

## **Determination G14B: Forward contracts for foreign exchange and commodities: an expected value approach**

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This determination may be cited as “Determination G14B: Forward contracts for foreign exchange and commodities: an expected value approach”.

This determination cancels and replaces Determination G14A: Forward contracts for foreign exchange and commodities: an expected value approach.

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

#### **What is 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 foreign currency is a contract to buy or sell specified amounts of a currency at a future date at a price fixed (in terms of another currency) at the time 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. For example, a person who sells NZD forward against purchase of USD can view the contract as either—

- the forward sale of NZD, or
- the forward purchase of USD.

A forward contract has characteristics that are very similar to a swap contract. In fact, swaps are often structured as a series of forward contracts. If you are a party to a swap, however, you may not apply this determination as swaps are subject to *Determination G27*. The only exception is a swap contract for fixed amounts, to be exchanged at a single fixed date. This type of swap is, in substance, a forward contract. Therefore, if you are a party to this type of forward contract, you have to apply this determination instead of *Determination G27*.

#### **When do you use this determination?**

You must use this determination for the 2003–04 income year and a forward contract for which this determination applies if—

- you are not a member of a group of companies and on or before the day that is the earlier of 31 July 2004 and the end of your accounting period that corresponds to the 2003–04 income year, you give to the Commissioner notice in writing that you elect—
  - (a) to use this determination; and
  - (b) to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*;
- you are a member of a group of companies and, on or before the day that is the earlier of 31 July 2004 and the earliest day that is the end of an accounting

period that corresponds to the 2003–04 income year for a member of the group, the members of the group give to the Commissioner notice in writing of an election—

- (a) to use this determination; and
- (b) to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

You must use this determination for the 2004–05 income year and a forward contract for which this determination applies if—

- you entered the forward contract after the date of this determination and were required to make a return of your income or expenditure for the 2003–04 income year on the basis of this determination, *Determination G9B: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach* or *Determination G14A*;
- you are not a member of a group of companies and, on or before the day that is the later of 31 July 2004 and the 63<sup>rd</sup> day of your accounting period that corresponds to the 2004–05 income year, you give to the Commissioner notice in writing that you elect—
  - (a) to use this determination; and
  - (b) to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*;
- you are a member of a group of companies and, on or before the day that is the later of 31 July 2004 and the earliest day that is the 63<sup>rd</sup> day of an accounting period that corresponds to the 2004–05 income year for a member of the group, the members of the group give to the Commissioner notice in writing of an election—
  - (a) to use this determination; and
  - (b) to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

You must use this determination for an income year beginning after the 2004–05 income year and a forward contract for which this determination applies if—

- you entered the forward contract after the date of this determination and were required to make a return of your income or expenditure for the 2004–05 income year on the basis of this determination, *Determination G9B: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach* or *Determination G14A*;
- you entered the forward contract before the date of this determination and you have made a return of your income or expenditure for an earlier income year and the forward contract on the basis of *Determination G14A* and are required under section 90 or sections 90AC and 90AE of the Tax Administration Act 1994 to make a return for the income year and the financial arrangement under this determination;
- you are not a member of a group of companies and, on or before the day that is the 63<sup>rd</sup> day of your accounting period that corresponds to the income year, you give to the Commissioner notice in writing that you elect—
  - (a) to use this determination; and

- (b) to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*;
- you are a member of a group of companies and, on or before the earliest day that is the 63<sup>rd</sup> day of an accounting period that corresponds to the income year for a member of the group, the members of the group give to the Commissioner notice in writing of an election—
  - (a) to use this determination; and
  - (b) to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

You may not use this determination for an income year unless you are required to do so by the above paragraphs.

### **What methods can be used to calculate income or expenditure under a Forward Contract for Foreign Exchange and Commodities?**

#### ***Expected Value Approach***

This determination sets out an expected value approach to calculate gross income or expenditure from a forward contract. This expected value approach can only be used for forward contracts within the scope of this determination, which is narrower than *Determination G14: Forward Contracts for Foreign Exchange and Commodities*. If you are required to use this determination, you must not use *Determination G14* for any such forward contract, and you must not use *Determination G9A: Financial Arrangements that are Denominated in a Currency or Commodity other than New Zealand Dollars* for any financial arrangement within the scope of *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

#### ***Mark to Spot Approach***

You may use *Determination G14: Forward Contracts for Foreign Exchange and Commodities* to calculate gross income or expenditure of any forward contract within the scope of this determination if you are not required to use this determination or *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

Alternatively, you may use the mark to market method if you satisfy the requirements of section EH 1(6) of the Act or the market valuation method if you satisfy the requirements of section EH 36 of the Act.

You may also use a method allowed by the proviso to section EH 1(6) of the Act or by section EH 38(2) of the Act.

## **How do I use the method set out in this determination?**

Under this method, the gross income or expenditure from a forward contract is the total of an expected component and an unexpected component. A typical forward contract drawn at the forward rate for no consideration, however, has no expected component.

