In most normal commercial financial arrangements, the annual rate will be unique, positive and less than 100 percent per annum; arrangements that do not meet these criteria are excluded and may be submitted for individual consideration by the Commissioner.

2. *Reference*—This determination is made pursuant to section 64E (1) (a) of the Income Tax Act 1976. It defines the application of the yield to maturity method to financial arrangements of the class described in paragraph 3 of this determination.

3. *Scope of Determination*—This determination applies to the class of financial arrangements that has the following attributes—

(a) All amounts payable or receivable under the financial arrangement, and the dates on which the amounts are payable or receivable, are known not later than the first balance date of the issuer or holder following the date of issue or acquisition as the case may be; and

(b) All such amounts are determined in New Zealand currency—

but does not apply to any financial arrangement in respect of which the annual yield to maturity rate R determined in accordance with paragraph 6 would be—

(c) Not unique; or

(d) Less than or equal to zero; or

(e) Greater than 100 percent.

4. *Principle*—The yield to maturity method apportions the total income or expenditure under a financial arrangement so that—

(a) The amount apportioned in respect of each period between payments represents a constant annual rate R on the amount of the principal outstanding during each period; and

(b) The rate R is such that at the time the financial arrangement is issued or acquired the discounted value of the money to be given and received accumulates to zero.

The amount apportioned to each period is then allocated to income years on a daily basis in accordance with Determination G1: Apportionment of Daily Income and Expenditure.

5. *Interpretation*—(1) In this determination—

(a) Unless the context otherwise requires, expressions used have the same meanings as in sections 64B to 64M of the Income Tax Act 1976:

(b) "The amount of the principal outstanding" during any period shall be equal to—

(i) The amount of the principal outstanding during the previous period (if any);

*plus* (ii) The amount (if any) payable by the holder or receivable by the issuer (as the case may be) immediately before the beginning of the period;

*plus* (iii) The amount calculated in respect of the previous period in terms of paragraph 6 (a) of this determination;

*less* (iv) The amount (if any) receivable by the holder or payable by the issuer (as the case may be) immediately before the beginning of the period:

(c) "Period" and "period between payments" means a term commencing immediately after a payment is payable or receivable and ending when the next payment is payable or receivable:

Provided that if a period exceeds 1 year it shall be deemed to comprise one or more periods each of 1 year followed (or preceded, at the option of the holder or issuer as the case may be) by a period of less than 1 year.

(2) For the purposes of applying paragraph 6 (a) of this determination—

(a) Where the greatest common divisor of all the periods between payments is—

(i) A year or 12 months, N shall be taken as 1:

(ii) A half year or 6 months, N shall be taken as 2:

(iii) A quarter or 3 months, N shall be taken as 4:

(iv) A month, N shall be taken as 12:

(v) A fortnight, N shall be taken as 26:

(vi) A week, N shall be taken as 52:

(b) Where 1 or 2 periods have a greatest common divisor different to the greatest common divisor of all other periods this fact shall be disregarded, and for each of those 1 or 2 periods N shall be taken as 365 divided by the number of days in the period including the ending date of the period but excluding the starting date of the period.

6. *Method*—If R is a constant annual rate and if—

(a) In respect of each period between payments an amount is obtained by multiplying the amount of the principal outstanding during that period by a fraction F where—

$$F = \frac{R}{100 \times N}, \text{ and}$$

N is—

(i) The amount defined in paragraph 5 (2) of this determination; or

(ii) Where paragraph 5 (2) (a) of this determination does not apply, 365 divided by the number of days in the period (including the ending date of the period but excluding the starting date of the period)—

which amount forms part of the principal outstanding during the next succeeding period; and

(b) The total of the principal outstanding during the final period between payments and the amount obtained in respect of that period pursuant to subparagraph (a) of this paragraph equals the amount of the final payment,—

the amount obtained pursuant to subparagraph (a) shall be the amount of income derived or expenditure incurred in respect of that period by the holder or issuer (as the case may be).

7. *Example*—On 12 March 1987 a holder acquires for $1,012,500 the right to receive the following income—

| | |
|---|---|
| 15 May 1987 | $70,000 |
| 15 November 1987 | $70,000 |
| 15 May 1988 | $70,000 |
| 15 November 1988 | $1,070,000 |

The holder balances on 31 March, and chooses to allocate income on a 365-day basis.

The periods are expressed in 6-month multiples, so N = 2, except for the first (broken) period for which

$$N = \frac{365}{64} = 5.703125.$$

It will be found that the constant annual rate R is 16.2308 percent per annum.

The following schedule may then be constructed, showing the income in respect of each period:

| Period Tending | Principal Outstanding $ | Income in Respect of Period $ | Payments Received at End of Period $ |
|---|---|---|---|
| 15/05/87 | 1,012,500 | 28,815 (1) | 70,000 |
| 15/11/87 | 971,315 | 78,826 (2) | 70,000 |
| 15/05/88 | 980,141 | 79,542 | 70,000 |
| 15/11/88 | 989,638 | 80,317 | 1,070,000 |
| Totals | | 267,500 (3) | 1,280,000 |

Notes (1) $\frac{16.2308}{100 \times 5.703125} \times \$1,012,500$

(2) $\frac{16.2308}{100 \times 2} \times \$971,315$

(3) Check = 1,280,000 − 1,012,500

The following schedule illustrates the allocation to the holder's income years on a 365-day basis:

| Period Ending | Income in Respect of Period $ | Days in Period | Allocation to Income Year | Allocation to Days | Amount $ | Income Year | Total Amount $ |
|---|---|---|---|---|---|---|---|
| 15/05/87 | 28,815 | 64 | 1986/87 | 19 | 8,554 | 1986/87 | 8,554 |
| | | | 1987/88 | 45 | 20,261 | | |
| 15/11/87 | 78,826 | 184 | 1987/88 | 184 | 78,826 | | |
| 15/05/88 | 79,542 | 182 | 1987/88 | 137 | 59,875 | 1987/88 | 158,962 |
| | | | 1988/89 | 45 | 19,667 | | |
| 15/11/88 | 80,317 | 184 | 1988/89 | 184 | 80,317 | 1988/89 | 99,984 |
| Totals | 267,500 | | | | 267,500 | | 267,500 |

NOTE: The yield to maturity method will enable the calculation of an amount of income or expenditure for the final income year to which a financial arrangement relates. However for the purposes of calculating the amount deemed to be assessable income or expenditure incurred in the final income year it is necessary to apply section 64F of the Income Tax Act 1976—the base price adjustment.

This determination is signed by me on the 13th day of May in the year 1987.

JOHN SIMCOCK, Commissioner of Inland Revenue.

20