The tax treatment of loans and forward contracts in a foreign currency

An officials' issues paper on suggested changes to use of determinations G9B and G14A

November 2003

Prepared by the Policy Advice Division of the Inland Revenue Department and the New Zealand Treasury

First published in November 2003 by the Policy Advice Division of the Inland Revenue Department,
P O Box 2198, Wellington, New Zealand.

The tax treatment of loans and forward contracts in a foreign currency.
ISBN 0-478-27111-5

CONTENTS

Chapter 1 INTRODUCTION 1

The determinations 1
Suggested changes 2
Submissions 2

Chapter 2 THE APPLICATION OF THE DETERMINATIONS 4

Suggested changes 6
De minimis limit 7
Timing of legislation 9
Benefits 9
Costs 10

Appendix 1 CURRENT LEGISLATION 11

Appendix 2 A DETAILED EXAMPLE DEMONSTRATING THE USE OF G9A AND G9B 16

Chapter 1

INTRODUCTION

1.1 Determinations G9A and G9B govern the treatment of foreign currency denominated loans, and G14 and G14A govern the treatment of forward contracts denominated in a foreign currency. Although each of the determinations deals with slightly different financial arrangements, a problem has arisen in relation to both G9B and G14A.

1.2 Following enactment of the accrual reforms in 1999, taxpayers could elect to use determinations G9B and G14A in relation to all such financial arrangements by using the methods described within for their returns for 1998-1999, or 1999-2000. For taxpayers who did not make such an election then it is now effectively necessary to continue to use determinations G9A and G14. They are now denied access to determinations G9B and G14A, which means they have to recognise unrealised and unanticipated gains and losses each year for tax purposes.

1.3 This officials' issues paper examines the problem and makes a number of suggestions for legislative changes to use of determinations G9B and G14A. It seeks views on the suggested changes before officials make any recommendations to the government on the matter. Depending upon the government's decisions, amending legislation could be introduced next year.

The determinations

1.4 The fundamental difference between these sets of determinations is that determinations G9A and G14 recognise both anticipated and unanticipated gains and losses arising in each year, whilst determinations G9B and G14A recognise only anticipated and realised gains and losses in each year, with unrealised, unanticipated gains/losses arising not being recognised until the last year in which the arrangement ends, or is deemed to end. In other words, determinations G9B and G14A will recognise unanticipated, but realised, gains/losses arising on interest flows or repayments of principal during the lifetime of the arrangement, as do G9A and G14, but the unrealised gains/losses arising from the change in value at the year end because of the exchange rates will not be recognised until the final year of the arrangement.

1.5 Clearly, there is a benefit in using determinations G9B and G14A in that the unexpected fluctuations which can otherwise occur are minimised. Currently, significant unrealised gains and losses can be taxable in each year, depending on the spot rate at the year end. This rate, and therefore the swing, cannot be predicted with any certainty. Using G9B and G14A means that the major unknown factor will arise in the year in which the arrangement ends when the actual costs and income are netted against the taxed sums over the whole period. This is closer to the economic reality and is closer to the scheme of the accrual legislation, which is to recognise only anticipated

gains and losses over the life of the arrangement, and not to require unnecessary compliance costs.

Suggested changes

1.6 Officials suggest that it should be mandatory for all or most taxpayers who could use determinations G9B and G14A to do so for all arrangements and contracts which are covered by these determinations for all returns for the years ended on or after 31st March 2006. All arrangements in existence would have to be brought into line with the determinations.

1.7 The change in method by a taxpayer would require the calculation of a transitional adjustment in the year of change.

1.8 Determinations G9A and G14 would remain in existence, providing a method of calculation to be used for arrangements with no predetermined end date when there is no forward rate so the anticipated gain cannot be calculated.

1.9 It may be appropriate to provide an exemption from this requirement for smaller corporates. Certain exemptions already exist for natural persons who satisfy the definition of a "cash basis person" under section EH 27 of the Income Tax Act 1994. An exemption for smaller corporates would be in recognition of the fact that there will be costs incurred in making the required calculations under determinations G9B and G14A. These costs would be offset by the gains in certainty, but the issue might not be so straightforward for this particular group of taxpayers.

1.10 Other benefits arising from the use of determinations G9B and G14A are that it would:

- Improve the consistency of treatment between a foreign denominated loan arrangement and that of a New Zealand dollar denominated loan.
- Assist all taxpayers to gain greater certainty in their calculations of provisional tax. Currently, as significant unrealised gains/losses can be taxable in each year, planning and the calculation of provisional tax payments can be a difficult exercise.

Submissions

1.11 Submissions are invited on:

- all aspects of the suggested mandatory application of determinations G9B and G14A;

- whether there should be a de minimis, or minimum value, exemption for small corporates, and if so how it should be calculated, and at what level it should stand; and

- whether the period of four years before the use of a new or amended determination becomes mandatory should be reduced.