To apply this method to a forward contract for the income year in which you enter the forward contract, you must—

- ignore any offsetting of payments between the parties, so that every amount that would be payable under the forward contract is taken into account under this determination; and
- choose one of the currencies under the forward contract as a base currency; and
- determine the expected component by taking into account all the base currency payments and payment dates in relation to the forward contract when you become a party to the contract, which consist of—
  - (a) the base currency value of the payment or receipt, if any, made in consideration of entering into the contract;
  - (b) the base currency value of the non-base currency payment to be made under the contract valued at the forward rate;
  - (c) the base currency value of the non-base currency payment to be made under the contract valued at the contract rate; and
- convert the expected base currency payments, where the base currency is not NZD, into expected NZD payments on the basis of forward rates available at the time you become a party to the forward contract; and
- spread the expected NZD net amount over the term of the forward contract.

To apply this method for the first time to a forward contract for an income year after the income year in which you enter the forward contract, you must calculate the gross income or expenditure of the forward contract as set out above, except that you must—

- in determining the expected component of the gross income or expenditure, use actual NZD payments up to the income year for which you first use this determination for the forward contract and expected NZD payments for the remaining term of the forward contract; and
- in calculating the expected NZD payments, use the relevant forward rates as at the end of the income year for which you first use this determination for the forward contract.

You must perform the base price adjustment under whichever is appropriate of section EH 4 of the Act and section EH 47 of the Act when a forward contract you are a party to matures or is disposed of. This adjustment contains the unexpected component of the gross income or expenditure of the forward contract.

You must also calculate a transition allowance for a financial arrangement to which you apply the method for the first time for an income year that is after the income year in which you enter the financial arrangement.

## **How do I elect to use the method outlined in this determination?**

### *Election for 2003–04 and subsequent income years*

If you are not a member of a group of companies, you may elect to use this determination for the 2003–04 and subsequent income years by giving a notice of election to the Commissioner on or before the day that is the earlier of 31 July 2004 and the day that is the end of your accounting period for the 2003–04 income year. The notice must be in writing and elect—

- to use this determination; and
- to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

If you are a member of a group of companies, you may elect to use this determination for the 2003–04 and subsequent income years by giving, together with all other members of the group, a notice of election to the Commissioner on or before the day that is the earlier of 31 July 2004 and the earliest day that is the end of an accounting period for the 2003–04 income year for a member of the group. The notice must be in writing and elect—

- to use this determination; and
- to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

### *Election for 2004–05 and subsequent income years*

If you are not a member of a group of companies, you may elect to use this determination for the 2004–05 and subsequent income years by giving a notice of election to the Commissioner on or before the day that is the later of 31 July 2004 and the day that is the 63<sup>rd</sup> day of your accounting period for the 2004–05 income year. The notice must be in writing and elect—

- to use this determination; and
- to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

If you are a member of a group of companies, you may elect to use this determination for the 2004–05 and subsequent income years by giving, together with all other members of the group, a notice of election to the Commissioner on or before the day that is the later of 31 July 2004 and the earliest day that is the 63<sup>rd</sup> day of an accounting period for the 2004–05 income year for a member of the group. The notice must be in writing and elect—

- to use this determination; and
- to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

### *Election for income years beginning after 2004–05 income year*

If you are not a member of a group of companies, you may elect to use this determination for an income year beginning after the 2004–05 income year, and for subsequent income years, by giving a notice of election to the Commissioner on or before the day that is the 63<sup>rd</sup> day of your accounting period for the income year. The notice must be in writing and elect—

- to use this determination; and
- to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

If you are a member of a group of companies, you may elect to use this determination for an income year after the 2004–05 income year, and for subsequent income years, by giving, together with all other members of the group, a notice of election to the Commissioner on or before the earliest day that is the 63<sup>rd</sup> day of an accounting period for the income year for a member of the group. The notice must be in writing and elect—

- to use this determination; and
- to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

### **How do I calculate the transitional adjustment?**

The transitional adjustment must be made for the first income year for which you are required to use this determination for a forward contract if you entered the forward contract before the income year and you have not been required to apply *Determination G14A* for the forward contract. The calculation is comparable to *Determination G25: Variations in the Terms of a Financial Arrangement*.

The transitional adjustment requires that for the income year of the adjustment you treat as gross income or expenditure the difference between the total amount that would have been gross income or expenditure calculated as described in this determination and the total amount actually recognised over the previous income years.

### **How is income or expenditure calculated in the year the forward contract matures or is disposed of?**

Regardless of which method you choose to use, you must calculate income or expenditure under the base price adjustment in whichever of section EH 4 of the Act and section EH 47 of the Act is applicable to the forward contract.

## **2. Reference**

This determination is made pursuant to section 90(1)(c) and section 90AC(1)(d) of the Tax Administration Act 1994.

