, the Alliance has not shown that FTT would be more efficient or more equitable than GST. Most respected tax analysts would not support the proposal that FTT should replace GST.

# 1 INTRODUCTION

An important pillar of the Alliance's economic policy is the proposal to replace the goods and services tax (GST) with a financial transactions tax (FTT). This report examines whether FTT should be preferred to GST on efficiency and equity grounds. It also analyses whether FTT would be a desirable tax if GST were retained. The focus here is on whether FTT would improve the efficiency of financial markets. Both issues are investigated from a public policy perspective.

The New Zealand Business Roundtable believes that the policies of all political parties should be examined thoroughly and widely debated. This report is a contribution to such a debate.

Major tax reforms implemented since 1984 include the adoption of a more comprehensive base for income tax, the introduction of lower and more uniform marginal rates of tax on income, and a broadening of the indirect tax base. GST replaced a range of selective taxes. GST collections in 1995/96 amounted to $7.3 billion (around 8 percent of GDP and 22 percent of total taxation).

The OECD concluded that New Zealand's tax system was "probably the least distortionary in the OECD".[1] This does not imply that further improvements to the efficiency and equity of the tax system are infeasible. It suggests, however, that proposals to change the structure of the tax system in a major way, such as by replacing GST with FTT, should be rigorously evaluated against valid public policy criteria.

The Alliance has released a number of statements on FTT.[2] They provide the main source of background information. As could be expected, details of the proposed FTT are limited at this stage whereas GST has operated since October 1986. In designing tax regimes, administration and compliance considerations may lead to the implementation of taxes that do not conform completely with the ideal models on which they are based. Policy makers are required to choose among practical taxes that could be implemented rather than ideal models (Feldstein 1976). Thus a feasible FTT should be compared with GST. Because FTT has not yet been developed to the stage where it could be implemented, there is a risk that GST will be compared unfairly with an ideal FTT.

While further clarification of FTT may change some aspects of the analysis presented in this report, its thrust is unlikely to be affected.

The amount of government expenditure affects the level of taxation and its efficiency cost (the economic loss which arises because most feasible

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1 See Organisation for Economic Cooperation and Development (1989).

2 See Alliance (1993a), (1993b), (1993c), (1994a), (1994b), (1995), (1996a), (1996b) and (1996c).

taxes distort resource use and lower potential national income). The analysis presented focuses on a revenue neutral choice between GST and FTT. The Alliance intends to increase government expenditure compared with projected levels.[3] It would therefore need to raise additional revenue. This is not taken into account in this report. Similarly, other elements of the Alliance's economic policies are not examined.

The balance of the report is presented in six sections. The next section (section 2) summarises the Alliance's proposal, and examines the size of the FTT base and the likely rate of FTT. The criteria to be applied in comparing FTT and GST, and in evaluating FTT as a stand-alone tax are noted in section 3. A general evaluation of FTT and GST is presented in section 4. Section 5 examines whether there are valid grounds for the introduction of FTT in addition to GST. The Alliance's arguments for the introduction of FTT are scrutinised in section 6. The conclusions are presented in section 7.

Appendix I presents information on taxes that are comparable to FTT which apply in Australia. Appendix II contains a table which summarises the efficiency and equity of FTT and GST.

3 Alliance (1996b).

## 2 THE ALLIANCE'S PROPOSAL

The Alliance released three papers in October 1993 which stated that FTT would be introduced and contained details of the proposed tax.[4] GST would be phased out from the second year following the introduction of FTT. In the lead-up to the recent election campaign, the introduction of FTT was included among the Alliance's non-negotiable policies for a coalition agreement with other parties.[5]

The Alliance has emphasised that FTT would apply to bank debits (withdrawals). If 'banking-type' functions are performed by institutions other than registered banks they would be subject to the tax but daily transactions relating to inter-bank settlements would be excluded.[6] Foreign exchange transactions which do not involve the New Zealand dollar are also to be exempt.[7] However, a precise indication of the breadth of the tax, for example the types of accounts that would be affected and whether the government sector would be subject to the tax, has not been released.[8]

FTT is not aimed at taxing withdrawals by final consumers alone. Withdrawals by business firms would generally be taxed. According to the Alliance, transactions by financial intermediaries account for around 90 percent of the FTT base.[9] The tax would be imposed on account holders rather than financial institutions and debited directly to customer accounts in the same way that resident withholding tax on interest is collected.[10]

The Alliance proposes to apply a fixed rate of tax to the value of each taxable financial transaction. FTT would therefore be an *ad valorem* tax. This contrasts with cheque and credit card duties which are levied at a fixed amount per transaction. FTT is a selective turnover tax.

### 2.1 The Size of the Tax Base and the Rate of FTT

The initial rate of FTT was to be 0.12 percent (12 cents per $100) of the amount of taxable transactions, but this rate was reduced to 0.10 percent in the Alliance's 1995 alternative budget.[11] The Alliance has not indicated

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4 See Alliance (1993a), (1993b) and (1993c).

5 See "Alliance Sets Out Rigid Terms for Deal on Coalition", *New Zealand Herald*, 14 November 1994.

6 Communication between the Alliance's economist, Mr David Steel, and the NZBR's public relations consultant, Mr Barrie Saunders, September 1995.

7 See "Alliance Plans Transaction Tax", *New Zealand Herald*, 13 June 1996.

8 The Alliance's most recent detailed paper on FTT does not elaborate on the tax base. See Alliance (1996b).

9 Alliance (1993a).

10 Alliance (1993a).

11 Alliance (1993a) and (1995).

the rate of tax that it believes would be required to enable GST to be replaced. FTT is to be non-deductible for income tax purposes.[12]

In June 1996, the Alliance suggested that the tax base would be $25-30 billion a day, after deducting certain inter-bank transactions and foreign exchange trading that does not affect the New Zealand dollar.[13] It stated that GST would be phased out using the amount of revenue raised by an FTT at a rate of 0.1 percent. The Alliance estimated FTT to raise $7,765 million in 1996/97.[14]

There are no reliable data on the annual value of financial transactions. Tripe (1994) estimates that transactions settled through Austraclear average more than $3 billion a day. Thorp (1995) put such transactions at $5 billion a day. Austraclear is used to settle large transactions. With an initial rate of FTT of 0.1 percent, these transactions alone would generate between $750 and $1,250 million a year assuming no change in behaviour.

Tait (1995) observed that on an average day, total transfers through all New Zealand payment systems are thought to exceed $25 billion. This implies annual transactions of at least $6,250 billion or 72 times GDP, and presumably includes government transactions.[15] Brash (1995) elaborated on Tait's estimate:

> The $25 billion figure is an all-inclusive estimate of the total value of transfers. A substantial portion of these transfers are in respect of inter-bank transactions in the wholesale markets. Although end of day *net* settlements amongst the banks are relatively small, the *gross* values of the underlying inter-bank transactions, which are included in our $25 billion daily estimate, [are] likely [to] run into billions of dollars each day. We are unclear on whether the Alliance intends that these transactions should be subject to the FTT. If not, the tax base would be very substantially less than $25 billion per day.

Another observer, who did not wish to be cited, put the potential tax base at about $9,335 billion in 1994 or 108 times GDP (see table 1). This estimate, which has been rounded, was described as indicative only. The total presented may include substantial double counting because, for instance, a foreign exchange transaction may also be included as an Interchange and Settlement Limited transaction. It also includes inter-bank settlements that are to be exempt. On the other hand, it excludes transactions such as

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12 The pre-tax equivalent initial rate of FTT would be 0.149 for businesses owned by resident taxpayers who face a 33 percent marginal rate of income tax. If the Alliance increases the top rate of personal tax to 49 percent, as announced, the pre-tax equivalent initial rate of FTT would rise to 0.196 percent for investors on the top rate.

13 See "Alliance Plans Transaction Tax", *New Zealand Herald*, 13 June 1996.

14 Alliance (1996c), table 3. In table 5 GST/FTT is put at $7,765 million in 1996/97.

15 Assuming 250 banking days/year.

transfers between two bank accounts held by a person at the same bank which are not processed through the central clearing system.

**Table 1**
**Estimated Annual Turnover of Financial Markets in 1994**

| Market | Estimated Turnover |
|---|---|
| | *$ billion* |
| Total bank payments (e.g. EFTPOS and cheques) | 45 |
| Interchange and Settlement Limited (main clearing house) | 6,000 |
| Foreign exchange | 1,310 |
| Futures | 300 |
| Forwards | 220 |
| Swaps | 1,410 |
| Options | 15 |
| Shares | 15 |
| Bonds | 20 |
| **Total** | **9,335** |

A detailed exercise is required to estimate the potential FTT base, to adjust it to conform with an administratively feasible tax and to allow for behavioural effects. In the absence of such an exercise, table 2 shows a range of rates of tax required to replace GST, given the value of taxable transactions as a percentage of GDP, after allowing for exemptions (if any) and behavioural responses. The rate of FTT required to raise $7.26 billion (the amount of GST collected in 1995/96) and thus replace GST is computed.

If taxable transactions are limited to total bank payments, which are estimated to be around $45 billion per annum in table 1, a tax rate of at least 16 percent is necessary. If the value of taxable transactions is equal to 100 percent of GDP, then FTT at the rate of at least 8.2 percent is required. A rate of this order is plausible if inter-bank settlements are exempt, if non-cash flow elements of derivatives are excluded (see below), and if there is considerable behavioural response to the imposition of the tax, especially in respect of high value transactions. The value of taxable transactions would need to exceed 8.2 times GDP if the rate of FTT is to be under 1 percent.

**Table 2**
**Required Rate of FTT to Replace GST**

| Assumed Ratio of Taxable Transactions to GDP [1] | Value of Taxable Transactions [1] | Required Rate of FTT |
|---|---|---|
| *Percent* | *$ billion* | *Percent* |
| 50 | 44 | 16.50 |
| 100 | 88 | 8.25 |
| 200 | 176 | 4.13 |
| 300 | 264 | 2.75 |
| 500 | 440 | 1.65 |
| 700 | 616 | 1.18 |
| 1,000 | 880 | 0.83 |
| 1,500 | 1,320 | 0.55 |
| 2,000 | 1,760 | 0.41 |
| 5,000 | 4,400 | 0.17 |
| 7,000 | 6,160 | 0.12 |
| 8,250 | 7,260 | 0.10 |

1 Net of exemptions and behavioural responses. GDP is estimated to be $88 billion.

## 2.2 Stamp, Cheque and Credit Card Duties

The Alliance proposes to abolish stamp and cheque duties on the introduction of FTT. Stamp duty can be viewed as a tax on registration services as it is usually payable when certain documents are required to be registered (Campbell and Froot 1994). Two types of stamp duty are applied at present. Conveyance duty is payable when certain property is permanently transferred from one owner to another. It is payable on the following property transaction documents:

- conveyances of commercial land and buildings;
- assignments of leases of commercial land and buildings;
- sales of shares in a company that owns flats or offices except where those shares carry a right to occupy a dwelling house; and
- conveyances of farm land (except where the buyer is a first time farm owner).

Conveyance duty is payable on the GST-inclusive value of the property that is transferred according to the following scale:

- 1.0 percent on the first $50,000 of property;

- 1.5 percent on the amount over $50,000 and up to $100,000; and
- 2.0 percent on the amount exceeding $100,000.

The second form of stamp duty is lease duty. It is payable on documents relating to the lease of commercial land and buildings and variations to leases such as rent increases and lease renewals. The rate of duty is 40 cents per $100 (or part of $100) of the maximum annual rental (inclusive of GST) which is payable under the lease. If the lease is for a term of less than one year the duty payable is 40 cents per $100 (or part of $100) of the maximum rental that may become payable.

Stamp duty in respect of transfers of shares (other than those noted above), mortgages, dwelling houses, easements and land on which a dwelling house is to be built was abolished on 17 March 1988.

Cheque duty is a transactions tax. It is similar to FTT except that a flat rate of tax is applied. Cheque duty is computed at the rate of 5 cents on each bill of exchange. A bill of exchange is defined as any promissory note other than a bank note. A credit card transaction duty of 5 cents is charged for each transaction entered into by holders of multi-purpose credit cards. It was introduced because payment by credit card is a close substitute for a cheque.

Stamp, cheque and credit card duties yielded $216 million or 0.2 percent of GDP in 1995/96.

## 3 CRITERIA FOR A GOOD TAX SYSTEM

The standard criteria for assessing taxation proposals are efficiency and equity. Economic efficiency refers to the best allocation and use of resources to meet society's needs. The efficiency criterion focuses on the effect of taxes on incentives and the choices facing firms and individuals. Most taxes change relative prices which leads to substitution effects. Income tax, for example, reduces the after-tax return from saving an additional dollar and thereby encourages a person to consume more of his or her income today. Substitution effects give rise to inefficiency and waste.

Taxes shift resources from activities which would best serve the needs of society, and they discourage the economical use of resources. They influence many choices which individuals and firms make such as whether to save, invest, take risks, innovate and work. Resources that are used in administering the tax system and in complying with tax rules are wasted from the perspective of society because they do not increase community welfare.

The central question addressed in this report is whether FTT would be a more efficient tax than GST. In addressing this issue both taxes are assumed to raise the same amount of revenue. Almost all feasible taxes reduce efficiency, but some impose larger costs on the community than others.[16] The amount of inefficiency due to GST and the loss which would be incurred with FTT are difficult, if not impossible, to quantify. A qualitative judgement is therefore required on the relative merits of FTT and GST.

Another issue is whether the introduction of FTT, in conjunction with GST, would enhance the efficiency of financial markets. This question focuses on whether capital markets are inefficient and, if so, whether the introduction of a financial transactions tax would improve their efficiency.

Equity is concerned with concepts of fairness. Most taxes affect the distribution of income, wealth, or both. The distribution of benefits derived from related government spending and the incidence of all taxes should be taken into account in assessing whether the tax system is equitable (Meade *et al.* 1978). In addition, the tax burden may be shifted from the person or firm that pays the tax to consumers, employees and investors. The ultimate incidence of taxes, rather than their initial burden, is relevant in assessing whether they are equitable.

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16 An exception arises where a selective tax is appropriately applied to align a divergence in social and private returns caused by an externality. This exception does not apply to general revenue taxes such as GST and the Alliance's FTT.

Taxes which treat people in like circumstances the same are said to be horizontally equitable.[17] Taxes which fall more heavily on people who earn higher incomes are said to be vertically equitable. These criteria are not precise. They do not establish, for example, whether equality of opportunity or outcome is the relevant benchmark. The vertical equity criterion does not specify the extent to which people on higher incomes should pay higher taxes.