1.12 Submissions should be addressed to:

Determinations
The General Manager
Policy Advice Division
Inland Revenue Department
PO Box 2198
WELLINGTON

Or email: policy.webmaster@ird.govt.nz

1.13 The closing date for submissions is 17 December 2003. Submissions should contain a brief summary of their main points and recommendations.

1.14 Submissions may be published on the web site of the Policy Advice Division of Inland Revenue, in the interests of making the information widely available. Should you object to your submission being published in this way, please clearly specify this in your submission.

Chapter 2

THE APPLICATION OF THE DETERMINATIONS

2.1 The accrual rule legislation under Division 2 (sections EH 20 to EH 59 of the Income Tax Act 1994[1]) was enacted in 1999, along with determinations G9B and G14A, after considerable consultation. The issues that led to these determinations were discussed in the 1997 government discussion document *The Taxation of Financial Arrangements*.[2] There was consultation on the determinations whilst they were in draft form, and then they were published in the New Zealand *Gazette* on 7 May 1998 and in the May 1998 *Tax Information Bulletin* Volume 10, No. 5. There are currently a number of concerns about the legislation as it stands.

2.2 Taxpayers who failed to elect in to determinations G9B and G14A are excluded from now doing so as the election window has closed. This means that they have to recognise unrealised and unanticipated gains and losses each year for tax purposes. They will have received a deduction for their unrealised losses against their profits, and will have been taxed on their unrealised gains. It is not possible for them to avoid this. When the two-year window for the election was introduced it was believed that taxpayers would take the opportunity to opt in sooner rather than later.

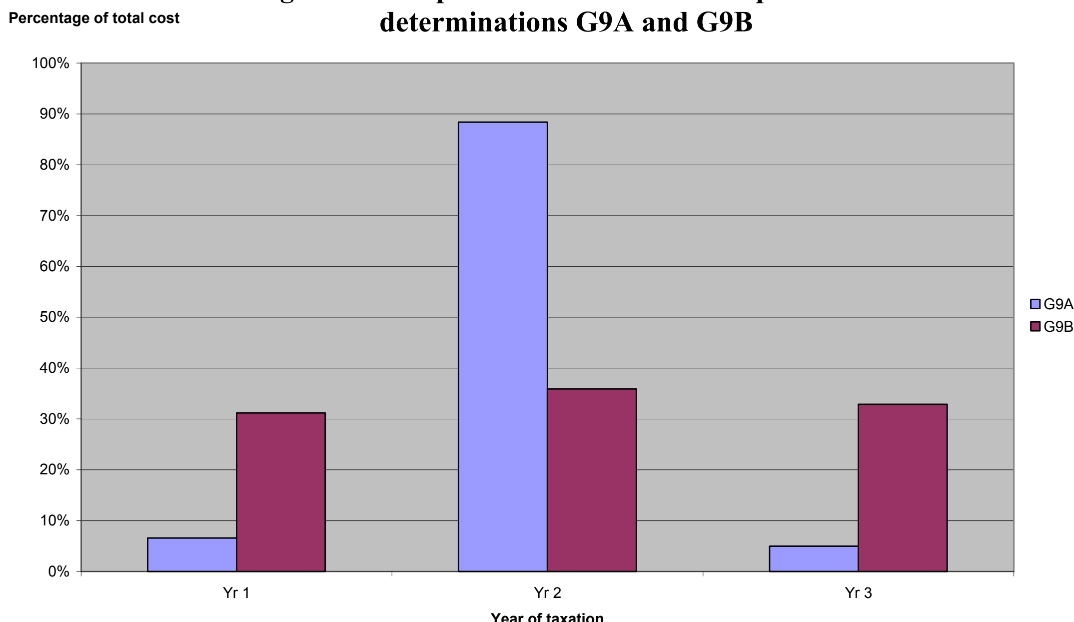
2.3 The reasoning behind the window was twofold. Firstly, it was to ensure that all taxpayers elected in sooner rather than later, so a consistency in treatment of arrangements within the accrual rules could be obtained at the earliest opportunity. Secondly, it was to minimise the opportunities for taxpayers to manipulate their choice of date of entry into the determinations, thus protecting the revenue. It was not anticipated that some taxpayers would not make the election within the permitted period, and so be denied the opportunity to access the benefits of determinations G9B and G14A in the future.

2.4 The unrealised gains and losses that fall to be taxed each year outside of determinations G9B and G14A are random. They depend on the spot rate at the year end, which can fluctuate significantly and is a rate over which the taxpayer can have no control. The sums involved, which are notional to the extent that they are not realised, can be very large.