### 3. Scope

- (1) This determination applies to the calculation of gross income or expenditure from a forward contract for foreign exchange and commodities.
- (2) This determination does not apply to—
  - (a) a futures contract;
  - (b) a security arrangement;
  - (c) a forward contract for foreign exchange and commodities where the forward rates of the currency cannot be determined;
  - (d) any forward contracts covered by the following determinations:
    - Determination G19: Exchange Traded Option Contracts;*
    - Determination G20: Discounted Value of Amounts Payable in Relation to Trade Credits Denominated in a Foreign Currency;*
    - Determination G21: Discounted Value of Amounts Payable in Relation to Deferred Property Settlements Denominated in a Foreign Currency;*
    - Determination G21A: Agreements for Sale and Purchase of Property Denominated in Foreign Currency: Discounted Value of Amounts Payable;*
    - Determination G27: Swaps;*
    - Determination G29: Agreements for Sale and Purchase of Property Denominated in Foreign Currency: Exchange Rate to Determine the Acquisition Price and Method for Spreading Income and Expenditure;*except as specifically allowed by those determinations.
- (3) You must use this determination for an income year for a forward contract that satisfies subparagraphs (1) and (2) above if—
  - (a) the income year is the 2003–04 income year and—
    - (i) you are not a member of a group of companies and make an election, as described in subparagraph (4) below, that applies for the 2003–04 income year;
    - (ii) you are a member of a group of companies and the members of the group make an election, as described in subparagraph (4) below, that applies for the 2003–04 income year;
  - (b) the income year is after the 2003–04 income year and—
    - (i) you are not a member of a group of companies and make an election, as described in subparagraph (4) below, that applies for the income year;
    - (ii) you are a member of a group of companies and the members of the group make an election, as described in subparagraph (4) below, that applies for the income year;
    - (iii) you entered the forward contract after the date of this determination and have been required to use this determination, *Determination G9B* or *Determination G14A* for an earlier income year;
    - (iv) you entered the financial arrangement before the date of this determination and have used *Determination G14A* for an earlier income year and the financial arrangement and are not excluded from the application of this determination for the income year and the financial arrangement by section 90(6) or 90AE of the Tax Administration Act 1994.

- (4) An election to use this determination must—
- (a) be made in writing to the Commissioner; and
  - (b) include an election to use *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*; and
  - (c) if you are not a member of a group of companies, be made—
    - (i) on or before the day that is the earlier of 31 July 2004 and the end of your accounting period that corresponds to the 2003–04 income year, if the election is to apply for the 2003–04 and subsequent income years;
    - (ii) on or before the day that is the later of 31 July 2004 and the 63<sup>rd</sup> day of your accounting period that corresponds to the 2004–05 income year, if the election is to apply for the 2004–05 and subsequent income years;
    - (iii) on or before the earliest day that is the 63<sup>rd</sup> day of your accounting period that corresponds to the income year, if the election is to apply for an income year that is after the 2004–05 and for subsequent income years; and
  - (d) if you are a member of a group of companies, be made by all the members of the group and—
    - (i) on or before the day that is the earlier of 31 July 2004 and the earliest day that is the end of an accounting period that corresponds to the 2003–04 income year for a member of the group, if the election is to apply for the 2003–04 and subsequent income years;
    - (ii) on or before the day that is the later of 31 July 2004 and the earliest day that is the 63<sup>rd</sup> day of an accounting period that corresponds to the 2004–05 income year for a member of the group, if the election is to apply for the 2004–05 and subsequent income years;
    - (iii) on or before the earliest day that is the 63<sup>rd</sup> day of an accounting period that corresponds to the income year for a member of the group, if the election is to apply for an income year that is after the 2004–05 income year and for subsequent income years.
- (5) If you must use this determination, you may not use—
- (a) *Determination G14: Forward Contracts for Foreign Exchange and Commodities* to calculate gross income or expenditure of any forward contract that is within subparagraphs (1) and (2) above;
  - (b) *Determination G9A: Financial Arrangements that are Denominated in a Currency or Commodity other than New Zealand Dollars* to calculate gross income or expenditure of any financial arrangement that is within the scope of *Determination G9C: Financial arrangements that are denominated in a currency other than New Zealand dollars: an expected value approach*.

(Note: A determination to which *Determination G14B* refers may be changed or rescinded by a new determination made by the Commissioner. In such a case, a reference to the old determination is extended to the new determination.)



#### 4. Principle

- (1) If you are a party to a forward contract to which this determination applies, the gross income or expenditure in respect of the forward contract is calculated by taking into account all amounts arising from the fluctuations of exchange rates or commodity prices.
- (2) The gross income or expenditure from the forward contract is the total of an expected component and the unexpected component.
- (3) If you must apply this determination to a forward contract for the income year in which you enter the forward contract, you must measure the expected component as at the time you enter the forward contract.
- (4) To measure the expected component you must convert the base currency payments into expected NZD payments on the basis of forward rates as at the time you become a party to the forward contract and spread the expected NZD net amount over the term of the contract.
- (5) If you must apply this determination for the first time to a forward contract for an income year that is after the income year in which you enter the forward contract, and you have not applied *Determination G14A* for the forward contract, you must measure the expected component as at the end of the income year. You must follow the principle set out above by calculating the expected NZD net amount using actual NZD payments up to the end of the income year in which you first apply the determination and the forward rates as at the end of that income year.
- (6) You must recognise the unexpected component for a forward contract by performing the base price adjustment that is required under whichever is applicable of section EH 4 of the Act and section EH 45 of the Act.