Firms and individuals can be assumed to have adjusted fully to established tax provisions that are expected to be retained. The effect of any differential tax will have been reflected in the economic choices that people make and in the value of affected assets. The marginal investor in penally-taxed and tax-preferred assets will earn a normal return. In these circumstances, changes to the tax system may not conform with horizontal equity even though the initial position is perceived to be inequitable (Feldstein 1976 and Meade *et al.* 1978). Meade *et al.* presents the following example:

> If there were no existing special tax on the profits of corporate as contrasted with unincorporated business, it could be argued that a proposal to introduce such a tax with its consequential effects on share values was not horizontally equitable on the grounds that it was inequitable to tax one man who received a certain income from profits and to exempt from tax another man who has received the same income from profits simply because the one arose from corporate business and the other from an unincorporated concern. But the situation is different if the tax has already been introduced and has been in operation for many years without any expectation of its removal. Businessmen will have made choices between the corporate or unincorporated form ... and investors will have put their funds into various forms of property, on comparison of expected post-tax rates of return. To remove the special tax on corporate profits would then give an unexpected advantage to the holders of ordinary shares in corporate enterprises, these shareholders being a quite different set of persons ... from those who owned the shares ... when the tax was first introduced. ... [The special tax's] abolition would now favour one man more than another, although both have the same post-tax incomes.

Taxes that redistribute income or wealth generally impose efficiency costs. The criteria do not specify the extent to which vertical equity should take precedence over a higher than otherwise income throughout a person's life. An appropriate tax would achieve the government's redistributive objectives at the lowest possible efficiency cost.

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17 Feldstein (1976) provides a more formal statement of this criterion: "... the introduction of a tax should not alter the ordering of individuals by utility level". He discusses the assumptions that are implicit in this criterion.

Feldstein (1976) argued that optimal tax reform depends on the starting point, that is, the historical context must be recognised. The case for FTT should rest on an assessment that it would improve efficiency and equity taking into account the costs involved in the change rather than a *de novo* comparison of both taxes.

# 4 GENERAL EVALUATION OF FTT AND GST

The Alliance proposes to replace GST with FTT. FTT would become the second most important source of revenue after income tax. The question of whether the adoption of FTT in place of GST would improve economic efficiency and equity is examined below.

## 4.1 Efficiency Issues

### *The Tax Base and Effective Rates of Tax*

There is agreement in the tax policy literature that broad-based taxes are generally more efficient than selective taxes that apply to a narrow range of goods, services, income or assets.[18] Broad-based taxes enable revenue to be raised with lower effective marginal tax rates. For the purposes of this study, effective marginal tax rates (EMTRs) measure the additional tax that arises from all sources for each extra dollar of value added. The efficiency costs of taxes rise more than proportionately as EMTRs increase.

Nobel laureate Professor James Meade chaired an authoritative non-government review of direct taxation in the United Kingdom in the 1970s. The committee (Meade *et al.* 1978) reflected the view that broad-based taxes are preferred in the following terms:

> One corollary of ... [the] need to keep marginal tax rates down is a general presumption in favour of tax systems which provide a broad basis for revenue-raising purposes. To raise revenue by means of low rates of tax spread over a large tax base may be assumed to cause less marked substitution distortions than to raise the same revenue by concentrating high rates of tax on a few special activities, unless special circumstances suggest that those particular activities show exceptionally low substitution sensitivities.

More recently, Slemrod (1990) wrote:

> I suspect that the ascendancy of uniform taxation ... is due to the lack of strong evidence pointing to a clear alternative and the sense that a uniform tax system is less susceptible to political pressures favoring tax changes that serve special interests and are unrelated to optimal tax considerations.

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18 The optimal tax literature suggests that rates of income and commodity taxes should be set to balance losses from decreased efficiency against gains due to a more equal distribution of income. The conclusions from this literature, which suggest highly disparate rates of tax, have not been applied strictly by policy makers, partly because the information required to do so is not available. Slemrod (1990), for example, notes that many critical issues in tax policy debates lie outside the usual domain of optimal tax theory. See also Feldstein (1976) and Heady (1993).

The theoretical GST base comprises resources that are consumed. The actual base comprises almost all consumption spending. The main exceptions are the supply of certain financial and housing services, and newly refined fine metal. These goods and services cannot feasibly be taxed fully or are exempt for other economic reasons.[19] GST collections in 1995/96 amounted to $7,262 million (8.2 percent of GDP) implying a base of about $58,000 million.[20]

Bird and Cnossen (1990) report that:

> The most important feature of tax policy in the twentieth century has unquestionably been the rise of the personal income tax to a predominant position in the revenue structure of most western countries.

The efficiency of income taxes has, however, been questioned particularly since the 1970s.[21] In contrast, broad-based consumption or expenditure taxes command substantial support in the tax policy literature and are often preferred on efficiency and equity grounds.[22] They have become the most preferred form of new taxation within the OECD. Seven members, including New Zealand and Japan, introduced broad-based consumption, expenditure or value added taxes between 1985 and 1990.[23] No recognised literature was found which advocated the adoption of a FTT-type tax in preference to an income or a consumption tax.

FTT would apply to a single activity - the withdrawal of funds from certain accounts. Other financial, and all non-financial, activities would be exempt. While the apparent FTT base might be large, because there is an immense volume of financial transactions in a modern economy, it does not constitute a broad-based tax.

Meade *et al.* (1978) observed that an exemption to the broad-base rule might apply in special circumstances where the particular activity is relatively insensitive to the rate of tax. The fungibility of money suggests

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19 A credit is not normally given for GST that is paid on inputs used in the production of exempt goods or services. As a consequence, only a part of exempt activities - value added in the last stage of production or distribution before supply to the final consumer - escapes GST. If exempt supplies are bought by a registered taxpayer, no credit is given for any GST paid in respect of inputs used in the production and distribution of such supplies. Thus the related output can be subject to a penal rate of tax. This applies in respect of financial services supplied to businesses.

20 Birch (1996) and New Zealand Business Roundtable.

21 See Pechman (1977), (1980) and (1984), Slemrod (1990) and Keen (1991).

22 See, for example, Aaron and Galper (1984), Andrews (1974), Bradford (1980a), Feldstein (1978), Graetz (1980), Mieszkowski (1980), and Milesi-Ferretti and Roubini (1995). A direct expenditure tax might be preferred to an indirect expenditure tax if a progressive rate of tax were to be applied and if overseas expenditure by residents were to be brought within the tax base. On the other hand, an indirect consumption tax might be preferred on administrative grounds.

23 Bird and Cnossen (1990).

that financial transactions are very sensitive to small changes in EMTRs.[24] The difficulty experienced by New Zealand in collecting non-resident withholding tax on interest income illustrates this point. A wide range of techniques were used to escape the tax. FTT is likely to affect activities that are more sensitive to taxes than those affected by GST thereby increasing the deadweight costs of the tax system.[25] Thus the exception referred to by Meade *et al.* does not justify FTT.

A narrow tax base leads to an excessive distortion of activities by creating a large tax wedge between taxable and other activities. Consumer preferences are biased, encouraging forms of production and consumption that are not taxed or are lightly taxed. It leads to lobbying aimed at shifting the boundary between taxable and non-taxable activities. This wastes resources from a national viewpoint because it does not lead to higher output. Avoidance activities are also facilitated, for example by making it easier for firms and individuals to exploit gaps in the relevant legislation.

FTT would impose variable EMTRs on productive activities. EMTRs would depend on the following factors:

- the value of taxable financial transactions involved in each activity. This would vary substantially. Transactional financial services, such as the facilitation of payment (for example processing cheques), would be particularly affected;

- the duration of any deposit which is subsequently withdrawn from a taxable account. As the Alliance (1993c) noted, FTT would impose an exceptionally high tax on short-term deposits. The effective rate of tax would reduce as the duration of the investment increases. FTT at a rate of 0.10 percent would be equivalent to an interest rate of 44 percent a year on a deposit for one day. The application of a high rate of tax to short duration deposits with lower rates for longer term deposits is viewed as a key attraction of FTT by its advocates. This feature discourages short-term transactions, such as perceived

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24 Grundfest and Shoven (1991), and Campbell and Froot (1994).

25 Schwert and Seguin (1993) report that the limited available evidence suggests that a 1 percentage point increase in *transaction costs* would result in a decline of between 0.25 percent and 1.35 percent in the volume of securities traded. This estimate relates to publicly traded shares and draws on research in the United States and elsewhere. Transaction costs incurred in buying and selling shares in New Zealand typically amount to between 0.4 and 1.2 percent of the value of the shares for a round trip. A non-deductible FTT of 0.1 percent would therefore increase transaction costs by between 12 and 37 percent after adjusting for income tax. If the estimate cited by Schwert and Seguin were to apply, the volume of shares traded in New Zealand would fall by between 3 and 50 percent, assuming that the marginal investor, such as a superannuation fund, is subject to income tax of 33 percent on incremental income. If the top marginal rate of tax rises to 49 percent as announced by the Alliance, the volume of shares traded would fall by between 4 and 66 percent. Diewert and Lawrence (1994) estimate the average compensated price elasticity of general consumption in New Zealand to be -0.41 (i.e. a 1 percentage point rise in the price of general consumption would result in a 0.41 percent fall in demand).

speculation. Considerable transaction business results in short-term deposits, for example a welfare benefit that is credited directly to a taxable account by the Department of Social Welfare and then withdrawn within a few days by the recipient. High taxes on such deposits is one reason why financial institutions which participate in the money market are normally exempt from financial transaction taxes or are subject to a lower rate of tax; and

- the rate of FTT. The higher the rate of FTT, the greater the variability in EMTRs.

In contrast, GST imposes a uniform effective rate of tax on almost all activities. The imposition of GST on outputs with credit for GST paid on inputs facilitates this outcome. As there is no similar mechanism with FTT, additional tax is levied each time a taxable transaction occurs without regard to the amount of tax already paid. Because exports, savings and investment are effectively exempt from GST, they are neither encouraged nor discouraged.

Bank accounts are used for two main purposes. They enable payments to be made and received (their transaction purpose) and they enable surplus funds to be invested and deficits to be financed (their savings/lending purpose). Relative to GST, FTT would:

- discourage the use of bank accounts for transaction purposes. At the margin, it would encourage firms and individuals to hold higher cash balances, to offset amounts owed by and to another firm, and to transfer negotiable instruments rather than clear them through the banking system. Substitutable non-taxable transaction accounts could emerge beyond the tax net. Such disintermediation involves a cost because the preferences of firms and individuals would be altered by FTT. Moreover, less efficient firms would be encouraged to offer alternative services not subject to FTT at a higher cost to the community than traditional suppliers;

- discourage savings, especially short-term savings. FTT reduces the after-tax return to savings. As noted above, low rates of FTT can make short-term savings unattractive. Short-term bank deposits and cash management funds provide a liquid means of managing fluctuations in income and spending. Most bank assets are for a term of 180 days or less, and diversified investment funds (such as unit trusts, life offices and superannuation funds) generally place around 5-20 percent of their funds in cash assets. Consumption would be encouraged. The duration of investments would increase, liquidity would reduce and interest rates, particularly short-term rates, would be higher than otherwise;

- distort the form of savings. Individuals and firms would tend to use saving vehicles that are not subject to FTT or are relatively lightly

taxed. A withdrawal from a bank account to buy shares, for example, would incur lower FTT than if the investment were made through a superannuation fund because the fund would pay FTT as well as the investor. Cash management funds would be affected adversely to a greater extent than equity funds;

- bias the choice of financial instrument. FTT imposes disparate levels of tax on different financial arrangements that are used to undertake equivalent transactions from an economic perspective. FTT would encourage the use of derivative instruments (such as futures and options) relative to the purchase of the underlying assets because they involve lower bank withdrawals and would therefore bear less tax. This is a perverse outcome given the Alliance's concerns about speculation in financial markets; and

- reduce the international competitiveness of domestic financial institutions. Edwards (1992) argues that even a relatively small tax on financial futures in the United States could jeopardise its competitive position in international financial markets. Grundfest and Shoven (1991) make the same point in respect of a wider range of financial services. Financial services are penalised to the extent that they bear GST on inputs acquired by financial institutions. This would, however, be substantially smaller than the penalty that would be imposed by FTT.

Relative to GST, FTT would also discourage:

- exports. FTT would reduce the competitiveness of exports, other things being equal. The resulting deterioration in the balance of payments, which would be accentuated by the favourable treatment of imports (see below), would put downward pressure on the exchange rate, thereby reducing the real income of New Zealanders. Exports are zero rated for GST purposes. This allows exporters to claim a deduction for GST paid on inputs used in their production. Exports are therefore generally unaffected by GST;

- investment. Investment would be subject to FTT. Because foreign investors require a risk-adjusted post-tax return at least equal to that available from comparable investments in other countries, FTT would be reflected in a higher pre-tax return on New Zealand investment than otherwise. This would reduce investment. GST payable on investment is offset against GST payable on outputs or refunded. This treatment is equivalent to an exemption; and

- goods and services that incorporate high levels of financial transactions. Unlike GST, no account is taken of FTT paid at an earlier stage in production and distribution. This leads to additional tax each time a taxable transaction occurs (a cascade effect) and to disparate EMTRs on activities. It penalises the production of

intermediate inputs and encourages larger enterprises, such as vertically integrated firms. GST does not apply to the supply of financial services. Such transactions by final consumers are favourably treated relative to other consumption spending.

As an example of the cascade effect, consider a person (A) who sells his or her house for $100,000 and repays a related bank mortgage of $50,000.

**Table 3**
**FTT on Sale and Purchase of House**

| Transaction | Tax Status | FTT Levied |
|---|---|---|
| | | $ |
| Proceeds from the sale of A's house banked by real estate agent (deposit) and sellers' solicitor (balance) into their trust accounts | Exempt | |
| Proceeds withdrawn from real estate agent's and solicitor's trust accounts to pay costs and A | Taxable | 100 |
| Proceeds, net of commissions, deposited in A's bank account | Exempt | |
| Mortgage repaid by debit to A's bank account | Taxable | 50 |
| Net proceeds withdrawn from A's bank account | Taxable | 45 |
| Net proceeds credited to term deposit account | Exempt | |
| Term deposit matures with debit to deposit account (interest ignored) | Taxable | 45 |
| Principal and interest paid into A's bank account | Exempt | |
| New mortgage credited to A's bank account | Exempt | |
| A pays for new house by cheque drawn on his or her bank | Taxable | 100 |
| Total FTT paid | | 340 |

Commissions and other costs are assumed to amount to 5 percent of the selling price. The net proceeds are invested. A few weeks later A buys a similar house in another town for $100,000. A new mortgage of $55,000 (including $5,000 to replace equity used to pay commissions and other costs and net of interest earned) is taken up. Assume also that A engages a solicitor to represent his or her interest. FTT is

payable on bank debits at the rate of 0.1 percent. The relevant transactions are presented in table 3. In this example, total FTT of $340 could be payable. This is more than three times the amount that might, at first glance, be expected to be paid.[26]

FTT would encourage the following relative to GST:

- the production and consumption of goods and services involving few taxable financial transactions. The prices of such goods and services would be lower than with GST. A revenue neutral switch from GST to FTT could be expected to change the relative price of particular goods and services without altering the overall level of prices; and

- imports. Imports that are paid for other than by way of a debit to a taxable account, for example by applying export receipts or drawing on overseas credit, would escape FTT. They would be encouraged relative to domestic production. Even if imports were paid for by a withdrawal from a taxable account, they would generally be favourably treated relative to domestic production because financial transactions incurred before importation would be free from FTT.

  Imported goods are subject to GST. Overseas services that are supplied to registered traders are effectively subjected to GST in the hands of traders. Such imported goods and services are treated on a neutral basis with respect to domestic production. Imports of goods and services by final consumers may escape GST because of the administrative cost of collecting the tax. In addition, overseas spending by residents escapes GST and could escape at least some FTT.