2.5 Figure 1 demonstrates very simply the difference in how the cost is spread over three years, using each method, for a fairly straightforward transaction to which determinations G9A/G9B can apply. The full detail of the example can be found in Appendix 2.[3]

---

[1] See Appendix 2 for full details.
[2] Chapter 8, "The Taxation of Foreign Exchange Loans and Forward Contracts".
[3] The example at Appendix 2 is taken from *The New Zealand Accrual Regime – a practical guide*, 2nd Edition, by Susan Glazebrook, Andra Glyn-Jones, Jan James, Greg Cole (CCH New Zealand Ltd).



2.6 Beyond the practical problems for taxpayers, there is also a problem in that the scheme of the accruals legislation generally seeks to treat all forms of debt as consistently as possible, so as to minimise the impact of tax on the structuring of debt instruments. This means that, so far as possible, the treatment of New Zealand dollar denominated arrangements and foreign denominated arrangements should lead to the same results. All gains from a financial arrangement should be taxed, and the expected or anticipated gains spread over the life of an arrangement. This is what is achieved under determinations G9B and G14A, but not determinations G9A and G14.

2.7 Other problems are created as a consequence of the effect of recognition of unrealised gains and losses. The tax profit is divorced from the "cash" profit, and this makes it difficult to estimate the provisional tax that needs to be paid by taxpayers in the course of the year. The provisional tax is based on the anticipated profit or loss that the business thinks it will make for the year. The spot rate at the future balance sheet date will, of course, not be known in the year, so businesses find it difficult to guess what the value of their financial arrangements will be at the year end. This means that they are unable to quantify accurately their expected profit for the purposes of calculating their provisional tax.

2.8 Some taxpayers made the election under determinations G9B and G14A at the appropriate time. Their gains and losses which are both anticipated and unrealised are spread over the period of the arrangement. A transitional adjustment was made in the year of change, and for all years after that they have neither recognised unanticipated and unrealised exchange profits, nor unanticipated and unrealised exchange losses, for tax purposes. Their tax liability is calculated in accordance with the scheme of the accruals legislation.

Suggested changes

2.9 In view of the concerns raised with regard to the operation of the determinations as they currently stand, and having regard to those issues raised above, there is some merit in giving consideration to amending the determinations and legislation to enable those taxpayers who did not elect into determinations G9B and G14A in the time allowed to now opt in. In framing such an amendment, it is important to have regard to those taxpayers that did elect to use determinations G9B and G14A for 1998/99 or 1999/2000. For that reason any change will have effect only for future years.

2.10 Officials suggest amending determinations G9B and G14A under the authority of section 90AC (1) (d) of the Tax Administration Act to:

- Remove the requirement in determinations G9B(3)(a) and G14A(3)(a) to make the election by using the method in the 1998-1999 or 1999-2000 return.

- Replace it with the requirement to use determinations G9B and G14A for all arrangements which may be covered by these determinations for all periods ended on or after 31 March 2006. It is appropriate to make the use of G9B and G14A mandatory to ensure that gains and losses are accounted for identically by all taxpayers from a particular date. This approach reduces a possible risk that exchange gains are excluded from the tax base whilst losses are claimed.

- The amended determinations would require a transitional adjustment, as already prescribed under the determinations, to be made in the year of transition. This adjustment is calculated by reference to the amounts that have been taxed or allowed in relation to the financial arrangement under the previous method, and what would have been taxed or allowed had determinations G9B and G14A been used from day one. The difference between these sums is taxed in the year of transition.

- Prime legislation in section 90AE (for Division 2) and section 90 (6) (for Division 1) will need to be amended to enable a replacement or amended determination to take effect from this date.

- Determinations G9A and G14 will remain in existence providing a method of calculation to be used for arrangements with no predetermined end date when there is no forward rate, so the anticipated gain cannot be calculated.

2.11 There are two other specific issues on which comments would be appreciated. These are firstly, should there be a de minimis limit exemption for small corporates and if so, at what level should it be set. Secondly, the issues around the timing of the legislation and how this relates to the four year period relating to determinations

De minimis limit

2.12 It may be appropriate to have a de minimis, or minimum value threshold, as an exception to the mandatory application by corporates of determinations G9B and G14A for lower value financial arrangements. We recognise that for smaller value financial arrangements the benefits to be gained by way of ascertaining in advance the anticipated and unrealised gains and losses each year may be less. Additionally, the compliance costs are broadly similar in nature regardless of the size of the financial arrangement. The costs and income of smaller transactions will be a greater percentage of the costs and income of smaller corporates. Although compliance costs may increase, this increase should not be overstated. For example, there will not be additional record keeping costs, as the need to use determinations G9B and G14A will not require further record keeping over and above that which is already necessary.

2.13 Possible options are to phrase the de minimis limit in terms of:

- the amounts payable/receivable under the arrangement;
- the value of the arrangements;
- the turnover of the business;
- a combination of two or three of these.