#### *Transitional adjustment*

- (7) For the first income year for which you must use this determination, you must perform the transitional adjustment calculation to calculate gross income or expenditure for all forward contracts—
  - (a) that you entered before the income year; and
  - (b) for which you have not been required to use *Determination G14A*.
- (8) This adjustment ensures that the gross income or expenditure up to the end of the income year in which you first use this determination is equal to that that would have been returned if the actual NZD payments and the forward rates, as described in subparagraph (4), were known and this determination had been used since you became a party to the forward contract.

## 5. Interpretation

(1) In this determination, a reference to the **Act** is a reference to the Income Tax Act 1994.

(2) In this determination—  
**base currency** in relation to a person and a forward contract, means the currency under the forward contract which is adopted by the person as a reference currency for the purposes of this determination

**commencement date** of a forward contract means the date on which the contract was entered into, or the date on which it was acquired, if later

**contract rate** in relation to a forward contract means the price of one currency expressed in terms of the other currency under the forward contract

**covered interest parity** means the proposition that the differential between forward and spot exchange rates is equal to the interest differentials. That is, the forward rate for a foreign currency exchange at time  $t$  for 1 period ahead is equivalent to the spot rate at time  $t$ ,  $S_t$ , multiplied by 1 plus the foreign interest rate,  $i_f$ , divided by 1 plus the domestic interest rate,  $i_d$ . Forward rates at time  $t$  for  $n$  periods,  $Fwd_{t,n}$ , can thus be derived based on the principle of covered interest parity as—

$$Fwd_{t,n} = S_t \times \frac{(1 + i_f)^n}{(1 + i_d)^n}$$

**currency** includes any commodity used as a medium of exchange or account, whether in general use or for the purpose of an arrangement

**exchange rate** means the price of 1 currency expressed in another currency

**forward rate** means the exchange rate for a forward contract as defined in *Determination G6D: Foreign Currency Rates* or the forward exchange rate calculated using the principle of covered interest parity or other methods that are commercially acceptable. In the case where the base currency is a commodity, the forward rate is the future value of the commodity (in NZD)

**future value** in relation to a commodity and a future date means the value of the commodity at the future date, on a given date, derived from any commercially-acceptable, market-based method of valuation

**NZD** means the currency of New Zealand

**non-base currency** means the currency under a forward contract that is not the base currency

**spot contract** means a contract for the sale or purchase of a currency for delivery in 2 business days

**spot rate** means the exchange rate for a spot contract as defined in *Determination G6D: Foreign Currency Rates* or in the case of a commodity, the spot value (in NZD) of the commodity

**spot value** in relation to a commodity and a day means the value of the commodity on that day derived from any commercially acceptable method of valuation

**USD** means the currency of the United States of America.

(3) All other terms used have the meaning given to them for the purpose of the Act.

## **6. Method**

(1) Your gross income or expenditure in an income year from a forward contract under this determination is the total of—

- (a) the expected component, calculated in accordance with subparagraphs (2) to (8); and
- (b) the unexpected component, calculated in accordance with subparagraph (9).

(2) To calculate the income or expenditure in relation to a forward contract, you must first nominate a base currency.

(3) If the terms of the forward contract provide for the netting off or offsetting of any amounts payable to or by one party to the forward contract with any amounts payable to or by the other party to the forward contract, you must ignore such netting off or offsetting for the purpose of this determination.

(4) If the first income year for which you are required to apply this determination to a forward contract is the income year in which you become a party to the forward contract, you must calculate the expected component for each income year of the remaining term of the forward contract as at the time you become a party to the forward contract. The expected component is calculated by first taking into account all base currency payments in relation to the forward contract. The base currency payments of a forward contract consist of—

- (a) the base currency value of the payment or receipt, if any, made in consideration of entering into the forward contract;
- (b) the base currency value of the non-base currency payment to be made under the contract valued at the forward rate;
- (c) the base currency value of the non-base currency payment to be made under the contract valued at the contract rate.

(5) You must convert the base currency payments into NZD using forward rates as at the time you become a party to the forward contract if the base currency is not NZD.

(6) The expected NZD net amount is the difference between items (b) and (c) in subparagraph (4), adjusted for any amount as described in item (a). You must spread the expected NZD net amount using the yield to maturity method consistent with *Determination G3* and, where necessary, allocate it to the income year on the basis of *Determination G1A*. This will give the expected component for each income year.

(7) You must use the straight-line method to spread the expected NZD net amount of a forward contract that has been written for no consideration at a rate other than the forward rate.

(8) If the first income year for which you are required to apply this determination to a forward contract is after the income year in which you entered the forward contract, and you have not been required to use *Determination G14A* for the forward contract, you must follow the method set out in subparagraphs (1) to (7) to calculate gross income or expenditure of the forward contract, except that—

- (a) the NZD net amount to be spread under subparagraph (6) consists of—
  - (i) actual NZD payments that have occurred since you became a party to the forward contract until the end of the first income year for which you must use this determination;
  - (ii) expected NZD payments in the remaining term of the forward contract; and
- (b) the expected NZD payments in the remaining term of the forward contract must be calculated on the basis of the forward rates available at the end of the first income year for which you must use this determination for the forward contract.

(9) The unexpected component is the difference between the actual NZD value of the payments during the year and the expected NZD value of those payments as calculated under subparagraph (5). You need not calculate the unexpected component separately as it is part of the base price adjustment required under whichever is applicable of section EH 4 of the Act and section EH 45 of the Act.