Taxes on inputs are often less efficient than those on outputs, such as GST, because they distort the mix of inputs.[27] Financial transactions associated with the production of goods and services, and investment, would be subject to FTT. Producers would be encouraged to replace taxable financial transactions with other inputs where it is profitable to do so.

Although a number of countries impose taxes on financial transactions, most notably stamp duties, no country comparable to New Zealand raises a significant proportion of its total revenue through such taxes. Revenue raised by taxes on financial and capital transactions levied by OECD countries averaged 2.1 percent of GDP in 1993. The equivalent taxes in New Zealand also raised revenue equal to 2.1 percent of GDP.[28]

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26 $100 being 0.1 percent of $100,000.

27 Although GST is paid on goods and services which firms purchase, the tax is offset against tax payable on outputs or refunded.

28 Organisation for Economic Cooperation and Development (1995). Taxes on the issue, transfer, purchase and sale of securities, taxes on cheques and taxes levied on specific

The most comparable taxes to FTT are Australia's financial institutions duty (FID) and bank account debits tax (DT). FID is a state tax that applies other than in Queensland and the Northern Territory. It is payable on credits (rather than debits) to accounts held at banks and some other financial institutions. DT applies in all states and territories other than the Australian Capital Territory. It applies to bank debits. These taxes are summarised in appendix I.

### *Efficiency of Financial Markets*

Spahn (1995), an advocate of the taxation of international financial transactions to help manage exchange rates within the European monetary system, argues that:

> A tax on financial transactions - whatever its objectives - is subject to one cardinal premise: it must preserve financial market efficiency and stability.

FTT fails this test because:

- it would increase transaction costs.[29] Financial transactions typically involve small margins. For example, financial institutions engage in arbitrage transactions that are motived by small gains. This activity, which accounts for a significant proportion of transactions in some markets, facilitates efficient pricing and is vital for well functioning financial markets. Market makers would widen their bid-ask (buy-sell) spreads to compensate for higher costs, including the additional costs of hedging risks. This would further discourage arbitrage transactions that respond to the mispricing of assets. Further, the higher cost of transacting would discourage other socially desirable transactions.

  The direct impact on transaction costs of FTT is illustrated in table 4. FTT would increase such costs in the key 90 day bank bill and futures markets by over 500 and 1,200 percent respectively. The bid-ask margin for bank bills would need to increase from about 5 basis points currently to almost 62 basis points to reflect FTT. Higher transaction costs would be passed on by way of increased interest rates and charges;

- it would reduce liquidity. Liquidity is one of the most valuable properties of any asset (Modigliani 1996). A high degree of liquidity is a feature of many markets for foreign exchange, debt and equity, and related derivatives such as options and futures. A FTT has the

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legal transactions such as validation of contracts and the sale of immovable property are classified as taxes on financial and capital transactions.

29 The arguments presented are discussed further in section 3.

**Table 4**
**Direct Impact on Transaction Costs of FTT**
**90 Day Bank Bills and Futures**

| | Bank Bills | Bank Bill Futures |
|---|---|---|
| | $ | $ |
| Price per $100 face value | 97.62 | 97.62 |
| Face value of bills/number of futures contracts | 500,000.00 | 1.00 |
| Market value of transaction | 488,085.00 | 488,085.00 |
| Commission for each transaction | 11.74 | 5.80 |
| Bid/ask spread for each transaction | 58.68 | 23.47 |
| Commission plus spread for each transaction | 70.42 | 29.27 |
| Commission plus spread for a round trip | 140.83 | 58.54 |
| FTT | 727.25 | 727.25 |
| Increase in transaction costs for a round trip (%) | 516 | 1,242 |

Assumptions:

- 90 day bank bills yield 9.9 percent;
- each bank bill futures contract has a face value of $500,000;
- bank bill commissions amount to 1 basis point ($11.74) a transaction;
- futures commissions and brokerage amounts to $5.80 a transaction;
- bid/ask spread is 5 basis points for bank bills and 2 basis points for futures;
- FTT is payable at an effective rate of 0.149 percent. This is the initial rate of FTT grossed up to its pre-tax equivalent rate. Income tax is assumed to be payable at the rate of 33 percent;
- FTT is assumed to be payable on the market value of bank bills and futures. As noted below this is unlikely to be the case for futures; and
- FTT applies to purchases but not sales of bank bills and futures.

"enormous disadvantage" that it cannot distinguish between liquidity trading and speculation (Spahn 1995). Liquidity trading would be reduced if FTT were introduced because the cost of such transactions would rise. Umlauf (1993) reports that the interest rate options market "evaporated" when a financial transactions tax was imposed in Sweden;

- it would distort the choice of financial instruments and bias investment portfolios. As discussed below, it is not feasible to tax closely substitutable financial instruments on a uniform basis. The preferences of investors would be altered, thereby biasing investment portfolios;

- it would increase the cost of capital. The required rate of return increases as transaction costs rise (Schwert and Seguin 1993). An increase in the cost of capital discourages investment and employment; and

- its impact on volatility is at best uncertain. In certain markets, such as the property market, relatively high volatility reflects inadequate liquidity. Transaction costs in those markets are also high, and this has not contributed to low volatility.

Brash (1995) summarised the effect on financial markets of FTT in the following terms:

> Overall, we believe an FTT which did not exclude the wholesale financial markets from its scope would do very serious damage to the soundness and efficiency of the New Zealand financial system. Limiting application of the tax to households and commercial firms would probably mitigate the effects on the wholesale markets but, if the same amount of revenue was to be collected, would accentuate the distortions in the non-financial sectors.

GST's impact on the efficiency of financial markets is small. On the one hand, financial services supplied to final consumers are favoured relative to the supply of other goods and services. On the other, financial services supplied to registered traders are discouraged because credit is not provided for GST incurred in respect of inputs used by financial institutions.

### *Avoidance and Evasion*

All feasible taxes encourage taxpayers to avoid and evade them. However, some taxes are easier to minimise than others. There are several features of GST which limit the scope for avoidance and evasion. They include:

- the tax invoice system coupled with credits for tax paid on inputs. These design features encourage traders to comply with GST. One risk is that final consumers may conspire with a supplier to evade GST (and probably income tax) for mutual gain;

- a broad tax base reduces the scope to escape GST, for example by exploiting the boundary between taxable and non-taxable activities. For most taxpayers, the cost of avoiding the tax is high. For instance, the cost of travel to Australia limits the scope to shop with the objective of avoiding GST;[30] and

- a relatively high level of public support for the tax. This encourages voluntary compliance by most suppliers and purchasers of goods and services. GST replaced an administratively complicated sales tax.

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30 Goods consumed, and services performed, overseas escape GST. Goods that are imported are subject to GST, but for compliance cost reasons returning residents who import goods for personal use within duty free limits are not required to pay GST.

FTT would be substantially easier than GST to avoid in respect of high value transactions, where the potential gain is large, for the following reasons:

- money is fungible. Tax authorities have little hope of controlling the jurisdiction of high-value financial transactions. The physical location of the parties to a financial transaction need not determine the jurisdiction in which the transaction is recorded. The jurisdiction can be selected, often at a small cost, to maximise the benefits to the parties involved. This will become an even greater problem as technology advances and as world capital markets become ever more closely integrated. Shares of major New Zealand companies are listed on overseas stock exchanges and New Zealand dollars are traded in several financial centres. Overseas bank accounts can be operated to process large payments to avoid FTT. The Internet provides an embryonic payment system that is potentially beyond the direct control of any government.

  Grundfest (1990) expressed this point in the following terms:

  > A meaningful financial transaction tax in one jurisdiction can drive business to other, lower-tax jurisdictions in the shake of an electron's tail.

  Edwards (1992) expressed a similar view in examining a possible tax on financial futures in the United States:

  > In today's environment of screen-based trading and instantaneous information and communication technologies, even small differences in transactions costs can cause substantial shifts of business from one market to another. US exchanges, therefore, should be viewed as "firms" operating in a highly competitive, global, futures market in which foreign exchanges are rival competing firms. As such the elasticity of demand for their products is likely to be quite high.[31]

  Commentators in the United Kingdom have welcomed the possible imposition of a tax on shares and debt securities traded in the United States because it would increase the attractiveness of London as a financial centre (Hakkio 1994). A number of countries have abolished or lowered stamp duties (Campbell and Froot 1994).

  The introduction of a transactions tax in Sweden resulted in the migration of considerable trading in Swedish shares to London, especially by foreign purchasers or sellers (Umlauf 1993, and

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31 A high price elasticity of demand means that a change in price will have a proportionately larger effect on the quantity of services demanded.

Campbell and Froot 1994). Some prominent proponents of a financial transactions tax, such as Tobin (1978), have emphasised the importance of multilateral rather than unilateral moves to introduce such a tax for this reason.

Collins (1993) reports that a New South Wales tax task force would have liked to recommend a higher financial institutions duty (FID) rate but it recognised that an increase:

> ... on a unilateral basis may not be feasible having regard to the mobility of the tax base in that money and money transactions may quite simply be moved to, or take place in, a non-FID or low-FID jurisdiction.

While this observation relates to transfers among states and territories within Australia, the same point applies among countries.

A second way in which taxpayers would seek to minimise the tax is by settling accounts on a net basis. Instead of firm A paying firm B the $3 million that it owes and firm B paying firm A the $1 million that it owes, firm A would pay the net amount of $2 million to firm B. There are some commercial advantages in netting large transactions. It could reduce credit risk and lower the potential threat to the payments system if a financial institution failed.[32] Futures, options and swaps are generally settled on a net basis.

It is possible to use financial instruments to replicate the economic substance of physical transactions. An investor can buy shares on a stock exchange, for example, or buy equivalent futures or options contracts. If FTT is to be applied, it should ideally treat transactions in physical and derivative markets on an even-handed basis. However, this raises serious problems for the design and administration of a feasible FTT (Shome and Stotsky 1995). The problems that arise affect large transactions, where tax minimisation is most likely to occur, and the markets that are of most concern to the advocates of FTT. An analysis of Sweden's transactions tax by Campbell and Froot (1994) suggests that the choice of debt securities was changed to avoid the tax.

Tripe (1994) and Thorp (1995) argue that the high value transactions that are processed through Austraclear are particularly susceptible to settlement in another jurisdiction, netting or other avoidance techniques. As noted above, these transactions appear to constitute a

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32 If firm B in the example were placed in receivership, firm A would become an unsecured creditor for $3 million. The $1 million that it owes to firm A would still be payable. On the other hand, if settlement were on a net basis and if this approach were also applied where a firm failed, firm A's maximum loss would be $2 million. Tait (1995) discusses risks to the payments system.

major part of the potential tax base. In the netting example cited, FTT collections would be halved.

Low nominal rates of FTT on large transactions may lead to avoidance in respect of transactions that would otherwise generate significant tax revenue. The amount of tax saved would be weighed against the cost of the steps required to avoid the tax. Low value transactions would be affected to a lesser extent. Thus FTT would be likely to apply to numerous small transactions (the minnows) while being avoided by a considerable number of large transactions (the whales). This explains why the maximum amount of tax payable on each transaction is capped under Australia's FID (see appendix I);

- the tax base is a narrow one leading to substantial pressure on the boundary between taxable and non-taxable transactions. Closely substitutable products are available in financial markets or they are created to avoid taxes and regulations. The experience of Italy provides an example. In a policy intended to reduce speculation against the lira, Italy taxed forward purchases or sales of foreign exchange. Traders created a 'domestic' currency swap market based on interest rate differentials between the lira and other currencies to be settled in lira. Differences between spot and forward exchange rates must equal interest rate differentials and transaction costs otherwise an arbitrage opportunity arises. The market provided an equivalent product that avoided the tax. The tax was eventually withdrawn (Shome and Stotsky 1995).

  The Alliance has said that FTT would apply to registered banks. If this approach were adopted, other financial institutions would offer services similar to those offered by registered banks. When banking was heavily regulated, substitutable services that escaped the net flourished. Solicitors provided investments and mortgages for clients, stock and station agents provided seasonal credit for farmers, and other non-bank financial institutions competed with banks for deposits and lending opportunities. If the Alliance were to respond by bringing bank-like services into the tax net, as it has indicated, it would need to define the types of transactions, institutions, or both that would be affected. This is difficult because the distinction between financial and other services is blurred at the margin, and individuals and firms would be encouraged to devise ways to avoid the tax. As the tax net is broadened an increasing proportion of transactions could be subject to multiple layers of FTT;

- FTT is intended to apply to the value of each transaction. This is straightforward in the case of simple financial transactions such as a withdrawal from a bank account, but it appears to be an intractable problem in the case of complex financial instruments (see, for example, Kupiec, White and Duffee 1993, and Campbell and Froot 1994).

Consider for example the purchase of a futures contract traded on the New Zealand futures exchange. A futures contract is an agreement to sell or buy a commodity or financial security on a future date at a price that is fixed today.[33] The buyer is required to post an initial cash margin which would be subject to FTT, if it involved a bank debit. If the market value of the futures contract falls, margin calls would be made and further FTT could be payable. Conversely, if the value of the contract rises, the excess margin could be refunded to the buyer and the exchange would pay FTT. The contract would be closed out on, or before, its expiry by selling an equivalent contract. The margin, adjusted for any profit or loss, would be returned to the buyer. Even if the margin is paid by drawing on a bank account, it is only a small proportion of the face value of the contract. Moreover, it would be possible for the exchange to agree to accept marketable securities such as Treasury bills rather than a cash margin to avoid FTT.

Banks are unable to charge FTT on the face value of a futures contract entered into by their customers because they often do not know the amount of the contract. For a similar reason, the resident withholding tax on interest only applies to interest paid or credited. It does not apply to other interest that arises under the accrual rules. If futures and options are taxed separately, perhaps through the exchange, then withdrawals from banks in respect of such contracts would be taxed twice and futures and options contracts traded other than on the exchange would escape. Trading would move away from the exchange, including to overseas exchanges.

If bank debits alone are subject to tax, then EMTRs will be much lower than otherwise where cash flow provides a poor indication of the value of a financial transaction. This is likely to be the case in respect of instruments such as futures and options that are often perceived by the advocates of FTT to be associated with speculative activity.

As Summers and Summers (1989), who advocate the application of taxes to certain financial transactions (see below), observe:

> ... the decision whether, and how to apply ... a value-based tax in the case of various derivative securities is not at all straightforward. As we have seen, traded financial futures and options are exempt from the UK transaction tax, and the Japanese exempt derivatives such as stock index futures.

Stiglitz (1989) also acknowledged the problem. In a brief discussion he suggested that options should be taxed on the basis of the strike price to achieve neutrality. Neither Stiglitz nor Summers and

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33 An unconditional agreement to sell a house on a future date at a fixed price is a futures contract.

Summers (1989) envisage a transactions tax on bank debits. It would distort the choice of financial instrument, be easily avoided in respect of high value transactions and lead to a substantial erosion of the tax base. This assessment takes account of the observation of Hawtrey (1993) that:

> Financial markets have a long history of innovation for the purposes of tax minimisation.