2.14 These options do not include a threshold applied to individual financial arrangements but, rather, the options apply to the sum of all the financial arrangements held by a corporate taxpayer. The reason for this is that a threshold based on the individual arrangement would be inconsistent with the requirements of determinations G9B and G14A that when they are used for one financial arrangement they must be used for all.

2.15 As an illustration of the options, the tests used under section EH 27(1), for cash basis persons, are the:

> "(a) absolute value of the person's income and expenditure under financial arrangements calculated under the accrual rules in that income year added together is $100,000 or less, or
>
> (b) on every day in a particular year the absolute value of each of the person's financial arrangements added together has a value of $1,000,000 or less"

2.16 Phrasing similar to this could be used for corporates. For example, limits could be set as follows:

- the absolute value of the amounts payable/receivable under the arrangements not to exceed $250,000;[4]
- on every day in a particular year the absolute value of each of the person's financial arrangements added together has a value of $3,000,000 or less;[5]
- the turnover of the business is less than $5,000,000 (exclusive of GST) in any 12 month period.

2.17 Although using a de minimis level calculated by reference to turnover initially has attractions in seeming simple, there may well be problems in defining exactly what is meant by turnover. The smaller corporates at which this exemption is aimed will not necessarily even be required to use Financial Reporting Standards, so a simple reference to those would not be helpful.

2.18 The advantage of using one, or both, of the methods in section EH27 is that the reference point bears a direct relationship to the financial arrangements themselves, which is what the legislation in concerned with.

2.19 These are suggestions for discussion and on which feedback is sought.

2.20 Although a new de minimis rule for corporates is being suggested, it is not suggested that changes should be made to the existing exemption for natural persons under the cash basis person exemption in section EH 27. The de minimis levels used there are working satisfactorily and seem appropriate. The definition of "company" will exclude companies acting in their capacity as trustee. The exemption will not apply to trustees.

2.21 There will be some small corporates that have already elected to use determinations G9B and G14A and would, under the suggested changes, be exempt from having to use these determinations. These corporates will not be able to now claim an exemption. They will remain in determinations G9B and G14A. At first glance, this may be thought to suggest that they are being treated differently. However, these taxpayers made the decision to opt into determinations G9B and G14A when they were able to. The facts that they took into account when making that decision have not changed, just because an exemption has become available. That exemption, to the extent that they could have chosen not to use determination G9B, was always available.

[4] This is 5% of $5,000,000 and is a ball park figure of what might be incurred on a loan arrangement of a small corporate.

[5] If a corporate has a turnover of $5,000,000 this would suggest, for example, very simplistically, a hedging of 60% of anticipated income.

Timing of legislation

2.22 Some taxpayers would like a change to be made to allow taxpayers the opportunity to use determinations G9B and G14A as soon as possible. However, section 90(6) and section 90AEof the Tax Administration Act 1994 state that when the Commissioner of Inland Revenue issues a new determination, rescinds or varies a determination the taxpayer need not give effect to it until four years after the date of publication.

2.23 Should the Commissioner issue a new determination in, say, February 2004, it could not be mandatory for taxpayers to use it until the return for the period ended 31 March 2008. If the prime legislation were changed to reduce the period of time before which a new, varied, or rescinded determination could take effect, a new determination could be put in place to be used for the return for the period ended 31 March 2006. This would require the legislation to say something along the lines of "a replacement or amended determination to take effect from the date specified within the determination so long as the return to which it first applies is for a period ending no earlier than 12 months after the date of publication".

2.24 A general amendment of the time frame for implementing determinations would allow more flexibility and it would enable taxpayers to make use of determinations G9B and G14A earlier. The price of this is a reduced period of certainty for taxpayers. Officials do not know whether, or to what extent, this is a matter of concern for taxpayers. It may be, for instance, that in view of the uncertainty in the current reporting climate arising from the adoption of the International Accounting Standards rather than the use of New Zealand Financial Reporting Standards this is not a matter of major concern.

Benefits

2.25 The suggestion to make the use of determinations G9B and G14A mandatory will bring the treatment of all financial arrangements denominated in a foreign currency into the scheme of the intent of the accrual legislation. That is, it will tax all unrealised gains/losses that are anticipated over the life of the arrangement. Any unexpected gains or losses that are taxed will only be realised gains or losses, and will not be taxed until they are realised – the date the arrangement ends or is deemed to end, or at the time that interest or a repayment of principal is paid or received. This will give taxpayers consistency, and will ensure that the fluctuations in profits for tax purposes, caused by the vagaries of using the spot rate at each balance date for revaluation, will be smoothed out. It will also ensure that the tax treatment of New Zealand dollar denominated arrangements and foreign denominated arrangements will be aligned.

Costs

2.26 The taxpayer may incur increased costs in making the calculations necessary for determinations G9B and G14A. However, offsetting benefits are that the taxpayer's costs of compliance will be reduced as the anticipated unrealised gains and losses will be known for each year from the date that the arrangement is entered into. This will simplify any calculations that have to be made of provisional tax payments due. Additionally, the final tax bill for each year will be more closely aligned to the actual cash position that is related directly to the arrangement. These benefits are likely to outweigh the costs.