*Transitional adjustment for existing forward contracts for foreign exchange and commodities*

(10) You must perform a transitional adjustment calculation for the first income year for which you must use this determination to calculate gross income or expenditure of any forward contract, if you entered the forward contract before the income year and have not been required to use *Determination G14A* for the forward contract. You must perform the transitional adjustment calculation for such forward contract in accordance with the following formula:

$$a - b - c + d$$

where—

- a** is the sum of all amounts that would have been income in respect of the forward contract from the time it was entered until the end of the income year, if this determination had applied from the time you became a party to the forward contract

- b** is the sum of all amounts that would have been expenditure in respect of the forward contract from the time it was entered until the end of the income year, if this determination had applied from the time you became a party to the forward contract
- c** is the sum of all income in respect of the forward contract since it was acquired until the end of the previous income year
- d** is the sum of all expenditure in respect of the forward contract since it was acquired until the end of the previous income year.

A positive net amount is gross income while a negative net amount is gross expenditure in the first income year for which you must use this determination.

## **7. Examples**

(1) A New Zealand corporate borrower enters into a long-term forward foreign exchange contract to buy 1 million US dollars (USD) against delivery of NZD in 2 years' time. The contract was entered into on 30 April 2005 for no consideration and the corporate borrower has a balance date of 30 June. The contract rate is 0.5919 USD to 1 NZD, so settlement will require delivery of NZD \$1,689,475. The corporate chooses NZD as the base currency for this contract.

(2) At the time the New Zealand corporate becomes a party to the forward contract, the expected NZD net amount is zero and so the expected component of the gross income or expenditure from the forward contract is zero. The New Zealand corporate will recognise the unexpected component of the gross income or expenditure from the forward contract when performing the base price adjustment under section EH 47 of the Act.

Further examples are provided in the schedule.

Signed on the 3<sup>rd</sup> day of June 2004.

Robin Oliver  
General Manager, Policy

## Schedule: Further examples

Note: In each example involving a base price adjustment, the base price adjustment is calculated on the assumption that the forward contract is subject to Division 2 of Part EH of the Act. The details of the calculation would differ for a forward contract that was subject to Division 1 of Part EH of the Act.

For the purpose of examples A to C assume that the spot rates and the forward rates for USD/NZD on the relevant dates are as follows:

Date	Actual Spot	CIP: Fwd (0,t)	CIP: Fwd (1,t)	CIP: Fwd (2,t)	Expected US,I	Expected NZ,I
30-Apr-04	0.6350	0.6350			0.04	0.06
30-Apr-05	0.6149	0.6230	0.6149		0.04	0.06
30-Apr-06	0.5750	0.6113	0.6033	0.5750	0.04	0.06
30-Apr-07	0.5570	0.5997	0.5919	0.5642	0.04	0.06

The forward exchange rates are derived on the principle of covered interest parity (CIP) using the expected interest rates in the United States of America (US,I) and the expected domestic interest rates (NZ,I). Fwd (0,t) represents the forward rates at 30 April 2004 out to period t, while Fwd (1,t) and Fwd (2,t) represent the forward rates at 30 April 2005 and 30 April 2006, respectively, out to period t. For convenience in these examples when calculating the base price adjustment, the same buy/sell spot rates have been used at date of delivery. In practice this would not normally be the case.

### Example A: Seller of base currency (NZD); contract rate is equal to market rate

A New Zealand corporate borrower enters into a long-term forward foreign exchange contract to buy USD \$1,000,000 against delivery of NZD in 2 years' time. The contract was entered into on 30 April 2005 for no consideration and the corporate borrower has a balance date of 30 June. The contract rate is 0.5919 USD to 1 NZD, so settlement will require delivery of NZD \$1,689,475. The corporate chooses NZD as the base currency for this contract.

#### *At the time the contract was entered into – 30 April 2005*

The expected base currency payments in relation to the forward contract consist of—

- the base currency value of the payment or receipt made in consideration of entering into the forward contract = 0;
- the base currency value of the non-base currency payment to be made under the contract valued at the forward rate = NZD \$1,689,475;
- the base currency value of the non-base currency payment to be made under the contract valued at the contract rate = NZD \$1,689,475.

Since the forward contract was entered into at the forward rate for no consideration, the expected NZD net amount is nil. So there is no expected component to be spread under the accrual rules.

***At the final balance date – 30 June 2007***

In the 30 June 2007 income year, the base price adjustment given in section EH 47 of the Act is calculated by applying the formula—

$$\text{consideration} - \text{income} + \text{expenditure} + \text{amount remitted}$$

where—

<b>consideration</b>	is the consideration paid or payable to the company less the consideration paid or payable by the company = $1,000,000/0.557 - 1,689,475$ = $1,795,332 - 1,689,475$ = NZD \$105,857
<b>income</b>	is all the amounts of gross income derived in previous income years = 0
<b>expenditure</b>	is expenditure incurred in previous income years = 0
<b>amount remitted</b>	is the amount of consideration remitted = 0.