### *Administration and Compliance Costs*

All feasible taxes that raise significant revenue impose considerable administration and compliance costs on the community. These costs are higher than is the case with voluntary transactions because the state is required to use its coercive powers to collect taxes from individuals and firms. The amount of revenue to be raised, the type of tax applied, and its design, affect the level of administration and compliance costs. Taxes that are collected using indirect mechanisms such as PAYE, GST and FTT generally involve lower administration and compliance costs than taxes that are collected directly from the taxpayer such as income tax payable by the self-employed.

Sandford and Hasseldine (1992) estimated the compliance cost of GST at 7.3 percent of revenue collected ($453 million) in 1990/91 compared with 1.9 percent for PAYE and 19.6 percent for business income tax. The compliance costs of GST fell more heavily on small firms than large ones. If a reduction in compliance costs were the prime reason for introducing FTT, Sandford and Hasseldine's findings suggest that priority should be given to replacing or reducing business income taxes rather than GST. It is the overall efficiency of taxes, however, that is relevant in judging their merits.

A simple FTT at a low rate that applied to withdrawals from registered banks, with other financial and non-financial transactions exempted, would be unlikely to involve high compliance costs, although significant costs would, in the first instance, be borne by banks. Such a tax would not, however, raise the required level of revenue, unless the rate of tax were substantially above that proposed by the Alliance. As the scope of the tax expands and as the rate of tax rises, compliance and administration costs could be expected to increase.

The compliance costs of a comprehensive FTT that replaced GST on a revenue neutral basis might be expected to lie between PAYE and business income tax. Australia's experience with a range of finance taxes offers little support for the view that FTT would entail low compliance costs.[34] Most traders that are currently registered for GST would benefit from the removal of compliance costs in respect of GST.

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34 See Hawtrey (1993).

The introduction of FTT would impose establishment costs arising from the need to modify accounting systems and documentation, to train staff within the private and public sectors, and to educate the public. Additional costs would be incurred in phasing out GST when both tax systems were operating.

***Transparency***

All indirect taxes suffer from the criticism that the taxpayer is unaware of the amount of tax that he or she pays each year. This reduces the incentive for taxpayers to scrutinise spending proposals. It may help pressure groups to succeed in lobbying for additional spending which benefits their members at the expense of the community.

FTT is particularly exposed to this criticism. The amount of FTT paid by each taxpayer is impossible to determine because it would vary considerably, for the reasons discussed above, and be imbedded in the price of goods and services. Although GST can also be criticised in this regard, it is more transparent than FTT as it is a fixed proportion of the price paid for almost all goods and services.

## 4.2 Equity Issues

The final incidence of FTT is difficult, if not impossible, to discern because it is such a non-transparent tax, and it would be shifted from the payer to consumers, investors and workers. Nonetheless, it is readily apparent that the introduction of FTT in place of GST would be neither horizontally nor vertically equitable. People in like circumstances at present would bear different amounts of FTT depending on whether the production and distribution of goods and services which they buy involve large or small amounts of taxable financial transactions. Moreover, a person on a low income may bear proportionately more FTT than a person on a higher income as the amount of tax paid by individuals is only loosely related to income or consumption.

Although the introduction of FTT in place of GST would not satisfy horizontal and vertical equity criteria, FTT would tend to be borne by elderly people, who own more financial assets than younger people, and by people on higher incomes. FTT is therefore likely to be a progressive tax in the first instance but its incidence over the longer term is likely to be uncertain (Shome and Stotsky 1995).

GST is broadly a proportional tax (Stiglitz 1988, and Caspersen and Metcalf 1994). Each household consumes its entire income over the lives of its members if gifts and bequests are small relative to lifetime income, which is usually the case, or if they are treated as consumption (i.e subject to

GST).[35] If the rate of GST is held constant in these circumstances, GST is proportional to lifetime income.[36]

It is sometimes argued that people on low incomes spend a higher proportion of their income than other people and that such people bear a disproportionately larger share of GST. For this reason, the Alliance claims that GST is a highly regressive tax. This view reflects a static analysis and it is misleading. People on both high and low incomes tend to spend their entire incomes over their lives as noted above. Moreover, there is considerable mobility among income groups over time.

The fact that GST is a proportional tax is illustrated in table 5.

**Table 5**
**GST as a Proportion of Lifetime Income**

| Item | Period 1 | Period 2 | Lifetime |
|---|---|---|---|
| | *$* | *$* | *Present Value* |
| Income | 50.00 | 110.00 | 150.00 |
| Spending exclusive of GST | (90.91) | (50.00) | (136.36) |
| GST (10 percent of spending) | (9.09) | (5.00) | (13.64) |
| Savings (dissavings) | (50.00) | 55.00 | nil |
| GST to Income (percent) | 18.18 | 4.54 | 9.09 |

The table examines the position of a household in two periods. In the first period, the household earns $50 and spends $90.01 (exclusive of GST) and pays GST of $9.09. In the second period the household earns $110 and spends $50 and pays GST of $5.00. The rate of GST is 10 percent of spending exclusive of GST. The household's lifetime position is found by discounting its second period income, spending, GST and savings by 10 percent (the assumed interest rate) to restate them in present value terms. The discounted income, spending and GST are then aggregated with income, spending and GST in the first period. In present value terms spending plus GST equals income. GST is shown to be proportional to lifetime income although the ratio of GST to income is 18.2 percent in period 1 and only 4.5 percent in period 2. This example demonstrates why a lifetime perspective should be taken.

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35 Surveys of retired people generally show that few own assets besides a debt-free owner-occupied house and related chattels, personal effects and limited financial assets such as cheque and savings accounts. Their lifetime incomes would generally need to be modest if their assets at death were to account for a large proportion of such income.

36 This explains why Andrews (1974) described a consumption tax as a cash flow personal income tax.

Stiglitz (1988) notes that:

> There is a widespread view that a consumption tax would [necessarily] be less egalitarian than an income tax, that it would hurt the poor relative to the rich. This view is based on several misconceptions. ... Finally, there is some confusion about the appropriate way to measure the degree of progressivity of the tax system. If one believes that consumption is a fairer tax base than income, the correct way of measuring progressivity relates tax payments to consumption; this is true even if the ratio of consumption to income declines with income so that the ratio of tax payments to income does not increase as rapidly as the ratio of tax payments to consumption.

People who earn high incomes generally pay more GST over their lives than those on low incomes. Thus on a lifetime basis GST is consistent with the vertical equity criterion. The behaviour of people and firms can be expected to have fully adjusted to GST which has been in place for 10 years. It therefore meets the test for horizontal equity discussed by Meade *et al.* (1978). The introduction of FTT in place of GST would fail to satisfy both criteria.

If the community believes that people on low incomes are unfairly taxed relative to the benefits that they derive from government spending, there are more efficient and equitable policies available than the introduction of FTT. They include:

- the elimination of low priority government expenditure which largely benefits people from high income households, for example excessive subsidies for arts and culture, and conservation;

- the introduction of, or increases in, user charges for publicly-provided private goods and services that benefit people from high income families such as tertiary education and health services; and

- tighter targeting of New Zealand superannuation. New Zealand superannuation benefits people who own significant assets.

Although the income tax system could be made more progressive, this would impose an efficiency cost on the community. It is doubtful whether the cost involved would be justified by related benefits. A more progressive tax system would reduce output and incomes by imposing higher deadweight costs on the community. These costs rise more than proportionately as the rate of tax is increased. Sustained economic growth rather than the redistribution of income is the key to raising the living standards of low income households on a permanent basis.

Progressive tax scales have two main effects on the distribution of income:

- they redistribute lifetime income over each taxpayer's life. Such scales provide a higher after-tax income than otherwise when a person earns a relatively low gross income, for example when young. They also result in a lower after-tax income than otherwise when a person earns a high gross income; and

- they transfer income from people who earn relatively high lifetime incomes to those with lower lifetime incomes.

Some international research indicates that the first effect (redistribution over each person's life) is far more important than the second (redistribution among people) when the distribution of government spending is also taken into account. There are no strong public policy grounds for the first form of redistribution as capital and insurance markets and other mechanisms (for example, the student loans scheme) generally assist people to implement such consumption choices.

The phase-out of GST would confer a wealth gain on savers because their savings would buy a larger volume of goods and services in the future. Savers tend to be older than the population on average and they generally earn higher than median incomes. On the other hand, the introduction of a FTT would impose a wealth loss equal to the present value of the expected FTT. The net effect on the distribution of wealth of these transitional adjustments is uncertain. It would be remarkable, however, if they were to offset each other for each person. It is likely that transitional wealth gains and losses would be distributed unevenly among people, depending on their particular circumstances.

### 4.3 Conclusion

The above discussion suggests that:

- FTT would be substantially inferior to GST as a main source of revenue. FTT performs poorly when assessed against recognised tax design criteria; and

- there is substantial support in the economic literature for GST-type taxes. There is no respected advocacy for the adoption of FTT in place of GST or income tax.

The assessment of the relative merits of GST and FTT reflects the pervasive effects of FTT on financial markets, the importance of those markets for the efficient operation of the economy, and the scope for avoidance. Activities affected by FTT are likely to be more sensitive to taxes than those affected by GST. The adoption of FTT in place of GST would, therefore, decrease efficiency.

There are no compelling efficiency and equity grounds for replacing GST with FTT as a main source of revenue. The arguments discussed in this section are summarised in tabular form in appendix II.

# 5 SHOULD A SELECTIVE TAX BE IMPOSED ON FINANCIAL TRANSACTIONS?

A further issue is whether there are valid grounds for imposing a selective tax on certain financial transactions in conjunction with GST. The focus of the analysis here is on the efficiency of financial markets rather than on the most efficient and equitable means of raising general revenue.

## 5.1 Efficiency Arguments for a Selective Tax

Some researchers have suggested that a selective tax should be imposed on certain financial transactions to address perceived efficiency concerns. Many of the arguments that are advanced can be traced to Keynes (1936). He asserted that investment institutions focused excessively on liquidity, that "speculation" dominated "enterprise" on Wall Street and that too many of the "best brains" were engaged in such activities. Keynes used the term speculation to describe "the activity of forecasting the psychology of the market" and the term enterprise for "the activity of forecasting the prospective yield of assets over their whole life".[37] He suggested that:

> The introduction of a substantial Government transfer tax on all transactions might prove the most serviceable reform available, with a view to mitigating the predominance of speculation over enterprise in the United States.

Although Tobin (1978) raised similar concerns, he proposed an international transfer tax on transactions across currencies. The revenue would be passed to a supernational entity such as the International Monetary Fund or the World Bank.[38] This tax would be aimed at dampening exchange rate volatility.

Spahn (1995) concluded that "the Tobin tax as a pure transaction tax is not viable". He proposed a tax on foreign exchange transactions with a two tier rate structure aimed at keeping exchange rates, such as those in the European Monetary System, within a target range by a fiscal rather than a monetary instrument.[39]

Stiglitz (1989) sought to recast the argument for a selective tax within a contemporary finance and tax framework. He developed a theory based on "noise" traders who irrationally believe that trading systems are beneficial in forecasting security prices.[40] According to Stiglitz, arbitragers are unable to offset completely the effect on security prices of noise traders. He

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37 Contemporary researchers usually use terms such as confidence and noise in place of speculation, and fundamental value in place of enterprise (see below).

38 Also see Tobin (1984) and Eichengreen, Tobin and Wyplosz (1995).

39 The merits of using transaction taxes to advance international coordination of macroeconomic policy is not examined further. Spahn (1995) surveys this literature.

40 Black (1986) contrasts noise with information.

suggests that noise traders are not removed from the market by losing their money because "a fool is born every minute". Stiglitz argues that traders who possess valuable information, or no information, trade less frequently than noise traders and would therefore be relatively unaffected by a transactions tax:

> Since the short-term speculative activity - the activities that will bear the brunt of the tax - consists largely of noise traders and those trying to smooth out the market, to make money from the noise traders, there may actually be a welfare gain from impeding these exchanges; in any case, there is not likely to be a significant welfare loss.

Stiglitz (1989) advocated a turnover tax on the transfer of shares. He argued that a tax of 0.5 to 1.0 percent would impose negligible deadweight costs although it would lead to exchange inefficiency. Stiglitz asserted that "uninformed" and "truly informed" traders would be "hardly affected" by a tax at a rate of less than 1 percent.

Summers and Summers (1989) proposed the introduction of a securities transactions excise tax (STET).[41] In respect of the United States, they argued that:

> There are strong efficiency arguments to be made in support of some kind of STET that "throws sand into the gears" ... of our excessively well-functioning financial markets. The efficiency benefits of curbing speculation are likely to exceed any costs of reduced liquidity or increased costs of capital that come from taxing transactions more heavily.

Summers and Summers (1989) argue that short-term speculation causes excessive volatility in security prices. They believe that a significant part of market volatility is due to noise trading. This conclusion rests on the view that:

> Excessive speculation that increases volatility would create rather than reduce risk, distort the allocation of investment, and limit [the] information content of asset prices.

Summers and Summers conclude that taxes that discourage turnover might reduce volatility and the risk of price fluctuations like those that occurred in October 1987.

Summers and Summers (1989) observe that their arguments for a STET do not apply to all financial transactions:

> The economic arguments ... suggest that a STET should cover the transfer of marketable securities or their equivalents. By

41 A summary of their arguments is presented in Summers and Summers (1990).

> this we mean debt or equity interests in corporations or business enterprises in other forms, debt of governmental entities, rights to acquire title or beneficial ownership to such assets, and other financial assets. None of the considerations raised ... suggests the adoption of a tax applicable to every contract for the transfer of other types of assets ... . Further, interests in privately held corporations for which there is no ready market could likewise be exempt from the STET.

Summers and Summers (1989) assert that too many resources are devoted to the provision of financial services.

## 5.2 Critique of Arguments for a Selective Tax

The arguments advanced by Stiglitz (1989) and Summers and Summers (1989) rest on the view that excessive volatility in security prices can be dampened by a transactions tax. Roll (1989) and Ross (1989) note that they cite no empirical studies that bear directly on this issue. Instead they refer to empirical studies which allegedly find that stock prices are too volatile to be explained by 'fundamental' determinants of value.

To sustain this view, Stiglitz (1989) and Summers and Summers (1989) needed to dismiss all but a very weak view of the efficient market theory. There are three main forms of the theory:

- the weak form holds that security prices reflect all information contained in the record of past prices. This implies that no investor can earn a higher than normal return by developing trading rules based on historical price and return information, such as the trading systems that Stiglitz assumed noise traders use. Research shows that the share market is at least efficient in this weak sense;

- the semi-strong form holds that prices reflect not only past prices but all publicly available information. Researchers have tested this theory by examining the effect on security prices of specific items of news such as announcements of earnings and dividends, and takeovers. Most new information was found to be rapidly and accurately impounded in the price of shares.