2.27 There may be some concerns with regard to the issue of the cost of bringing the requirement to use determinations G9B and G14A into effect in a shorter time scale than is currently provided for in the legislation. At the moment, it allows for four years to pass from the date of publication of a new or amended determination before a taxpayer has to use such a determination, although the taxpayer can choose to use the determination earlier. However, the costs or time constraints caused by introducing a shorter time scale should not prove unreasonable or likely to cause a real problem. For example, it is understood that the many interested parties have expressed a preference for implementing the IAS from 2005 rather than 2007.[6]

[6] In a PricewaterhouseCoopers (2003) survey, 54% of respondents said that the requirement to adopt should be effective from 2005, 9% were in favour of 2007, and 38% did not comment (taken from *Chartered Accountants Journal* Vol 82, No 6 July 2003 p7).

Appendix 1

CURRENT LEGISLATION

Primary legislation

For financial arrangements entered into after 20 May 1999,[7] the Division II rules, found in sections EH 20 to EH59 of the Income Tax Act 1994, detail the accrual rules to be followed for tax purposes. The purpose of the division is described in section EH20 as:

"... To require parties to a financial arrangement to accrue over the term of the arrangement a fair and reasonable amount of income derived from, or expenditure incurred under the arrangement, and so prevent deferring income and advancing expenditure".

Section EH 22 (1) defines a financial arrangement as:

(a) a debt or debt instrument, including a debt that arises by law;

(b) an arrangement (that may include a debt or debt instrument or an excepted financial arrangement) under which a person receives money in consideration for a person providing money to any person

  (i) at a future time, or

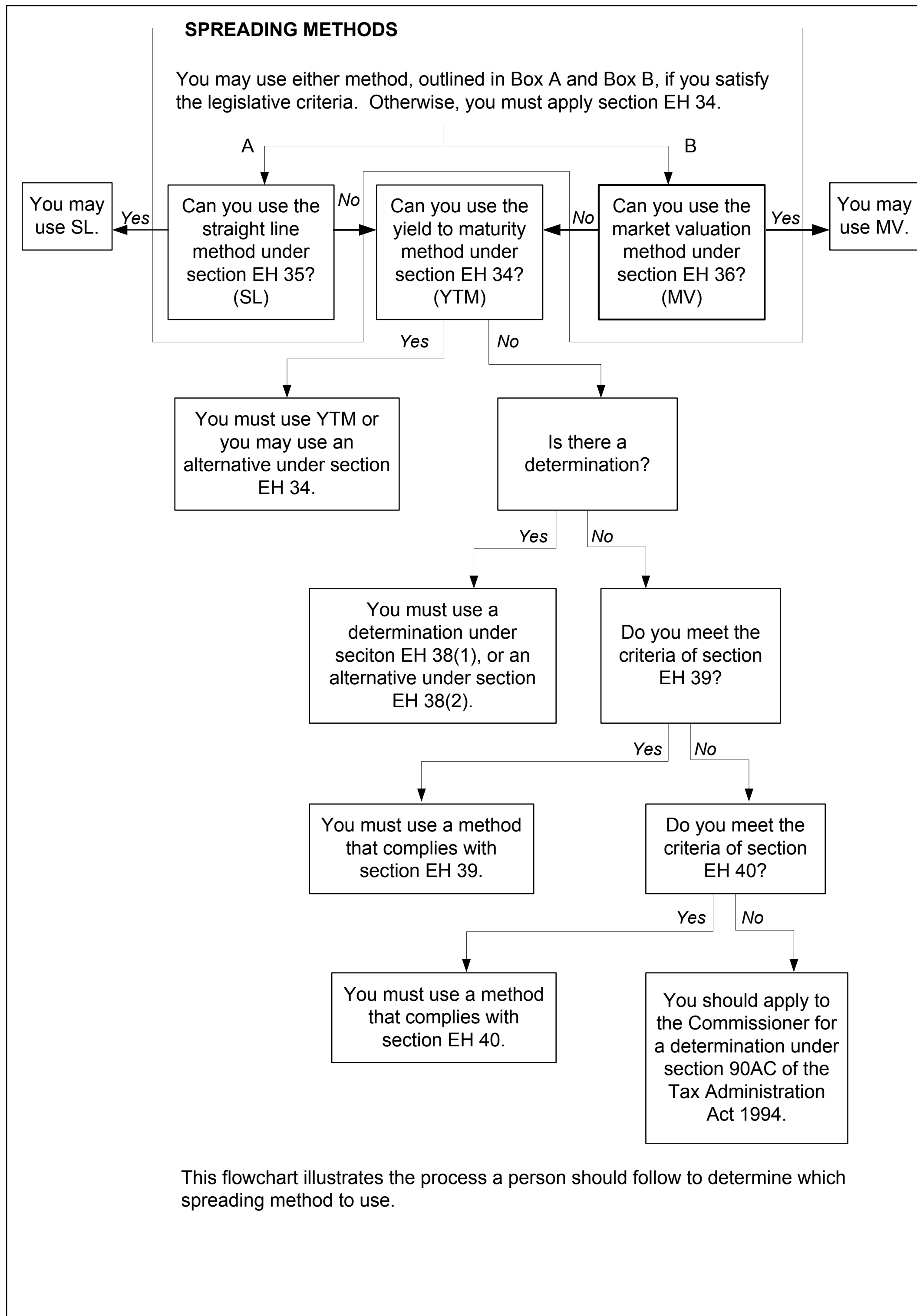
  (ii) when an event occurs in the future or does not occur (whether or not the event occurs because notice is or is not given).