Therefore, the base price adjustment = \$105,857 and since this is positive, the amount of NZD \$105,857 is gross income of the New Zealand corporate for the 30 June 2007 income year.

**Example B: Seller of base currency (NZD); contract rate is equal to the market rate**

A New Zealand corporate borrower enters into a long-term forward foreign exchange contract to buy USD \$1,000,000 against delivery of NZD in 3 years' time. The contract was entered into on 30 April 2004 for no consideration and the corporate borrower has a balance date of 30 June. The contract rate is 0.5997 USD to 1 NZD, so settlement will require delivery of NZD \$1,667,416. The corporate chooses NZD as the base currency for this contract.

Assume that the New Zealand corporate has not been using *Determination G14A* and has been using an alternative method to calculate the income or expenditure of the forward contract in the 2003–04 income year. In fact, the corporate has recognised NZD \$32,982 as gross income in respect of the forward contract for the year ending 30 June 2004. However, the corporate has elected to use this determination for the 2004–05 and subsequent income years.

Further, assume that the forward rate on 30 June 2005 out to 30 April 2007, the delivery date of the forward contract, is 0.5919. Therefore, the market rate for the delivery of USD \$1,000,000 on 30 April 2007 is NZD \$1,689,475. Given the contract rate of 0.5997 for the delivery of USD \$1,000,000, there is an expected NZD net amount of NZD \$22,059. Using this determination, the expected NZD net amount should be spread on a straight line basis over the term of the forward contract.

***The transitional adjustment in the 2004–05 income year – 30 June 2005***

Using a straight line method to spread the expected NZD net amount of NZD \$22,059, the gross income in relation to the forward contract for the year ending 2004 and 2005 should have been NZD \$1,226 and NZD \$7,353, respectively.

Therefore the transitional adjustment is—

$$a - b - c + d$$

where—

- a** the sum of all amounts that would have been income from the time the corporate become a party to the forward contract until the end of the income year  
= 1,226 + 7,353  
= 8,579
- b** the sum of all amounts that would have been expenditure from the time the corporate become a party to the forward contract until the end of the income year  
= 0
- c** the sum of all income in respect of the forward contract since it was acquired until the end of the previous income year  
= 32,982
- d** the sum of all expenditure in respect of the forward contract since it was acquired until the end of the previous income year  
= 0.

The net amount of –NZD \$24,403 is gross expenditure in the 2004–05 income year.

***At the final balance date – 30 June 2007***

In the 30 June 2007 income year, the base price adjustment given in section EH 47 of the Act is calculated by applying the formula—

$$\text{consideration} - \text{income} + \text{expenditure} + \text{amount remitted}$$

where—

- consideration** is the consideration paid or payable to the company less the consideration paid or payable by the company  
= 1,000,000/0.557 – 1,667,416  
= 1,795,332 – 1,667,416  
= NZD \$127,916
- income** is all the amounts of gross income derived in previous income years  
= 32,982 + 7,353  
= NZD \$40,335
- expenditure** is expenditure incurred in previous income years  
= NZD \$24,403
- amount remitted** is the amount of consideration remitted  
= 0.



Therefore, the base price adjustment =  $\$127,916 - \$40,335 + \$24,403 + 0 = \$111,984$  and since this is positive, the amount of NZD \$111,984 is gross income of the New Zealand corporate for the 30 June 2007 income year.

**Example C: Seller of base currency (NZD); contract rate is not equal to the market rate**

A New Zealand corporate borrower enters into a long-term forward foreign exchange contract to buy USD \$1,000,000 against delivery of NZD in 2 years' time. The contract was entered into on 30 April 2005 and the corporate borrower has a balance date of 30 June. The contract rate is 0.5997 USD to 1 NZD, so settlement will require delivery of NZD \$1,667,416. For the purpose of this example assume that the corporate borrower paid NZD \$10,000 to enter into this forward contract. (This could be the same forward contract as in the previous example where the forward contract was sold on 30 April 2005.) The corporate chooses NZD as the base currency for this contract.

***At the time the contract was entered into – 30 April 2005***

The forward rate in this case is 0.5919 USD to 1 NZD, which is different from the contract rate of 0.5997 USD to 1 NZD. The expected settlement on the commitment to purchase USD \$1,000,000 at 30 April 2007 is, therefore, NZD \$1,689,475. The payment made in acquiring the forward contract was NZD \$10,000. Thus, the expected base currency payments in this example consist of—

- the base currency value of the payment or receipt made in consideration of entering into the forward contract = NZD \$10,000;
- the base currency value of the non-base currency payment to be made under the contract valued at the forward rate = NZD \$1,689,475;
- the base currency value of the non-base currency payment to be made under the contract valued at the contract rate = NZD \$1,667,416.

So, the expected NZD net amount from the forward contract is NZD \$12,059 (i.e. the difference between the commitments under the forward contract measured at the contract rate (NZD \$1,667,416) and the commitments under the forward contract measured at the forward rate (NZD \$1,689,475) less the payment made to acquire the forward contract).

The payments in relation to the forward contract are summarised in the table below. The expected NZD net amount is spread using the yield to maturity method recommended in *Determination G3* and allocated to the income year on a daily basis consistent with *Determination G1A*.