  Weston and Copeland (1992) summarise the evidence in the following terms:

  > ... hundreds of empirical tests of the semi-strong-form efficiency hypothesis have been published. The preponderance of this evidence supports the conclusion that capital markets are indeed efficient in their semi-strong form, although some anomalies have been reported.[42]

42 Fama (1991) reviews the literature.

- the strong form holds that prices reflect not just public information but all information that can be acquired by painstaking fundamental analysis of companies and the economy. This form is difficult to prove or disprove. It has been tested by examining whether insiders, with access to information that is not publicly available, earn higher than normal returns. Such tests suggest that the strong form of the efficient market theory should be rejected.[43] Furthermore, the existence of a large broking industry that undertakes research on company performance implies that the strong form is unlikely to hold. On the other hand, research suggests that private information is rare (Fama 1991).

Brealey and Myers (1991) conclude:

> Although few simple economic ideas are as well supported by the evidence as the efficient-market theory, it would be wrong to pretend that there are no puzzles or apparent exceptions. ...
>
> We believe that there is now widespread agreement that capital markets function well. So nowadays when economists come across instances where this apparently isn't true, they don't throw the efficient-market hypothesis onto the economic garbage heap. Instead they ask whether there isn't some missing ingredient that their theories ignore.

The conclusion that capital markets are efficient, because all available public information is rapidly and accurately reflected in prices, presents a major obstacle to the validity of the proposition that community welfare can be improved by the introduction of a financial transactions tax as proposed by Stiglitz (1989) and Summers and Summers (1989).

Empirical evidence on whether security prices reflect fundamental value is inconclusive. Black (1986) theorises that financial markets reflect economic fundamentals only in the long run. He suggests that security prices may wander far from their fundamental value in the short term because of random acts of investors who pay little attention to economic factors but that such noise traders make financial markets possible by providing liquidity. Cutler, Poterba and Summers (1989) find that important macroeconomic and political news accounts for about one-third of the variance in stock prices. On the other hand, research such as that by Fama (1990) and Barsky and De Long (1990) suggests that there is little room for arguing that market prices are determined by irrational behaviour.

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43 Fama (1991), and Weston and Copeland (1992).

Several compelling criticisms of Stiglitz (1989) and Summers and Summers (1989) have been advanced by Edwards (1992).[44] The main ones are summarised below:

- even if the presence of noise traders is accepted, it does not necessarily follow that markets for securities are inefficient. Firms and individuals that trade on the basis of market fundamentals - information traders - may offset the effects of noise traders at least in the long term;

- a transactions tax would fall on all traders, but not equally. The ultimate effect of the tax would depend on which class of trader is most discouraged by the tax and not by the amount of trading which each undertakes. Without knowing whether information or noise traders would be most sensitive to the tax, it is not possible to know whether volatility would increase or decrease; and

- a study by Meyer of the effects of speculation on the volatility of eight commodities between 1968 and 1987 concludes that there is no consistent relationship between the volume of speculation and volatility.[45] Several measures of speculation were used. A separate study by Edwards (1992) of 16 major futures markets found that the magnitude of speculative trading is unrelated to price volatility in either futures markets or the related spot markets.

Ross (1989) commented that:

> Unfortunately for this [Stiglitz's] analysis, there is not any consensus on what the term *excess volatility* means, or, on whether it is present in the market, whatever it means, or, for that matter, on exactly what social costs volatility might have.

Grundfest and Shoven (1991) suggest that a model could be constructed to support virtually any prediction about volatility. They observe that:

> Purely theoretical arguments about a STET's effect on volatility are thus charitably described as indeterminate and, given our current ability to model the dynamics of stock market volatility, these theories are as speculative as the speculation that they seek to drive from the market.

A study of the stock market in the United States by Schwert (1990) found that:

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44 Also see Schwert and Seguin (1993) for a summary of arguments for and against financial transaction taxes.

45 See Edwards (1992).

> Apart from October 1987 and October 1989, volatility was not particularly high in the 1980s. Moreover, the growth in stock index futures and options trading has not been associated with an upward trend in stock volatility.

Roll (1989) examined three commonly proposed policy instruments aimed at addressing excessive volatility. They were higher margin requirements, limits on price movements and transaction taxes. He observed that there is "very little evidence in favor of the efficacy" of these instruments. Roll concludes, from a cross-country study of the 1987 share market decline which included New Zealand, that:

> Transaction taxes are inversely but insignificantly correlated with volatility across countries, and the effect is too questionable for taxes to be used with confidence as an effective policy instrument.[46]

Roll (1989) also observed that:

> Summers and Summers seem to regard securities transactions and the entire securities industry as a pernicious activity that should be taxed heavily along with other vices such as gambling, alcohol [and] tobacco ...

A financial transactions tax would increase the cost of trading in affected markets, reduce the volume of trading and hence liquidity, and raise the cost of capital. Transactions that take advantage of asset mispricing would be more costly with a financial transactions tax. Market makers would also increase their margins to recover higher costs. These factors would discourage such transactions, and the efficiency of financial markets would be reduced.[47]

In the context of the United States, Schwert and Seguin (1993) report that:

> There is a strong empirical relationship between transaction costs and required rates of return, with high-cost securities commanding higher rates. ... [A] broad-based 0.5% [STET] would increase the costs of capital, determined from the rates

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46 An analysis by the Congressional Budget Office reported by Grundfest (1990) suggested that countries such as Japan and the United Kingdom which tax security transactions did not appear to bear a less severe fall in share prices in October 1987 than the United States. Summers and Summers (1989) note that France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, United Kingdom and the United States imposed some form of STET, including stamp duties.

47 Schwert and Seguin (1993) suggest that a 1 percentage point increase in transaction costs would result in a decline of between 0.25 percent and 1.35 percent in the volume of securities traded. They note that these estimates are based on limited evidence.

> of return demanded on new issues, by between 0.1% and 1.8% a year.[48]

An increase in the cost of capital would result in a fall in the United States share market of between 5 and 20 percent (Grundfest and Shoven 1991). In the longer term, it would result in lower investment, employment, output and incomes than otherwise.

Sweden imposed a tax on equity transactions of 1 percent for a 'round trip' in 1984.[49] The tax was increased to 2 percent in 1986 (Umlauf 1993). The share market index fell by 2.2 percent when the tax was announced in 1984 and by 5.3 percent in the 30 days up to and including the date of its announcement. The index fell by 0.8 percent when the rate increase, which had been anticipated, was announced. In response to a tax of 2 percent, 60 percent of trades in the 11 most actively traded Swedish shares, representing over 30 percent of all trading in equities, migrated to London. By 1990, the proportion of total Swedish shares traded in London exceeded 50 percent. The volatility of the shares traded in London fell relative to comparable shares traded in Stockholm. Umlauf's results suggest that a transactions tax increases rather than decreases volatility, contrary to the prediction of Summers and Summers (1989).

In 1994 the Securities and Exchange Board of India essentially prohibited a form of highly leveraged margin trading *(badla)* on the ground that it caused excessive speculation. Eleswarapu and Kristhnamurti (1995) found that equities affected by the *badla* system were less volatile than other shares. Berkman and Eleswarapu (1996) examined the impact on share prices of the prohibition of the *badla* system and its subsequent reinstatement, in a modified and more restrictive form, in October 1995. Over a four week period in which the system was prohibited, *badla* stocks under-performed other equities by 25 percent but out-performed other stocks following its reinstatement.

Berkman and Eleswarapu concluded:

> Overall, the results suggest that the market perceives short-term traders as playing a significant positive role, with a larger benefit accruing to the relatively less-liquid firms.

A related argument which has been advanced for taxing security transactions is that excessive short-term trading in the stock market biases the incentives of corporate managers. It is claimed to shift their attention from the long-run prospects of firms toward myopic pursuit of current earnings. The first mechanism which might produce such behaviour is

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48 See Amihud and Mendelson (1986), and Grundfest and Shoven (1991). Amihud and Mendelson hypothesised that the market-observed expected return on assets is an increasing and concave function of the bid-ask price spread. Amihud and Mendelson's empirical tests were consistent with the predictions of their model.

49 A tax of 0.5 percent was applied to both purchases and sales of shares.

excessive short-term trading which accentuates stock market volatility, thereby raising the cost of capital and discouraging long-term investment. For the reasons cited above, it is doubtful that this is the case. Moreover, it would imply that financial markets are not efficient and, in any event, a transactions tax would appear to be a questionable policy response (Kiefer 1990). The second possible mechanism is that agency costs lead to myopic behaviour by managers. A transactions tax is unlikely to correct or mitigate any such problem.

A further argument for a transactions tax is that speculative trading results in more resources being devoted to the financial markets than is appropriate from a community perspective. Subrahmanyam (1996) develops a model which suggests that a transactions tax can have the beneficial effect of reducing wasteful rent seeking in the 'race' to obtain information early, but he notes that a broader analysis would be necessary to justify the tax.

The argument that no net social benefit is derived from obtaining information a short time before it is released publicly, which was advanced by Stiglitz (1989), is unduly narrow. It ignores broader benefits which arise from the incentive to invest in information. The net expected private benefit from obtaining information before its release to the public will decline as the release time approaches and the amount of effort invested in discovering it will also reduce. As Edwards (1992) notes, the onus is on the promoters of such a tax to show that there is an externality (a difference between private and community costs and benefits) and that the overall benefits of addressing it outweigh related costs. No evidence has been produced to demonstrate that these tests would be satisfied. Even if they were, it is not obvious that a transactions tax would be an efficient response.

Summers and Summers (1989) are aware that the design and implementation of a STET would not be straightforward and that it would be susceptible to avoidance.[50] Some of their suggestions for containing those problems, such as harmonisation of the STET structure and common enforcement arrangements among international financial centres, are unlikely to be available to a small country. Stiglitz (1989) did not examine the feasibility of implementing a financial transactions tax in depth.

An adverse assessment of the administrative and compliance implications of a STET was provided by Grundfest and Shoven (1991):

> In all, it is hard to imagine a tax more difficult to implement and monitor than a transactions tax imposed on the highly

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50 Kupiec, White and Duffee (1993) note that a STET is difficult to implement and to administer. However, Spahn (1995) observes that "there seem to be no major administrative problems associated with the operation of a Tobin tax, although difficulties may arise in detail, in particular in the derivatives markets".

> liquid, internationalised, and innovative capital markets. It is also hard to imagine a tax more likely to generate substantial substitution, legal avoidance and illegal but unmonitorable noncompliance. Indeed, in light of extreme substitutability apparent in the world's capital markets, the very notion of a STET runs directly counter to basic insights of the Ramsey rule, which suggests the deadweight loss generated by taxes is minimised if taxes are imposed in an inverse relationship to underlying market elasticities. ... A STET, imposed on perhaps the most elastic and substitutable market of all, would fly in the face of this basic principle of welfare economics and would generate endless compliance difficulties to boot.

The experience of Sweden in grossly over-estimating the revenue from its financial transactions tax is instructive. The Ministry of Finance initially estimated revenue at 1,500 million kronor (about NZ$7.8 billion) a year. The realised revenue averaged only 50 million kronor a year (3 percent of forecast revenue) with a maximum of 80 million kroner in 1989 (Hakkio 1994).

Neither Stiglitz (1989) nor Summers and Summers (1989) expect a financial transactions tax to raise substantial revenue. The latter noted that in 1985 the countries that imposed some form of STET collected between 0.04 percent (Germany) and 0.48 percent (Switzerland) of GNP. This is equivalent to between NZ$35 and NZ$415 million or, at most, 6 percent of the revenue generated by GST.

## 5.3 Conclusion

The taxes proposed by Stiglitz (1989) and Summers and Summers (1989) would be applied directly to taxable transactions rather than to bank withdrawals as proposed by the Alliance. In many situations this difference may be of little significance from an efficiency perspective, for instance when shares are paid for by withdrawing funds from a bank account. However, there are other circumstances where this is not the case.

Although there are some advocates in the literature for a selective tax on certain financial transactions, these arguments rest on questionable theories of capital markets and lack empirical support. Moreover, the feasibility of such a tax is doubtful. Finally, the literature focuses on liquid markets for equity, debt and related securities and does not provide general support for FTT of the type proposed by the Alliance.

# 6 AN EVALUATION OF THE ALLIANCE'S ARGUMENTS

## 6.1 Arguments for Replacing GST with FTT

The Alliance has advanced a number of arguments for replacing GST with FTT. They are summarised and evaluated in this section.

### *Increase Progressivity*

In October 1993 the Alliance stated that GST would be withdrawn:

> Because replacing GST with FTT and a revamped income tax system would have a progressive effect on the whole tax system.[51]

This goal alone could not possibly justify the introduction of FTT in place of GST. As noted above, FTT might increase the perceived progressivity of the tax system but it would not necessarily do so in a predictable manner. It is likely to add to the variability of tax burdens relative to lifetime income or consumption, which is the appropriate benchmark.

If greater progressivity is considered a desirable goal, it could be achieved more effectively by altering the income tax scale, the relative reliance on income tax, GST and user charges, or by changing government spending patterns.

The Alliance plans to increase the progressivity of the tax scale. It is unclear why it is also necessary to replace GST with FTT to achieve the same objective.

### *Improve Equity*

The Alliance stated in its 1993 briefing for Treasury that:

> GST is a bad tax. It falls heaviest on those least able to pay it.[52]

The view that GST is a bad tax is not supported by the literature. Many researchers advocate the adoption of GST-type taxes for countries such as the United States. To the best of our knowledge no respectable researcher has suggested that FTT should be adopted as a main tax base in preference to a value-added tax such as GST.

As demonstrated above, it is not correct to argue that GST falls most heavily on those least able to pay it. GST is a broadly proportional tax from a lifetime perspective. Moreover, low income groups were compensated

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51 Alliance (1993c), p.1.
52 Alliance (1993b), p.10.

when GST was introduced whereas savers faced a wealth loss arising from the imposition of additional tax when their savings were spent.

The Alliance argued in its 1995 alternative budget that:

> Those using the financial system more intensively would tend to pay a greater proportion of their income in FTT. This is more likely to mean that those with considerable assets to manage in complex ways will tend to pay more FTT than those cashing a pay cheque at the local pub.[53]

This argument focuses on the initial incidence of FTT rather than its ultimate burden. There is a presumption that people who own considerable assets will bear a higher proportion of FTT than other people. This is not certain. It would depend on the extent to which people with assets engage in taxable financial transactions relative to other people, and on the breadth of FTT.

Consider, for example, a person with substantial financial assets who adopts a buy and hold strategy. Since FTT would only apply to withdrawals from taxable accounts, such a person would bear little or no FTT in respect of his or her investments. Many people who own significant interests in businesses, including founder shareholders in listed companies, farmers and other property owners could fall into this category. Conversely a person with fewer assets who buys and sells often could bear a higher level of FTT.

Most financial transactions are undertaken by businesses. Consumers of goods and services produced by such businesses would ultimately bear most of such FTT. The Alliance plays down this aspect of FTT. People who engage in taxable transactions directly or indirectly would pay more FTT than other people, but there may not be a close relationship between the former and those on high incomes.

Investors in affected firms would also bear FTT. They include contributors to superannuation schemes, life insurance funds and unit trusts. Many middle income earners invest in such funds. To the extent that the incremental efficiency costs of FTT reduce output and growth, national incomes will be lower than otherwise.

In 1996 the Alliance stated:

> At present people pay 12.5% in GST. For someone spending $350 a week this amounts to $38.89 in GST. If FTT were levied at 10 cents in $100 that person would only pay 35 cents in FTT which would leave an extra $38.54 to spend or save.

