A suitable formula for straight line interpolation to obtain the required rate is:

$$\text{So } Px = P1 + \frac{(Tx - T1) * (P2 - P1)}{(T2 - T1)}$$

P1 is the mid-rate for the forward contract with the shorter term (= 0.55366).

P2 is the mid-rate for the forward contract with the longer term (= 0.50975).

Px is the required rate.

T1 is the term till delivery (expressed in days) of the forward contract with the shorter term (= 365).

T2 is the term till delivery (expressed in days) of the forward contract with the longer term (= 730).

Tx is the term till delivery of the contract held (= 398).

The required rate is therefore calculated as follows:

$$\text{So } Px = P1 + \frac{(Tx - T1) * (P2 - P1)}{(T2 - T1)}$$

$$= 0.55366 + \frac{(398 - 365) * (0.50975 - 0.55366)}{(730 - 365)}$$

$$= 0.55366 + \frac{33 * (-0.04391)}{365}$$

$$= 0.54969$$

The current value of the 612,000 United States Dollars receivable on 1 August 1988 is therefore 1,113,354.80 New Zealand Dollars.

This determination is signed by me on the 23rd day of April in the year 1990.

R. D. ADAIR, Deputy Commissioner of Inland Revenue. 60

go5386

Determination G10A: Present Value Calculation Methods

This determination may be cited as "Determination G10A: Present Value Calculation Methods".

1. *Explanation* (which does not form part of the determination)—

(1) This determination rescinds and replaces Determination G10: Present Value Calculation Methods, made by the Commissioner on 21 November 1988. This determination differs from Determination G10 in the interpretation of a 360 day basis for calculating the number of days between two given dates.

(2) For the purposes of the accrual tax accounting regime it may be necessary to calculate present values for a variety of reasons, for example:

(a) To calculate the yield to maturity of a financial arrangement. The yield to maturity is the interest rate at which the first amount payable under the financial arrangement is equal to the present value of all subsequent amounts payable under the financial arrangement calculated as at the due date of the first payment:

(b) To calculate present values at intermediate times during the term of a financial arrangement in order to calculate the amount of the income derived or expenditure incurred by a person in respect of the financial arrangement.

(3) The present value of a financial arrangement as at a date excludes any amounts payable under the financial arrangement on that date.

(4) This determination specifies approved methods of calculating present values for use in other determinations. These methods may be added to or removed from time to time.

Method A is a general purpose method suitable for many applications and gives very similar results to Determination G3: Yield to Maturity Method. Method A may be used on either a 360 or 365 day basis.

Method B is used to calculate prices of government or local authority stock, and other financial arrangements having similar characteristics, employing the formula approved by the International Association of Bond Dealers and used in calculators such as the HP12C.

(5) Alternative approved methods may not generate exactly identical results.

(6) Once a person has elected to use an approved method of calculating the present value of a financial arrangement, that method shall be used by the person over the life of the financial arrangement unless the prior consent of the Commissioner is obtained to adopt another method.

(7) This determination is for use in conjunction with other determinations, for example Determination G11: Present Value Based Yield to Maturity Method.

2. *Reference*—(1) This determination is made pursuant to sections 64E (1) (a) and 64E (6) of the Income Tax Act 1976.

(2) Determination G10: Present Value Calculation Methods is hereby rescinded with effect from the day on which this Determination G10A is signed.

3. *Scope*—This determination shall be used as required by any other determination which will specify—

(a) The date at which the present value shall be calculated; and

(b) The interest rate that shall be used in the calculation; and

(c) The amounts and due dates for which the present value shall be calculated—

and which may specify the method to be used.

4. *Principle*—This determination specifies alternative methods for calculating the present value of a financial arrangement, equal to the sum of the values as at the specified date of all amounts payable under the financial arrangement after that date, discounted at the specified rate.

5. *Interpretation*—(1) In this determination unless the context otherwise requires—

"The Act" means the Income Tax Act 1976:

"Income year" has the same meaning as in sections 64B to 64M of the Act:

"Period" and "period between payments" in relation to a person means a term—

(a) Commencing immediately after—

(i) A specified date in relation to a financial arrangement; or

(ii) A date on which an amount is payable under a financial arrangement as the case may be; and

(b) Ending on the next succeeding date on which an amount is payable under a financial arrangement.

Provided that if a period or a period between payments exceeds one year it shall be deemed to comprise one or more periods each of one year followed (for preceded, at the option of the person) by a period of not more than one year:

"Specified date" in relation to a financial arrangement means the date at which the present value of the financial arrangement is required to be calculated:

"Specified rate" in relation to a financial arrangement and a person means the annual rate of interest at which the present value of the financial arrangement is required to be calculated.

(2) The number of days in a period calculated on a 365 day basis is the actual number of days in the period including the ending date of the period but excluding the starting date of the period.

(3) The number of days in a period calculated on a 360 day