Date	Expected Cash (NZD)	Contract Cash (NZD)	Expected Cash (NZD)	Expected Income
30-Apr-05	0	0	-10,000	
30-Apr-06	0	0	0	4,852
30-Apr-07	1,689,475	1,667,416	<u>22,059</u>	<u>7,207</u>
Total			12,059	12,059
YTM			49%	

***At the first balance date – 30 June 2005***

Expected component =  $(61/365 \times \$4,852) = \$811$ .

Unexpected component = 0.

The amount of \$811 is gross income at the first balance date.

***At the second balance date – 30 June 2006***

Expected component =  $(61/365 \times \$7,207) + (304/365 \times \$4,852) = \$1,204 + \$4,041 = \$5,245$ .

Unexpected component = 0.

The amount of \$5,245 is gross income at the second balance date.

***At the final balance date – 30 June 2007***

In the 30 June 2007 income year, the base price adjustment given in section EH 47 of the Act is calculated by applying the formula—

$$\text{consideration} - \text{income} + \text{expenditure} + \text{amount remitted}$$

where—

**consideration** is the consideration paid or payable to the company less the consideration paid or payable by the company  
 $= 1,000,000/0.557 - 1,667,416 - 10,000$   
 $= 1,795,332 - 1,677,416$   
 $= \text{NZD } \$117,916$

**income** is all the amounts of gross income derived in previous income years  
 $= 811 + 5,245$   
 $= \text{NZD } \$6,056$

**expenditure** is expenditure incurred in previous income years  
 $= 0$

**amount remitted** is the amount of consideration remitted  
 $= 0$ .

Therefore, the base price adjustment =  $\$117,916 - \$6,056 + 0 + 0 = \$111,860$  and since this is positive, the amount of NZD \$111,860 is gross income of the New Zealand corporate for the 30 June 2007 income year.

**Example D: Purchaser of base currency (USD); contract rate is not equal to the market rate**

Assuming that in the previous example, the corporate chooses USD as the base currency for the forward contract.

***At the time the contract was entered into – 30 April 2005***

Since the base currency is USD, the base currency payments expected at the commencement date is—

- the base currency value of the payment or receipt made in consideration of entering into the forward contract = NZD \$10,000 × 0.6149 = USD \$6,149;
- the base currency value of the non-base currency payment to be made under the contract valued at the forward rate = NZD \$1,667,416 × 0.5919 = USD \$986,944;
- the base currency value of the non-base currency payment to be made under the contract valued at the contract rate = NZD \$1,667,416 × 0.5997 = USD \$1,000,000.

The expected base currency payments (summarised in column 4 of the table below) are converted into NZD using the relevant forward rates. The expected NZD net amount of NZD \$12,057 is then spread over the term of the forward contract using the yield to maturity method recommended in *Determination G3* and allocated to the income year on a daily basis consistent with *Determination G1A*.

<b>Date</b>	<b>Expected Cash (USD)</b>	<b>Contract Cash (USD)</b>	<b>Expected Cash (USD)</b>	<b>Expected Cash (NZD)</b>	<b>Expected Income</b>
30-Apr-05	0	0	-6,149	-10,000	
30-Apr-06	0	0		0	4,852
30-Apr-07	986,944	1,000,000	<u>13,056</u>	<u>22,057</u>	<u>7,206</u>
Total			6,907	12,057	12,057
YTM			46%	49%	

***At the first balance date – 30 June 2005***

Expected component =  $(61/365 \times \$4,852) = \$811$ .

Unexpected component = 0.

The amount of \$811 is gross income at the first balance date.

***At the second balance date – 30 June 2006***

Expected component =  $(61/365 \times \$7,206) + (304/365 \times \$4,852) = \$1,204 + \$4,041 = \$5,245$ .

Unexpected component = 0.

The amount of \$5,245 is gross income at the second balance date.

***At the final balance date – 30 June 2007***

In the 30 June 2007 income year, the base price adjustment given in section EH 47 is calculated by applying the formula—

$$\text{consideration} - \text{income} + \text{expenditure} + \text{amount remitted}$$

where—

<b>consideration</b>	is the consideration paid or payable to the company less the consideration paid or payable by the company = $1,000,000/0.557 - 1,667,416 - 10,000$ = $1,795,332 - 1,677,416$ = NZD \$117,916
<b>income</b>	is all the amounts of gross income derived in previous income years = $811 + 5,245$ = NZD \$6,056
<b>expenditure</b>	is expenditure incurred in previous income years = 0
<b>amount remitted</b>	is the amount of consideration remitted = 0.

Therefore, the base price adjustment =  $\$117,916 - \$6,056 = \$111,860$  and since this is positive, the amount of NZD \$111,860 is gross income of the New Zealand corporate for the 30 June 2007 income year.

**Example E: Forward contract to purchase commodity for USD at non-market rate with a corresponding forward contract in foreign exchange in market rate**

For the purpose of this example, assume that the forward rates for USD/NZD are as summarised in the following table. These forward exchange rates are derived on the principle of covered interest parity (CIP). Fwd (0,t) represents the forward rates at 30 June 2004 out to period t while Fwd (1,t) and Fwd (2,t) represent the forward rates at 30 June 2005 and 30 June 2006, respectively, out to period t.