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53 Alliance (1995), Appendix 3, p.2.

> It is true that FTT will be included in the price of all goods so the actual tax paid will be larger than given here. However, ... the level of cascading is so small as to have no major effect.[54]

The implication that people will bear a much lower tax burden with FTT than GST does not withstand scrutiny. A revenue neutral switch between FTT and GST must leave the average tax impost on households largely unchanged. Taxes cannot generally be passed forward in higher export prices because New Zealand is a price taker in a competitive world. While foreign visitors and investors may bear some FTT and GST, households would ultimately pay by far the largest share of FTT and GST.

The example is misleading because it underestimates the amount of FTT which would initially fall on the business sector but would be passed on to households. The cascade issue does not invalidate this crucial point.

### *Discourage Speculation*

In 1996 the Alliance said that:

> The most important reason for introducing FTT is to discourage speculative short-term money market and foreign exchange dealing.[55]

In 1993 the Alliance stated that FTT:

> ... will broaden the tax net bringing in many transactions which currently avoid tax, particularly those of a speculative and capital investment nature.[56]

If trading in the New Zealand dollar and daily inter-bank settlements are to be exempt, the reason given in 1996 for introducing FTT would not apply.

FTT is a poorly targeted instrument for addressing perceived problems of speculation, no matter how speculation is defined. The STET discussed above is more directly targeted at such perceived problems than FTT.

Spahn (1995) observed that:

> A Tobin tax has the enormous disadvantage that it cannot distinguish between liquidity trading and speculation.

Most financial transactions are unrelated to speculation. Tobin (1978) recognised that a financial transactions tax aimed at discouraging

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54 Alliance (1996a), p.4.
55 Alliance (1996a), p.2.
56 Alliance (1993b), p.10.

speculation in financial markets should exempt all transactions relating to real goods and services.

The point can be illustrated by asking how a tax on any of the following transactions can reduce speculation:

- a withdrawal from a child's savings account to buy a book;
- the withdrawal of a welfare benefit that has been directly credited to a bank account to buy groceries and pay the rent;
- monthly withdrawals from a home owner's bank account to pay interest on a mortgage, and electricity and telephone bills;
- regular withdrawals from a person's bank account to invest in a superannuation fund or to pay insurance premiums;
- a withdrawal from an electrician's business account to pay wages;
- a withdrawal from a business bank account to pay for imported goods and services; and
- a withdrawal from a business bank account to pay income and other taxes.

These are typical examples of thousands of banking transactions that individuals and firms engage in every day. They may not account for most transactions that take place but neither are they insignificant.

Financial transactions arise from voluntary exchanges because they are more efficient than other means of settlement such as barter. A key function of financial institutions is to perform transactions on behalf of their clients. There are no valid grounds for penalising such services relative to other activities.

Financial markets encourage savings and channel them to wealth-creating investment projects. Prices set in equity and debt markets convey information to investors on the return required by savers to compensate them for forgoing current consumption and assuming risk. They thereby signal whether additional investment is likely to be profitable or whether disinvestment is warranted, and they facilitate incentive arrangements that encourage managers to act in the interests of investors. These functions are much broader than merely raising capital through new issues as the Alliance asserts.

Financial markets also assist firms and individuals to manage risk efficiently. The swap market, for example, enables a firm to convert an obligation to pay a variable rate of interest in respect of its borrowing to a fixed rate of interest. A firm may wish to engage in such a transaction

because it is to receive a fixed income stream and wishes to reduce the impact on its profitability of a possible increase in interest rates. It may do so for the very reason that it does not wish to make judgments about the future direction of interest rates. Similar reasons motivate firms to buy and sell foreign exchange. Their actions are equivalent to buying fire insurance.

The Alliance appears to regard all such transactions as speculative. It fails to appreciate that the rapid development of financial instruments has assisted firms to manage financial risks more efficiently than previously. A substantial reduction in the cost of financial transactions over recent years is a main reason for the growth in the volume of transactions.

The New Zealand dollar is traded in overseas markets. A domestic financial transactions tax cannot affect overseas trading in New Zealand dollars by non-residents. A similar point was recognised by Tobin (1978) who stressed the need for multilateral rather than unilateral moves to introduce a transactions tax.

FTT would encourage the use of derivative instruments such as options and futures rather than the purchase of related assets because FTT could be avoided or minimised. Derivatives involve lower cash payments than other instruments.

There is a contradiction in the Alliance's stance. On one hand it argues that FTT at a low rate would raise sufficient revenue to replace GST. On the other hand it suggests that FTT will discourage speculation in money and foreign exchange markets. If trading in those markets is reduced significantly, then FTT will not raise the required revenue unless the tax rate is raised above the initial level. If trading is not reduced, the tax will have failed to discourage perceived speculation.

### *Tax Profits from Speculation*

In 1994 the Alliance stated:

> At present, profits from speculation in the financial markets are not taxed as income unless speculation is a consistent source of income ... .[57]

This statement is simply incorrect. Income derived from any business is subject to income tax. A business is defined as any profession, trade, manufacture or undertaking, whether legal or illegal, carried on for pecuniary profit. In addition, gains on the sale of any property, other than financial arrangements, acquired for the purpose of sale are taxable. Under the accrual rules all income, including capital gains, derived by resident taxpayers from financial arrangements is subject to income tax. A

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57 Alliance (1994), p.6

financial arrangement is broadly defined. Profits from perceived speculation on the financial markets are taxable because such activity is by definition undertaken with the objective of earning a profit.

The statement is also inconsistent with the Alliance's observation that 90 percent of financial transactions are intermediate transactions.[58] The firms involved are subject to income tax. When individuals are also taken into account, it is apparent that relatively few financial transactions that would be included in the FTT base are exempt from income tax as suggested.

If there are concerns about the income tax laws or their administration, they should be addressed directly. The introduction of FTT would be an inefficient response to the perceived problem. In particular, FTT would be most easily avoided in respect of high value transactions.

### *Tax the Financial System*

The Alliance stated in its 1995 alternative budget that:

> FTT is a tax on the use of the financial system. ... FTT is the purest form of turnover tax it is possible to devise.[59]

This statement highlights that FTT is a selective tax on certain services provided by financial institutions. Turnover taxes are not generally regarded as efficient taxes, especially in raising large amounts of revenue, because they impose disparate EMTRs on activities. In addition, a feasible FTT, in contrast to an ideal FTT, is unlikely to justify the assertion that it is the purest form of turnover tax.

The Alliance's argument appears to reflect a view that financial services are not beneficial to the community and should be discouraged relative to other services. There are no valid public policy grounds for such a view.

### *Tax Money Transactions*

The Alliance argued in its 1995 alternative budget that:

> Unlike GST, FTT would be levied on virtually all money transactions ... . A huge range of goods like second-hand goods and houses are not subject to GST. ...
>
> The only items that are not covered [by FTT] are non-monetary gifts and barter.[60]

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58 Alliance (1993c), p.2.
59 Alliance (1995), Appendix 3, p.2.
60 Alliance (1995), Appendix 3, p.2.

This claim is misleading. GST applies to virtually all consumption spending. Second-hand goods are generally subject to GST when they are first acquired. The sale of second-hand goods between two GST-registered traders is treated on a neutral basis with respect to the sale of new goods. Similarly, the sale of second-hand goods between two non-registered persons is neutral because both new and second-hand goods bear one level of GST. A problem arises when second-hand goods are sold by a non-registered person to a registered trader. The former is unable to issue a tax invoice for GST previously paid. This is a minor exception to the neutrality principle and was justified on administrative grounds. In contrast, the effective rate of FTT on new and second-hand goods varies depending on the rate of tax and the holding period.

While existing houses are not directly subject to GST, because it is not feasible to tax them, new houses and inputs used in constructing and repairing houses are subject to GST.[61] Exports and investment are not subject to GST because such treatment would impose excessive efficiency costs on the community.

A very broad and elaborate FTT, with high compliance and administration costs, would be required if it were to be as encompassing as the Alliance implies.

### *Advance Neutrality*

The Alliance also stated that FTT is:

> ... neutral between exports and imports, spending and saving, financial and non-financial savings, and spending on new goods and spending on second-hand goods. None [of this] is true of GST.[62]

This claim is wrong in almost all respects:

- FTT unambiguously discourages exports relative to imports whereas GST treats exports and imports on a neutral basis;

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61 In the case of consumer durables such as houses, GST could be applied to the supply of services derived (which would tax consumption as it occurs but is impracticable) or to the supply of the durable. These approaches are equivalent from an economic perspective under certain conditions (see Graetz 1980). Moreover, the taxation of consumer durables is the exact opposite of the deduction for investment. The economic equivalent in that case is to exempt the yield on investment. The Alliance's comments on the treatment of housing and second-hand goods suggest that it has overlooked this equivalence. The choice between these tax treatments reflects judgments about administrative and compliance costs.

62 Alliance (1995), Appendix 3, p.2.

- FTT discourages savings by increasing transaction costs whereas GST is neutral between spending now and savings; and

- GST is broadly neutral in its treatment of new and second-hand goods as noted above.

## 6.2 Conclusion

The Alliance's statements on FTT demonstrate confusion about the following matters:

- the ultimate incidence of FTT;

- the lifetime distribution of GST;

- present income tax rules that apply to financial transactions; and

- the impact on exports, imports, spending, investment and saving of FTT.

The Alliance also appears to have little appreciation of the complex practical issues that would need to be addressed if FTT were to be applied as it proposes. FTT would be a poorly targeted instrument for addressing perceived problems arising from an inequitable distribution of after-tax income, tax avoidance and speculation in financial markets.

The Alliance has not shown that FTT would be more efficient or more equitable than GST. Respected tax researchers would not support the proposition that FTT should replace GST.

# 7 CONCLUSION

Broad-based consumption or expenditure taxes, such as GST, command substantial support in the literature. They are often preferred on efficiency grounds to income taxes, and have become the most common form of new taxation within the OECD. No recognised literature could be found which advocated the adoption of a FTT-type tax in preference to a consumption or an income tax.

The FTT base would apply to a single activity - the withdrawal of funds from certain accounts. While the FTT base could be large because the volume of financial transactions in a modern economy is enormous, it does not constitute a broad-based tax.

A narrow tax base leads to an excessive distortion of economic activity. This is a particular problem where the volume of activities, such as financial transactions, is sensitive to small changes in the effective marginal tax rate (EMTR). Consumer preferences are biased. The production and consumption of goods and services that are taxed are discouraged. There are incentives for lobbying aimed at shifting the boundary between taxable and non-taxable goods and services. This wastes resources from a national viewpoint. A narrow tax base encourages avoidance activities.

FTT would impose a variable EMTR on activities. GST imposes a uniform EMTR on almost all activities. Relative to GST, FTT would discourage the use of taxable accounts, savings, exports, investment, and goods and services that incorporate high levels of financial transactions. FTT would encourage activities that involve few taxable financial transactions and imports.

Although a number of countries impose taxes on financial transactions, most notably stamp duties, no comparable country raises a significant proportion of its total revenue through such taxes. There is considerable uncertainty about the size of the FTT base.

FTT would be substantially easier than GST to avoid in respect of high value transactions where the potential gain is large. The tax authorities have little hope of controlling the jurisdiction of such transactions. Technological advances will accentuate this problem over time. The application of FTT to financial instruments such as futures, options and swaps is far from straightforward. Financial markets have a long history of innovation for the purposes of tax minimisation which is facilitated by the availability of closely substitutable products and services.

The compliance and administration costs of a comprehensive FTT that replaced GST are unlikely to be low. FTT is a non-transparent tax as the

amount paid by each taxpayer is impossible to determine. Although GST can also be criticised in this regard, it is more transparent than FTT.

A revenue neutral switch from GST to FTT would impose on households a tax burden comparable to GST. The Alliance's suggestion that households will be substantially better off with FTT is incorrect. It omits the impact on households of FTT which would be imbedded in the prices of goods and services.

The Alliance claims that GST is a highly regressive tax. This reflects a static analysis and is misleading. GST is a broadly proportional tax because each household consumes its entire income over the lives of its members if gifts and bequests are small relative to lifetime income. On a lifetime basis, GST is consistent with both vertical and horizontal equity whereas FTT would fail to satisfy both criteria.

A few researchers have suggested that a selective tax should be imposed on certain financial transactions to address perceived efficiency concerns. Their arguments rest on questionable theories and lack empirical support. The feasibility and efficacy of such a tax are highly doubtful. The advocates of FTT-type taxes do not expect them to raise anywhere near the amount of revenue (relative to GDP) that would be required to replace GST. This literature focuses on the taxation of transfers of publicly traded equity, debt and related securities. It does not provide general support for FTT as proposed by the Alliance.

The Alliance's statements on FTT demonstrate confusion about the ultimate incidence of FTT, the lifetime distribution of GST, present income tax rules and their application to financial transactions, and the impact on exports, imports, spending, investment and saving of FTT. The Alliance appears to have little understanding of the complex practical issues that would need to be addressed if FTT were to be applied as it proposes.

The onus is on the advocates of major changes to the tax system to show that their proposals satisfy recognised public policy criteria. The Alliance has not shown that FTT would be more efficient and more equitable than GST, and it is most unlikely that it could do so.

Most respected tax analysts would not support the proposal that FTT should replace GST. There are no valid efficiency or equity grounds for replacing GST with FTT as a main source of revenue.

# AUSTRALIAN TAXES COMPARABLE TO FTT

## 1 FINANCIAL INSTITUTIONS DUTY

The Campbell Committee, which enquired into the Australian financial system, noted that the state governments have limited scope to raise revenue. It reported in 1981 that:

> The Committee believes that *total abolition of specific duties in the financial area has much to commend it.* However, because of the revenue needs of the States such a course would only be feasible and acceptable to the States if there were Commonwealth compensation or replacement with another tax. The Committee offers no suggestion on this issue other than to point to the benefits of an efficient and neutral tax system. ...
>
> From the point of view of tax neutrality and hence efficiency of the financial system, the preferred form of levy is that: *for similar kinds of financial transactions there be an Australia-wide uniform duty so structured as not to impact on the choice of financing arrangements.*[63]

In the 1980s New South Wales and Victoria, acting in concert, imposed financial institutions duty (FID) in place of several taxes that applied to commercial instruments. South Australia and Western Australia quickly followed their example. With the exception of Queensland, all states and territories of Australia now levy FID.

FID is imposed when a financial institution receives money from any person or entity by way of a payment, repayment or deposit, or as income. It is levied on receipts (that is on credits) unlike FTT which is to be levied on debits.[64] The levy is generally passed on to an institution's customers. A different regime applies to the short-term money market receipts of a financial institution, or of any other person who carries on a business as an operator in that market.

The typical rate of FID is 0.06 percent which is 60 percent of the initial rate proposed by the Alliance. FID at a rate of 0.1 percent is applied in the Australian Capital Territory. All Australian states and territories except the Northern Territory cap FID at a maximum of $1,200 a transaction. A

63 Campbell *et al.* (1981).

64 The economic effect of FTT on credits would be similar to FTT on debits.

concessionary rate also applies to the short-term money markets. In 1992/93 FID raised A$972 million (about NZ$1,100 million).