The primary legislation found in Division 2 allows for spreading using a yield to maturity method,[8] a straight line method,[9] and a market valuation method.[10] The straight line method applies only to taxpayers who are party to a very small amount of financial arrangements at all times in the year.

Section EH33 details which method must be used. See table 1.

[7] The rules are slightly different for arrangements entered into on or before 20th May 1999, which are governed by Division I.
[8] EH 34.
[9] EH 35. This applies only to persons who are party to financial arrangements where the face value of those instruments is less than $1,500,000 on any day in the year.
[10] EH 36.

Table 1: Spreading Methods



A yield to maturity method can be used when the arrangement is for a fixed period. Effectively, this will spread the income and expenditure over the period of the arrangement. A market valuation method will charge or allow the income/expense arising from the arrangement in the year but will additionally effectively tax the gain or loss arising on the change in value of the arrangement in the year at the end of each year.

If a yield to maturity method cannot be used, and neither a straight line method nor market valuation method can be used or is chosen, then section EH 38 applies, and determinations G9A: "Financial arrangements that are denominated in a currency or commodity other than New Zealand dollars" and G14: "Forward contracts for foreign exchange and commodities" must be used. This is unless an election was made for 1998/1999 or 1999/2000 to use G9B: "Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach", and G14A: "Forward contracts for foreign exchange and commodities: an expected value approach".

There are certain "excepted financial arrangements" defined in sections EH 23 and EH24. The determinations G9B and G14A apply only to certain types of financial arrangements.

Types of arrangements covered by determinations G9A, G9B, G14 and G14A

Determination G9A is a method for calculating the income or expenditure in respect of a financial arrangement where any rights and obligations of the parties are expressed in a "base currency"[11] other than New Zealand dollars: this base currency may be a foreign currency or a commodity. It must not be fixed in New Zealand dollars. It does not apply to a forward or future contract, a futures contract, a swap contract, an option, or a security arrangement.

Determination G9B is applicable to essentially the same arrangements and may be used when a business holds financial arrangements where the rights and obligations under the financial arrangement are fixed or otherwise determined in a currency other than New Zealand dollars, including variable rate arrangements that are denominated in a currency other than New Zealand dollars.

The determination only applies, however, to financial arrangements where the payment dates are known not later than the first balance sheet date after becoming a party to the financial arrangement; and forward rates for the currency in which the financial arrangements are denominated can be determined.

[11] G9A (5) defines base currency "in relation to a financial arrangement means the currency or commodity in which rights or obligations under the financial arrangements are fixed.".

Determinations G14 and G14A may be used when a taxpayer is a party to a forward contract for foreign exchange and commodities. A forward contract for foreign exchange or commodities is a contract to buy or sell specified amounts of foreign currency or commodities at some future date at a specified contract rate. For example, a forward contract for currency is a contract to buy or sell specified amounts of currency at a future date at a price fixed (in terms of another currency) at the time that the contract is entered into. Each party contracts simultaneously to sell one currency and purchase another currency. The same forward contract can always be viewed as either the sale of one currency or the purchase of the other currency.

A forward contract has characteristics that are very similar to those of a swap contract. In fact, swaps are often structured as a series of forward contracts. If a taxpayer is party to a swap, however, these determinations must not be applied. Instead, determination G27 should be used. The only exception is a swap for fixed amounts, to be exchanged at a single fixed date. This type of swap is, in substance, a forward contract. Therefore a party to this type of financial arrangement should apply determination G14 or G14A, not G27.

Practical effects of G9A, G14, G9B and G14A

Determination G9A broadly follows the accounting treatment of foreign exchange loans to the extent that changes in the spot value of the loan are brought into account for tax on each balance sheet date. This is achieved by returning the difference between the opening and closing book value of the loan as income or expenditure in the year, along with any consideration given or received in the year.