Date	Actual Spot	CIP: Fwd (0,t)	CIP: Fwd (1,t)	CIP: Fwd (2,t)	Expected US,I	Expected NZ,I
30-Jun-04	0.6350	0.6350			0.04	0.06
30-Jun-05	0.6149	0.6230	0.6149		0.04	0.06
30-Jun-06	0.5750	0.6113	0.6033	0.5750	0.04	0.06
30-Jun-07	0.5570	0.5997	0.5919	0.5642	0.04	0.06

The spot and forward rates per barrel of crude oil (in USD) are summarised in the following table. For example, the market price for a barrel of crude oil was USD \$19.2 per barrel on 30 June 2004 while the forward price out to 30 June 2007 was USD \$21 per barrel.

<b>Date</b>	<b>Actual Spot</b>	<b>Fwd (0,t)</b>	<b>Fwd (1,t)</b>	<b>Fwd (2,t)</b>
30-Jun-04	19.2	19.2000		
30-Jun-05	19.6	20.2000	19.6000	
30-Jun-06	21.1	21.8000	22.1000	21.1000
30-Jun-07	22	21.0000	22.8000	22.1000

A New Zealand company enters into 2 forward contracts simultaneously on 30 June 2004. The first forward contract secures the supply of 10,000 barrels of crude oil. This forward contract is to be cash settled on 30 June 2007, at USD \$20 per barrel. The second forward contract was entered into for the purchase of USD \$200,000 in exchange for the delivery of NZD at a contract rate of 0.5997. The second forward contract is to be settled on 30 June 2007. For the purpose of this example assume that the corporate chooses USD as the base currency for both contracts.

***At the time the forward contracts were entered into – 30 June 2004***

The forward contract for the supply of crude oil was entered into at a price below the market rate. (This may be because the supplier is expecting excess supplies that have not been factored into the market prices yet.) The contract rate of \$20 is lower than the forward rate of \$21. As a result, gains are expected from the forward contract. The expected base currency payments include—

- the base currency value of the payment or receipt made in consideration of entering into the forward contract = 0;
- the base currency value of the non-base currency payment to be made under the contract valued at the forward rate =  $10,000 \times \$21 = \text{USD } \$210,000$ ;
- the base currency value of the non-base currency payment to be made under the contract valued at the contract rate =  $10,000 \times \$20 = \text{USD } \$200,000$ .

The expected base currency payments are converted at the forward rate of 0.5997 USD/NZD and the expected NZD net amount is spread under the accrual rules over the term of the forward contract. As the company did not pay anything to enter into the forward contract, the gains cannot be spread using the yield to maturity method. Therefore, the straight-line method will be adopted to spread the expected gains.

The forward contract for the foreign exchange was entered into at the forward rate. As such, there are no expected gains or losses to be spread under the accrual rules (see Example A).

***At the first and second balance date – 30 June 2005 and 30 June 2006***

For the forward contract for crude oil—

Expected component =  $1/3 (\$10,000/0.5997) = \$5,558$ .

Unexpected component = 0.

The amount of \$5,558 is gross income at the first and second balance date.

*At the final balance date – 30 June 2007*

On the 30 June 2007 balance date, the forward contract for the supply of crude oil would have been cash settled at the contract price of USD \$20 per barrel. The market price per barrel of crude oil on the delivery date is USD \$22. The spot exchange rate on the delivery date is 0.557 USD/NZD.

The base price adjustment given in section EH 47 of the Act in relation to the forward contract for the supply of crude oil is calculated by applying the formula—

$$\text{consideration} - \text{income} + \text{expenditure} + \text{amount remitted}$$

where—

<b>consideration</b>	is the consideration paid or payable to the company less the consideration paid or payable by the company = $220,000/0.557 - 200,000/0.557$ = $394,973 - 359,066$ = NZD \$35,807
<b>income</b>	is all the amounts of gross income derived in previous income years = $5,558 + 5,558$ = NZD \$11,116
<b>expenditure</b>	is expenditure incurred in previous income years = 0
<b>amount remitted</b>	is the amount of consideration remitted = 0.

Therefore, the base price adjustment =  $\$35,807 - \$11,116 = \$24,791$  and since this is positive, the amount is gross income of the New Zealand company for the 30 June 2007 income year.

The forward contract for the foreign exchange is also settled on 30 June 2007. In the 30 June 2007 income year, the base price adjustment given in section EH 47 of the Act is calculated by applying the formula—

$$\text{consideration} - \text{income} + \text{expenditure} + \text{amount remitted}$$

where—

<b>consideration</b>	is the consideration paid or payable to the company less the consideration paid or payable by the company = $200,000/0.557 - 200,000/0.5997$ = $359,066 - 333,500$ = NZD \$25,566
<b>income</b>	is all the amounts of gross income derived in previous income years = 0
<b>expenditure</b>	is expenditure incurred in previous income years = 0
<b>amount remitted</b>	is the amount of consideration remitted = 0.

Therefore, the base price adjustment = \$25,566 and since this is positive, the amount is gross income of the New Zealand company for the 30 June 2007 income year.