Although FID is virtually the same in all the states and territories which impose it, the structure and details of the legislation adopted by each state differ.

## 1.1 FID in South Australia

The South Australian levy is governed by the Financial Institutions Duty Act 1983. A 0.065 percent tax (the primary rate) is imposed on each receipt by a financial institution subject to the maximum tax of $1,200. Only financial institutions whose "dutiable" receipts exceeded A$5 million during the preceding 12 months, or A$416,666 during the preceding month, are subject to the tax. Upon reaching either threshold, a financial institution must register and, within 21 days of the end of each month, furnish a return setting out the dutiable receipts for the preceding month. Grouping provisions have been enacted with the aim of preventing financial institutions from avoiding the thresholds. Depositors are subject to FID if they deposit money with a financial institution that has exceeded the thresholds but has not registered.

Receipts from short-term money market activities are placed in a special account. They are exempt from the standard duty. The "average daily liability" of a short-term money market operator is determined and taxed at the lower rate of 0.005 percent.

The definition of a 'financial institution' includes banks, persons whose sole or principal business is the provision of finance, dealers in securities, trustee companies, management companies within the meaning of the local companies code and pastoral companies (the equivalent of New Zealand stock and station agents). The legislation excludes certain industry-wide institutions from FID including:

- corporations whose sole or principal business is the operation of superannuation schemes;
- trustees of approved superannuation schemes; and
- life and general insurance companies.

Non-bank financial institutions are permitted to open exempt accounts at banks to avoid double duty on receipts.

Technical problems have arisen in defining receipts. FID is levied when a financial institution receives money. Money is defined to include bills of exchange and promissory notes. A receipt is defined to include a payment, repayment, deposit or subscription, and the crediting of an account. The

tax is levied on inter-account transfers of funds within a financial institution, and on transfers between ledgers and divisions in an account where different terms and conditions apply.

The broad scope of these definitions led to unintended double taxation. When a depositor passes notes, coins or cheques to a teller to be credited to an account two receipts of money are generated. The first is the bank employee's act of receiving the money or cheques and the second occurs when the funds are credited to the depositor's account. To prevent double taxation the legislation expressly provides that the first receipt is not subject to duty. The legislation also recognises that a financial institution may credit accounts without an inflow of money to the institution and without the instigation of a third party who is a debtor or creditor of the bank. Consequently the legislation provides that credit entries made "solely in accordance with the institution's internal accounting policies are not deemed to be receipts".

A person in South Australia who deals in securities, bills of exchange, promissory notes or certificates of deposit in the short-term money market may apply for registration as a short-term money market operator (STMMO). A STMMO, other than a registered financial institution, is entitled upon application and approval to open a short-term dealing account at a bank that is a registered financial institution. This enables money received by the STMMO to be quarantined. A STMMO is prohibited from depositing into the account any money other than that arising from short-term money market activities. Money which the operator transfers from an account kept in an interstate bank located in another prescribed state or territory is exempt from FID.

In South Australia FID is payable on the receipts of a financial institution in the state and on the receipt of money outside the state "in pursuance of a transaction of which South Australian law is the proper law". The general thrust of the legislation is that if money is received in South Australia for transmission to another state it may be subject to FID both in South Australia and in the other state. The states have not reached an agreement to avoid multiple taxation on funds flowing across their borders.

### 1.2 FID in Other States

The New South Wales legislation provides for the FID to be levied through the Stamp Duties Act, and it is imposed as a category of stamp duty. Although the tax base is the same as in South Australia, the charge is levied through more complex provisions.

Registered persons must file a FID return within 21 days after the end of the month and pay the amount of FID shown on the return. Designated persons include financial institutions (which broadly follow the South

Australian definition), pastoral companies, credit providers and retailers. (South Australia excludes credit providers and retailers.)

FID was imposed in Victoria from December 1982 by the Financial Institution Duty Act 1982. The legislation is similar to that of South Australia. However, unlike South Australia and New South Wales, Victoria does not generally attempt to tax receipts that relate to the state but are received outside of it.

The Western Australian Financial Institutions Duty Act 1983 first applied in January 1984. The legislation is similar to that of South Australia, New South Wales and Victoria. The initial definition of a 'financial institution' included credit providers. They were removed from the ambit of FID from January 1985. The Western Australian legislation lacks any territorial provisions and therefore FID is payable only on money received within the state.

The Tasmanian Financial Institutions Duty Act 1986 first applied in October 1986. It closely follows the South Australian model.

### 1.3 Comment on FID

Snowden (1994) suggests that the story of Jurassic Park parallels many aspects of the FID which:

> ... like its prehistoric comparison, [FID] initially appeared harmless in its application but over time has become out of place and inappropriate to cope with modern day financial transactions. FID too has the potential to wreak havoc stemming from its inability to adequately comprehend financial products and its uncertainty of application to the myriad of complex financial transactions.

Snowden argues that FID has failed to achieve the objectives intended by the Campbell enquiry. FID has lead to many uncertainties and places a heavy burden on those firms that are required to comply with it. A number of committees have recommended changes to FID, including the Collins report in 1988 and a 1990 FID Review Committee.[65] A discussion paper released by the latter was reported by Snowden to have found that:

- there are uncertainties and difficulties in interpreting the legislation as it applies to individual transactions;
- there is difficulty in computerising FID routines to cover all transactions undertaken by a financial institution;

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65 Reported by Snowden (1994).

- the efficiency of the financial system is adversely affected because of the difficulties encountered by taxpayers in determining their FID liability in respect of non-standard transactions;

- FID is not flexible enough to adapt to changes in financial markets and the application of technology to the business sector; and

- FID imposes unreasonable compliance and administration costs, and accordingly creates incentives for avoidance.

Snowden's main conclusion is that a tax which appeared to be simple to administer has proved to be complex, uncertain and distortionary.

## 2 BANK ACCOUNT DEBITS TAX

A bank accounts debits tax was first levied by the Commonwealth government in April 1983. From 1991 the revenue raised by the tax was directed to the state and territory governments. In 1994 the state and territory governments assumed full responsibility for debits tax (DT).

New South Wales imposes a bank debits tax at rates ranging from A$0.30 for transactions up to A$100 to a maximum of A$4 for transactions over $10,000. Victoria and South Australia apply DT at similar rates to New South Wales. The Australian Capital Territory is the only territory or state that does not levy DT.

DT applies to bank accounts that provide cheque facilities and to building society and credit union accounts with a payment order facility. Collins described DT as "surely the worst tax in the [Federal Government's] armoury", and he advised that "the current review by the States of financial institutions taxes would be well-advised to recommend the abolition" of DT.[66] DT has been retained. In 1992/93 it raised A$504 million.

Joss (1994) outlined some of the distortions caused by FID, DT, or both. They:

- encourage the holding of multiple accounts. Withdrawals from accounts without cheque facilities are not subject to DT;

- discourage the use of automatic teller machines which dispense $20 and $50 bills because the rate of tax on a withdrawal of $99.99 is 30 cents whereas it is 70 cents on $100 to $500;

- discourage competition among institutions. FID and DT reduce the advantage that may be obtained from withdrawing funds from an account with one institution and placing them on deposit at another;

66 Collins (1993).

- encourage businesses to accumulate cash receipts to take advantage of the maximum tax payable on deposits. Similarly, electronic fund transfers are hindered because payments would be made as they occur rather than being consolidated. Cash receipts are also transported to Queensland to avoid FID;

- discourage automatic sweep facilities which transfer funds from accounts in credit to those in debit; and

- impair the competitiveness of Australian financial institutions. Foreign institutions are able to provide some services offshore that compete with domestic services but avoid FID and DT.

## Table 6
## Summary of the Efficiency and Equity of FTT and GST

| Efficiency Issues | FTT | GST |
|---|---|---|
| Breadth of tax base | Narrow<br>• The tax base comprises withdrawals from taxable accounts. | Broad<br>• The tax base comprises almost all consumption spending. |
| Effective rate of tax on activities | Highly variable<br>• The effective rate of tax would vary depending on the extent to which taxable financial transactions are incurred.<br>• The effective rate of tax on financial transactions would vary depending on the duration of the deposit and the amount of value added. It would be very high for short-term deposits (for example immediate withdrawal of welfare benefits that are direct credited to bank accounts).<br>• Investment and savings would be discouraged because related financial transactions would be subject to FTT.<br>• FTT would cascade as no credit is given for tax already paid. | Broadly uniform<br>• A uniform EMTR is applied to almost all activities. Exceptions, which are few, arise for administrative and compliance reasons.<br>• Neutral effect on investment and savings. GST payable on investment is offset against GST payable on outputs or refunded.<br>• No cascade effect in most cases, i.e. where goods and services are supplied to registered traders by another registered trader. A cascade effect may arise where exempt services, such as financial services, are supplied to a registered trader as no credit is given for GST paid on inputs used by the exempt trader, or where a non-registered person supplies goods and services to a registered trader. |

## Table 6 (Continued)
## Summary of the Efficiency and Equity of FTT and GST

| Efficiency Issues | FTT | GST |
|---|---|---|
| Impact on exports | Discourage<br>• No relief provided for FTT incurred in the production and distribution of exports. | Neutral<br>• Exports are zero rated and therefore do not bear GST. |
| Impact on imports | Largely encouraged<br>• FTT will apply if imported goods are paid for by withdrawing funds from a taxable account in New Zealand but other financial transactions that take place before they are imported would escape FTT. If imports are funded in other ways, for example by credit provided overseas or from export receipts that are not remitted to New Zealand, they would escape FTT. Such imports would be encouraged relative to domestic production.<br>• High value financial transactions may take place overseas to avoid FTT. Financial services provided in other jurisdictions may be preferred to domestic services.<br>• Overseas financial services supplied direct to firms or consumers would escape FTT. | Largely neutral<br>• Imported goods are subject to GST at the border. This treats imports on the same basis as domestic production.<br>• Overseas services supplied to registered traders are subject to GST. Services that are supplied direct to final consumers escape GST. |

**Table 6 (Continued)**
**Summary of the Efficiency and Equity of FTT and GST**

| Efficiency Issues | FTT | GST |
|---|---|---|
| Impact on financial markets | Highly distortionary<br>• Increase transaction costs.<br>• Reduce liquidity.<br>• Raise the cost of capital.<br>• Bias the choice of financial instrument.<br>• Discourage financial intermediation.<br>• Short-term deposits would be particularly discouraged. This would encourage consumers to hold higher levels of cash than otherwise and to transfer negotiable instruments rather than clear them through the banking system. | Limited distortion<br>• Most financial services are exempt from GST for administrative reasons. Thus the value added generated by financial institutions is not generally subject to GST where services are supplied directly to final consumers. Financial services supplied to registered traders are penally treated because credit is not provided for GST paid on inputs bought by financial institutions. |

## Table 6 (Continued)
## Summary of the Efficiency and Equity of FTT and GST

| Efficiency Issues | FTT | GST |
|---|---|---|
| Avoidance | High risk<br>• The imposition of a tax on a narrow base would provide taxpayers with considerable scope to avoid the tax. Financial transactions are sensitive to small changes in taxes.<br>• Money is fungible. Advances in technology and the flexibility of financial markets pose a major risk in respect of high value transactions.<br>• Transaction taxes on share trading in Sweden and on sales and purchase of forward foreign exchange in Italy resulted in substantial avoidance. Both taxes were dropped after a short period. | Low to moderate risk<br>• GST is a broad-based tax and the rate of tax is uniform. These and other features diminish the scope for avoidance.<br>• The invoice system together with credits for GST paid on inputs helps to contain avoidance problems. |
| Administration and compliance costs | Moderate to high<br>• High transition costs. Both GST and FTT are to apply initially.<br>• Most costs will fall on financial institutions and IRD. Other firms would be relieved of the costs of complying with GST.<br>• Administration and compliance costs might be low to moderate in the longer term if a simple low-rate tax were applied. Such a tax would not raise the required revenue. An FTT along the lines proposed by the Alliance would be at least moderately costly to collect and comply with. | Moderate<br>• Compliance costs were estimated to be equal to 7.3 percent of revenue raised. |

**Table 6 (Continued)**
**Summary of the Efficiency and Equity of FTT and GST**

| Efficiency Issues | FTT | GST |
|---|---|---|
| Transparency | Not transparent | Moderately transparent |
| Targeted at perceived problems | Poorly targeted<br>• Better instruments are available to address perceived problems relating to the distribution of after-tax income, avoidance and speculation should government action be justified. | Not applicable |
| Impact on inflation | Similar impact on the overall price level and rate of change in prices to GST.<br>• If FTT and GST raise the same revenue their overall impact on prices would be broadly similar.<br>• The cost of taxable financial transactions would rise, in some cases substantially, while the prices of some other goods and services would be lower than otherwise. | Similar impact on the overall price level and the rate of change in prices to FTT.<br>• Cost of financial services would be lower than with FTT.<br>• The prices of some other goods and services would be higher with FTT while others would be lower. |
| Government revenue | Assumed to raise equivalent revenue to GST. | Assumed to raise equivalent revenue to FTT. |

**Table 6 (Continued)**
**Summary of the Efficiency and Equity of FTT and GST**

| Equity Issues | FTT | GST |
|---|---|---|
| Horizontal equity | Inequitable<br>• People can be expected to have fully adjusted to GST. Thus any change in their relative tax position will breach the horizontal equity criterion.<br>• Amount of tax paid is unrelated to income or consumption which are the usual benchmarks. | Equitable<br>• Amount of tax paid is broadly proportional to life-time consumption and income. |
| Vertical equity | Inequitable<br>• Amount of tax paid is unrelated to income or consumption. | Equitable<br>• Amount of tax paid is broadly proportional to life-time consumption and income. This is the appropriate benchmark.<br>• Low income people were compensated on the introduction of GST. |

# BIBLIOGRAPHY


Aaron, Henry J. and Galper, Harvey (1984), "A Tax on Consumption, Gifts and Bequests and Other Strategies for Reform", in Pechman, Joseph A. (ed.), *Options for Tax Reform*, Brookings Institution, Washington D.C. and the Financial Executives Research Foundation, Morristown, New Jersey.

___ and Pechman, Joseph A. (eds.) (1981), *How Taxes Affect Economic Behavior*, Brookings Institution, Washington D.C.

Alliance (1993a), "Executive Summary: Alliance Taxation Policy", Unpublished paper dated October 3.

___ (1993b), "In New Zealand's Interest: Briefing by the Incoming Alliance Government for the Treasury", Unpublished paper dated October 3.

___ (1993c), "Executive Summary: The Financial Transactions Tax - Questions and Answers", Unpublished paper dated October 3.

___ (1994a), "Alliance Economic Policy Design: A Discussion Paper to Foster Understanding Between the Financial and Corporate Sectors and the Alliance", Unpublished paper dated September 28.

___ (1994b), "Questions and Answers Concerning Alliance Economic Policy Design: A Background Paper for Political Journalists", Unpublished paper dated September 28.

___ (1995), "A Plan for All New Zealanders: 1995 Alliance Alternative Budget", Unpublished and undated paper.

___ (1996a), "Financial Transactions Tax: The Alliance Plan to Abolish GST", Unpublished and undated paper.

___ (1996b), *1996 Alliance Manifesto*, Alliance Campaign, Auckland.

___ (1996c), The Alliance 1996 Alternative Budget, Unpublished paper, June.

Amihud, Yakov and Mendelson, Haim (1986), "Asset Pricing and the Bid-Ask Spread", *Journal of Financial Economics*, 17, 223-249.