Determination G14 treats the difference between the forward value and the spot value of the commodity or currency at the start of the contract as a premium or discount. This is spread over the term of the contract. At subsequent balance sheet dates the change in the spot value of the currency or commodity is brought into account for tax as a loss or gain.

Determination G9B spreads the expected income or expenditure over the life of the arrangement, and brings the unexpected gains or losses into account when the arrangement ends or is deemed to end. (Gains or losses realised at the date of payments of interest or principal will also still be recognised as in G9A and G14.) To calculate the expected component, at the date at which the arrangement is entered into the taxpayer converts the base currency payments into expected New Zealand dollar payments on the basis of the forward rates at that date, and spreads the expected New Zealand net amount over the term of the financial arrangement. The unexpected component is calculated at the end of the arrangement by comparing the actual New Zealand dollar amount with the expected New Zealand dollar payments.

Determination G14A operates in the same way as G9B. The base currency payments are converted into expected New Zealand dollar payments on the basis of the forward rates at the time the taxpayer becomes a party to the forward contract, and by spreading the expected New Zealand dollar amount over the term of the contract. The unexpected component is calculated at the end of the arrangement by comparing

the actual New Zealand dollar amount with the expected New Zealand dollar payments.

It is not possible to use the determinations under determinations G9B and G14A if an election was not made for the 1998-1999 or 1999-2000 years. It is also not possible to use G9B without using G14A or vice versa. If such an election was not made then G9A and G14 must be used. The exception to this is when a financial arrangement covered by either G9B or G14A is entered into in a subsequent year for the first time, in which case the election can then be made by using that methodology for the first accounting period in which the taxpayer was subject to such an arrangement.

Practical differences between G9A and G14, and G9B and G14A

The significant difference between G9A/G14 and G9B/G14A is that under the latter the income or expense (including the anticipated exchange gains or losses) is spread over the period of the arrangement, and the unexpected and unrealised gains/losses are brought into account under a Base Price Adjustment only when the arrangement matures or ends.

The Base Price Adjustment is an adjustment in the year in which the arrangement ends, is disposed of, or matures,[12] and which effectively charges or allows any income or expense which has not been taken into account in previous years.[13]

Realised gains and losses on actual payments made or received will be recognised at the point of payment, which ever determination is used.

[12] EH 45 defines the circumstances when such an adjustment is required.
[13] EH 47 details the calculation required.

Appendix 2

A DETAILED EXAMPLE DEMONSTRATING THE USE OF G9A AND G9B

(Taken from *The New Zealand Accrual Regime – a practical guide*, 2nd Edition, by Susan Glazebrook, Andra Glyn-Jones, Jan James, Greg Cole (CCH New Zealand Ltd))

This example demonstrates the potential difference in the tax treatment of foreign currency loans, using a relatively simple example, using first G9A and then G9B.

1. Using G9A

It is assumed that a New Zealand resident borrows for a $US100 discount a $US1,100 three-year note paying $US100 pa coupons payable in arrears. Cash flows, in US dollars, are:

Year	Cash flows
0	1,000 (initial borrowing)
1	(100)
2	(100)
3	(1,200)

The US dollar yield (i.e. The discount rate at which the net present value of the cash flows equals zero) is approximately 12.94% pa. Spot US/NZ rates are assumed to be:

End of Year 0	0.5
End of Year 1	0.55
End of Year 2	0.45
End of Year 3	0.5

The spot rate at the beginning of a year is assumed to be the spot rate at the end of the previous year. In this example, all figures are rounded to the nearest dollar.

In year 1:

(a) The closing tax book value in US dollars is $1,000 plus $129 (being the accrued interest of $1,000 x 12.94%) minus $100 coupon interest paid - a total of $1,029.

(b) The opening tax book value in US dollars is $1,000

(c) Closing tax book value in New Zealand dollars at 0.55 spot rate is $1,871

(d) Opening tax book value in New Zealand dollars at 0.5 spot rate is $2,000

(e) Coupon payment at 0.55 spot rate is $NZ182.

(f) Accrual expenditure in New Zealand dollars is, therefore:

- closing tax book value = $1,871, plus
- coupon payment = $182, minus
- opening tax book value = $2,000
  Total = $53

This figure can be interpreted as expenditure of $258 (being the yield of $US 129 at the initial spot rate of 0.5) minus an exchange gain of $205 (being the "reduction" in liability of $US1,129 at the end of year 1 caused by the spot exchange rate increasing by 0.05 points).

In year 2:

(a) The closing tax book value in US dollars is $1,029 plus $133 (being the accrued interest of $1,029 x 12.94%) minus $100 coupon interest paid - a total of $1,062.

(b) The opening tax book value in US dollars is $1,029.

(c) Closing tax book value in New Zealand dollars at 0.45 spot rate is $2,360.

(d) Opening tax book value in New Zealand dollars at 0.55 spot rate is $1,871.

(e) Coupon payment at 0.45 spot rate is $NZ222.