Andrews, William D. (1974), "A Consumption-Type or Cash Flow Personal Income Tax", *Harvard Law Review*, 87, 6 (April), 1113-1188.

— (1980), "A Supplemental Personal Expenditure Tax", in Pechman, Joseph A. (ed.), *What Should be Taxed: Income or Expenditure?*, Brookings Institution, Washington D.C.

Atkinson, Anthony B. and Stiglitz, Joseph E. (1976), "The Design of Tax Structure: Direct Versus Indirect Taxation", *Journal of Public Economics*, 6, 55-75.

Barsky, Robert B. and De Long, J. Bradford (1990), "Bull and Bear Markets in the Twentieth Century", *Journal of Economic History*, 50, 2, 265-281.

Berkman, Henk and Eleswarapu, Venkat R. (1996), "Short Term Trading and the Liquidity Premium: A Test Using Bombay Stock Exchange Data", Unpublished paper, Department of Accounting and Finance, the University of Auckland, Auckland.

Birch, W. F. (1994), *Financial Statements of the Government of New Zealand: For the Year Ended 30 June 1994*, Office of the Minister of Finance, Wellington.

— (1995), *Financial Statements of the Government of New Zealand: For the Year Ended 30 June 1995*, Office of the Minister of Finance, Wellington.

— (1996), *Pre-Election Economic and Fiscal Update*, Office of the Minister of Finance, Wellington.

Bird, Richard and Cnossen, Sijbren, (1990), "Introduction and Summary", in Cnossen, Sijbren and Bird, Richard (eds.), *The Personal Income Tax: Phoenix from the Ashes?*, North-Holland, Amsterdam.

Black, Fischer (1986), "Noise", *Journal of Finance*, 41, 3, 529-543.

Boskin, Michael J. (1978), "Taxation, Saving, and the Rate of Interest", *Journal of Political Economy*, 86, 2, Part 2, S3-S27.

— (1988), "Tax Policy and Economic Growth: Lessons From the 1980s", *Journal of Economic Perspectives*, 2, 4 (Fall), 71-97.

Bossons, John (1970), "The Value of a Comprehensive Tax Base as a Tax Reform Goal", *Journal of Law and Economics*, 13, 327-363.

Bradford, David F. (1980a), "The Case for a Personal Consumption Tax", in Pechman, Joseph A. (ed.), *What Should be Taxed: Income or Expenditure?*, Brookings Institution, Washington D.C.

___ (1980b), "The Economics of Tax Policy Toward Savings", in von Furstenberg, George M. (ed.), *The Government and Capital Formation*, Ballinger, Cambridge, Massachusetts.

Brealey, Richard A. and Myers, Stewart C. (1991), *Principles of Corporate Finance*, McGraw-Hill, New York.

Brash, D. T. (1995), "Financial Transactions Tax", Unpublished letter to Mr Max Bradford, Chair, Finance and Expenditure Committee, Parliament House, dated 17 August 1995.

___ (1996), "New Zealand and International Financial Markets: Have We Lost Control of Our Own Destiny?", Unpublished address to the 31st Foreign Policy School, 29 June, University of Otago, Dunedin.

Campbell, J. K. *et al.* (1981), *Australian Financial System: Final Report of the Committee of Inquiry*, Australian Government Publishing Service, Canberra.

Campbell, John Y. and Froot, Kenneth A. (1994), "International Experiences with Securities Transaction Taxes", in Frankel, Jeffrey A. (ed.), *The Internationalization of Equity Markets*, University of Chicago Press, Chicago.

Caspersen, Erik and Metcalf, Gilbert (1994), "Is a Value Added Tax Regressive?: Annual Versus Lifetime Incidence Measures", *National Tax Journal*, 47, 731-746.

Cnossen, Sijbren and Bird, Richard (eds.) (1990), *The Personal Income Tax: Phoenix from the Ashes?*, North-Holland, Amsterdam.

___ and Messere, Ken (1990), "Personal Income Tax Reforms in OECD Member Countries", in Cnossen, Sijbren and Bird, Richard (eds.), *The Personal Income Tax: Phoenix from the Ashes?*, North-Holland, Amsterdam.

Collins, David J. (1993). "Problems with State Taxes: A Reformer's View", in Collins, D. J. (ed.), *Vertical Fiscal Imbalance and the Allocation of Taxing Powers*, Australian Tax Research Foundation, Conference Series No. 13.

Cutler, David M., Poterba, James M. and Summers, Lawrence H. (1989), "What Moves Stock Prices?" *Journal of Portfolio Management*, Spring, 4-12.

Diewert, W. Erwin and Lawrence, Denis A. (1994), *The Marginal Costs of Taxation in New Zealand*, New Zealand Business Roundtable, Wellington.

Edwards, Franklin R. (1992), "Taxing Transactions in Futures Markets: Objectives and Effects", *Journal of Financial Services Research*, 6, 75-91.

Eichengreen, Barry, Tobin, James and Wyplosz, Charles (1995), "Two Cases for Sand in the Wheels of International Finance", *Economic Journal*, 105, January, 162-172.

Eleswarapu Venkat R. and Krishnamurti, Chandrasekhar (1995), "Do 'Speculative Traders' Increase Stock Price Volatility? Empirical Evidence from the Bombay Stock Exchange", Unpublished paper, Department of Accounting and Finance, the University of Auckland, Auckland.

Fama, Eugene (1990), "Stock Returns, Expected Returns, and Real Activity", *Journal of Finance*, 45, 4, 1089-1108.

___ (1991), "Efficient Capital Markets II", *Journal of Finance*, 46, 5, 1575-1617.

Feldstein, Martin (1976), "On the Theory of Tax Reform", *Journal of Public Economics*, 6, 77-104.

___ (1978), "The Welfare Cost of Capital Income", *Journal of Political Economy*, 86, 2, Part 2, S29-S51.

___ (1983), *Capital Taxation*, Harvard University Press, Cambridge Massachusetts.

French, Kenneth R., Schwert, G. William, and Stambaugh, Robert F. (1987), "Expected Stock Returns and Volatility", *Journal of Financial Economics*, 19, 3-29.

Galper, Harvey (1985) "The Tax Proposals of the U.S. Treasury Department", Unpublished paper prepared for Conference on Changing the Tax Mix, Monash University, February 28 - March 2.

Garber, Peter and Taylor, Mark P. (1955), "Sand in the Wheels of Foreign Exchange Markets: A Sceptical Note", *Economic Journal*, 105, January, 173-180.

Goode, Richard (1980) "The Superiority of the Income Tax", in Pechman, Joseph A. (ed.), *What Should be Taxed: Income or Expenditure?*, Brookings Institution, Washington D.C.

___ (1984), "Lessons From Seven Decades of Income Taxation", in Pechman, Joseph A. (ed.), *Options for Tax Reform*, Brookings Institution, Washington D.C.

___ (1990), "Key Issues in the Reform of Personal Income Taxes", in Cnossen, Sijbren and Bird, Richard (eds.), *The Personal Income Tax: Phoenix from the Ashes?*, North-Holland, Amsterdam.

___ (1991), "Should Reformers Aim at an Improved Income Tax or at an Expenditure Tax?", *Australian Tax Forum*, 8, 429-456.

Graetz, Michael J. (1980), "Expenditure Tax Design", in Pechman, Joseph A. (ed.), *What Should be Taxed: Income or Expenditure?*, Brookings Institution, Washington D.C.

___ (1984), "Can the Income Tax Continue to Be the Major Revenue Source?", in Pechman, Joseph A. (ed.), *Options for Tax Reform*, Brookings Institution, Washington D.C.

Grundfest, Joseph A. (1990), "The Damning Facts of a New Stocks Tax", *The Wall Street Journal*, 23 July.

___ and Shoven, John B. (1991), "Adverse Implications of a Securities Transactions Excise Tax", *Journal of Accounting, Auditing & Finance*, 6, 409-442.

Hakkio, Craig S. (1994), "Should we Throw Sand in the Gears of Financial Markets?", *Economic Review*, Federal Reserve Bank of Kansas City, second quarter, 17-30.

Hawtrey, Kim (1993), "Finance Taxes in Australia", *Australian Tax Forum*, 10, 251-337.

Heady, Christopher (1993), "Optimal Taxation as a Guide to Tax Policy: A Survey", *Fiscal Studies*, 14, 1, 15-41.

Henderson, Gordon D. (1984), "Alternatives to the Income Tax", in Pechman, Joseph A. (ed.), *Options for Tax Reform*, Brookings Institution, Washington D.C.

Hubbard, R. Glenn (1993), "Securities Transactions Tax: Tax Design, Revenue, and Policy Considerations", *Tax Notes*, November 22, 986-999.

Joss, Robert (1994), "The Impact of Transaction Taxes", Unpublished address to the Committee for Economic Development of Australia by the managing director and chief executive officer, Westpac Banking Corporation, Melbourne.

Kaldor, Nicholas (1955), *An Expenditure Tax*, George Allen & Unwin, London.

Keen, Michael (1991), "Tax Reform", *Oxford Review of Economic Policy*, 7, 3, 50-67.

Keynes, J. M. (1936), *The General Theory of Employment, Interest and Money*, Macmillan, London.

Kiefer, Donald W. (1990), "The Securities Transactions Tax: An Overview of the Issues", *Tax Notes*, August 13, 885-901.

Kupiec, Paul, White, A. Patricia, Duffee, Gregory (1993), "A Securities Transactions Tax: Beyond the Rhetoric", *Research in Financial Services Private and Public Policy*, 5, 55-76.

Meade, J. E. *et al.* (1978), *The Structure and Reform of Direct Taxation*, Institute of Fiscal Studies, George Allen & Unwin, London.

Mieszkowski, Peter (1980), "The Advisability and Feasibility of an Expenditure Tax System", in Aaron, Henry J. and Boskin, Michael J. (eds.), *The Economics of Taxation*, Brookings Institution, Washington D.C.

Milesi-Ferretti, Gian Maria and Roubini, Nouriel (1995), "Growth Effects of Income and Consumption Taxes: Positive and Normative Analysis", Working Paper 5317, National Bureau of Economic Research, Cambridge.

Modigliani, Franco (1996), "Where Credit is Due", *The Economist*, August 31st - September 6th, 4.

*New Zealand Herald* (1994), "Alliance Sets Out Rigid Terms for Deal on Coalition", *New Zealand Herald*, 14 November 1994.

___ (1996), "Alliance Plans Transaction Tax", *New Zealand Herald*, 13 June 1996.

Organisation for Economic Cooperation and Development (1989), *OECD Economic Surveys: New Zealand 1988/1989*, Organisation for Economic Cooperation and Development, Paris.

___ (1995), *Revenue Statistics of OECD Member Countries 1965-1994*, Organisation for Economic Cooperation and Development, Paris.

Pechman, Joseph A. (ed.) (1977), *Comprehensive Income Taxation*, Brookings Institution, Washington D.C.

___ (ed.) (1980), *What Should be Taxed: Income or Expenditure?*, Brookings Institution, Washington D.C.

___ (ed.) (1984), *Options for Tax Reform,* Brookings Institution, Washington D.C.

___ (1989), *Tax Reform, the Rich and the Poor,* Harvester Wheatsheaf, New York.

___ (1990), "The Future of the Income Tax", *American Economic Review,* 80, 1, 1-20.

Roll, Richard (1989), "Volatility, International Market Links, and their Implications for Regulatory Policy", *Journal of Financial Services Research,* 3, 211-246.

Ross, Stephen A. (1989), "Commentary: Using Tax Policy to Curb Speculative Short-Term Trading", *Journal of Financial Services Research,* 3, 117-120.

Sandford, Cedric and Hasseldine, John (1992), *The Compliance Costs of Business Taxes in New Zealand,* Institute of Policy Studies, Wellington.

Schwert, G. William (1990), "Stock Market Volatility", *Financial Analysts Journal,* May-June, 23-34.

___ and Seguin, Paul J. (1993), "Securities Transaction Taxes: An Overview of Costs, Benefits and Unresolved Questions", *Financial Analysts Journal* , September - October, 27-35.

Shome, Parthasarathi and Stotsky, Janet G. (1995), "Financial Transaction Taxes", IMF Working Paper 95/77, Fiscal Affairs Department, International Monetary Fund, Washington.

Slemrod, Joel (1990), "Optimal Taxation and Optimal Tax Systems", *Journal of Economic Perspectives,* 4, 1, 157-178.

Snowden, Richard (1994), "Financial Institutions Duty - Jurassic Park Revisited", *Australian Tax Review,* 23.

Spahn, Paul Bern (1995), "International Financial Flows and Transaction Taxes: Survey and Options", IMF Working Paper 95/60, Fiscal Affairs Department, International Monetary Fund, Washington.

Stiglitz, Joseph E. (1988), *Economics of the Public Sector,* Norton, New York.

___ (1989), "Using Tax Policy to Curb Speculative Short-Term Trading", *Journal of Financial Services Research,* 3, 101-115.

Stulz, René M. (1994), "Comment", in Frankel, Jeffrey A. (ed.), *The Internationalization of Equity Markets*, University of Chicago Press, Chicago.

Subrahmanyam, Avanidhar (1996), "Transaction Taxes and Financial Market Equilibrium", Unpublished paper, Anderson Graduate School of Management, University of California at Los Angeles, 6 August, Los Angeles.

Summers, Lawrence H. (1981), "Capital Taxation and Accumulation in a Life Cycle Growth Model", *American Economic Review*, 71, 533-544.

___ and Summers, Victoria P. (1989), "When Financial Markets Work Too Well: A Cautious Case for a Securities Transactions Tax", *Journal of Financial Services Research*, 3, 261-286.

___ and Summers, Victoria P. (1990), "The Case for a Securities Transactions Excise Tax", *Tax Notes*, August 13, 879-884.

Tait, John (1995), "Real Time Gross Settlement and the Development of the Exchange Settlement Account System (ESAS)", *Reserve Bank Bulletin*, 58, 2, 79-84.

Thorp, Clive (1995), "Alliance's Financial Transactions Tax Contains Obvious Flaws", *National Business Review*, 18 August.

Tobin, James (1978), "A Proposal for International Monetary Reform", *Eastern Economic Journal*, 4, July - October, 153-159.

___ (1984), "On the Efficiency of the Financial System, *Lloyds Bank Review*, July, 1-15.

Treasury Department (1977), *Blueprints for Basic Tax Reform*, US Department of the Treasury, Washington D.C.

___ (1984), *Tax Reform for Fairness, Simplicity, and Economic Growth*, US Department of the Treasury, Washington D.C.

Tripe, David (1994), "Loopholes in Alliance Tax Plan", *The Dominion*, 16 September.

Umlauf, Steven R. (1993), "Transaction Taxes and the Behaviour of the Swedish Stock Market", *Journal of Financial Economics*, 33, 227-240.

Weston, J. Fred and Copeland, Thomas E. (1992), *Managerial Finance*, Dryden, Fort Worth.