(f) Accrual expenditure in New Zealand dollars is, therefore:

- closing tax book value = $2,360, plus
- coupon payments $222, minus
- opening tax book value = $1,871
  Total = $711

This figure can be interpreted as expenditure of $242 (being the yield of $US133 at the spot rate of 0.55) plus an exchange loss of $469 (being the "increase" in liability of $US1,162 at the end of year 2 caused by the spot exchange rate decreasing by 0.1 point).

In year 3:

The taxpayer must apply the base price adjustment formula. This involves determining the consideration paid to the person less the consideration paid by the person, less income already recognised and plus expenditure already recognised.

(a) Consideration provided to the taxpayer was $NZ 2,000.

(b) Consideration provided by the taxpayer is (in New Zealand dollars):

	S
Year 1	182
Year 2	222
Year 3	2,400
Total	2,804

(c) Expenditure incurred in Years 1 and 2 was (in New Zealand dollars):

	S
Year 1	53
Year 2	711
Total	764

Thus, expenditure in year 3 is (in New Zealand dollars):
$2,000 - $2,804 + $764 = $40

This figure can be interpreted as expenditure of $307 (being the yield of $US137 at the spot rate of 0.45) plus an exchange gain of $267 (being the "decrease" in liability of $US1,199 at the end of year 3 caused by the spot exchange rate increasing by 0.05 points).

Over the three-year term, accrued expenditure in US dollars amounts to $400 ($300 coupon plus $100 discount). In New Zealand dollars it is $804, being coupon payments of $604 and discount of $200. The eventual cash flows, in New Zealand dollars, were:

	S
Year 0	(2,000)
Year 1	182
Year 2	222
Year 3	2,400
Net	804

Actual cash flows (in New Zealand dollars) resulted in net expenditure to the borrower of $804. This is the amount of expenditure calculated under the full accrual method set out in *determination* G9A.

However, the use of spot rates resulted in the $804 expenditure being spread unevenly as follows (in New Zealand dollars):

	S
Year 1	53
Year 2	711
Year 3	40
Net	804

2. Using G9B

The same example using G9B produces very different results. Using the same facts as above (i.e. A New Zealand resident borrows for a $US100 discount a $US1,100 three-year note paying $US100 pa coupons payable in arrears), it would be calculated as follows :

Cash flows, in US dollars, are:

Year	**Cash flows**
0	1,000 (initial borrowing)
1	(100)
2	(100)
3	(1,200)

The US dollar yield (i.e. The discount rate at which the net present value of the cash flows equals zero) is approximately 12.94% pa. Spot US/NZ rates are assumed to be:

End of Year 0	0.5
End of Year 1	0.55
End of Year 2	0.45
End of Year 3	0.5

The spot rate at the beginning of a year is assumed to be the spot rate at the end of the previous year. In this example, all figures are rounded to the nearest dollar. Assume forward rates for each year at the time the arrangement was entered into are 0.5.

Expected cash flows in New Zealand dollars under the arrangement, using the forward rate of 0.5, are as follows:

Year	**Cash flows**
0	2,000 (initial borrowing)
1	(200)
2	(200)
3	(2,400)

Again, this gives a yield of approximately 12.94%. This would give rise to expected New Zealand dollar expenditure in each year of:

Year	**Expenditure**
I	$258.8 (being S2,000 x 12.94%)
2	$266.4 (being S2,058.8 x 12.94%)
3	$275 (being S2,125 x 12.94%)

The unexpected component for each year is as follows:

Year 1

Actual value of $US100 payment at the spot rate of 0.55 = $NZ182
Expected value of $US100 payment at the forward rate of 0.5 = $NZ200
This gives an unexpected "gain" of $8. Therefore, in year 1 the expenditure recognised would be $258.8 less $8 = $250.8

Year 2

Actual value of $US100 payment at the spot rate of 0.45 = $NZ222 Expected value of $US 100 payment at the forward rate of 0.5 = $NZ200

This gives an unexpected "loss" of $22. Therefore in year 1 the expenditure recognised would be $266.4 plus $22 = $288.4

Year 3

The taxpayer must apply the base price adjustment formula. This involves determining the consideration paid to the person less the consideration paid by the person, less income already recognised and plus expenditure already recognised.

(a) Consideration provided to the taxpayer was $NZ2,000.

(b) Consideration provided by the taxpayer is (in New Zealand dollars):

	S
Year 1	182
Year 2	222
Year 3	2,400
Total	2,804

(c) Expenditure incurred in years 1 and 2 was (in New Zealand dollars):

	S
Year 1	250.8
Year 2	288.4
Total	539.2

Thus, expenditure in year 3 is (in New Zealand dollars):
$2,000 - $2,804 + $539.2 = $264.8

As can be seen this method produces a much more even income and expenditure flow than the full accrual method used in *determination* G9A. Refer to graph under Current Situation.