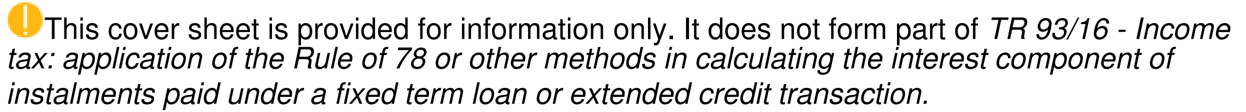
TR 93/16 - Income tax: application of the Rule of 78 or other methods in calculating the interest component of instalments paid under a fixed term loan or extended credit transaction.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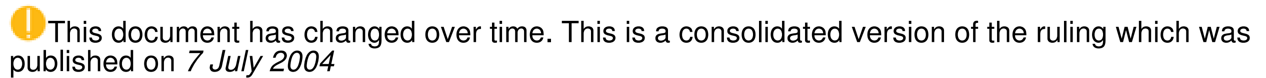
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Australian Taxation Office

Taxation Ruling

Income tax: application of the "Rule of 78" or other methods in calculating the interest component of instalments paid under a fixed term loan or extended credit transaction.

other Rulings on this topic

IT 2065

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This Ruling, to the extent that it is capable of being a 'public ruling' in terms of Part IVAAA of the ***Taxation Administration Act 1953****, is a public ruling for the purposes of that Part . Taxation Ruling TR 92/1 explains when a Ruling is a public ruling and how it is binding on the Commissioner.*

[Note: This is a consolidated version of this document. Refer to the Tax Office Legal Database (http://law.ato.gov.au) to check its currency and to view the details of all changes.]

What this Ruling is about

1. This Ruling considers when it is appropriate to use the "Rule of 78" or other method of estimation to apportion instalments paid under a fixed term loan or extended credit transaction between principal and interest. The Ruling does not consider whether this interest is deductible under subsection 51(1) of the Income Tax Assessment Act 1936 ("the Act") or when the interest becomes deductible.

Ruling

2. If the amount of interest paid on a fixed term loan or extended credit transaction during the year of income is known, that figure must be used as the basis for calculating any applicable deduction. In these circumstances, the "Rule of 78" or any other estimation method must not be used.

3. If a transaction is subject to a State or Territory Credit Act or other legislation which regulates how instalments are apportioned between principal and interest, the amount of interest so calculated should be used for calculating the deduction.

4. If the taxpayer does not know how much interest has been paid, he should take reasonable steps to obtain this information from the lender or supplier of credit ("the financier"). If the financier fails to or

refuses to give this information to the taxpayer but the method which the financier used to apportion the instalments between principal and interest is known, the taxpayer must use this method. The amount of interest should then be used to calculate the deduction.

5. If the amount of interest is not known and cannot reasonably be ascertained from the financier, or be precisely calculated, it is acceptable to estimate the interest paid.

6. This Office accepts that the "Rule of 78", the actuarial method and the flat rate method are all appropriate methods for estimating interest paid under a fixed term loan or extended credit transaction. Other methods may be appropriate. Arbitrary or non-commercial estimation methods are not considered to be acceptable methods.

7. Whichever method is adopted must be used consistently over the life of the fixed term loan or extended credit transaction.

8. This Ruling does not apply to:

- hire purchase agreements where the interest charge is capitalised and included in the cost for depreciation purposes (see Taxation Rulings IT 196 and IT 2236);
- leases (see Taxation Ruling IT 28);
- interest-only loans;
- loans which do not have fixed terms;
- transactions to which Division 16E of the Act applies; and
- transactions to which Division 240 of the *Income Tax Assessment Act 1997* applies. (An example of a Division 240 calculation can be found in the Explanatory Memorandum to Taxation Laws Amendment Bill No.1 2001).

Date of effect

9. This Ruling applies to years commencing both before and after its date of issue. However, the Ruling does not apply to taxpayers to the extent that it conflicts with the terms of a settlement of a dispute agreed to before the date of issue of the Ruling (see Paragraphs 21 and 22 of Taxation Ruling TR92/20). The Ruling does not have application for a taxpayer who has relied on Taxation Ruling IT 2065 for the purposes of the former home loan interest rebate schemes.

Explanations

10. A fixed term loan or an extended credit transaction such as a hire purchase agreement or instalment sale, normally entails the payment

of a predetermined number of instalments. Each instalment will generally include an element of capital or principal and another element which may be variously described as interest, hiring charge or terms charge. For the purposes of this Ruling the latter are all referred to as interest.

11. If funds borrowed under such agreements are used in gaining or producing assessable income or in carrying on a business for that purpose, an income tax deduction may be available for the interest component of each loan instalment provided the requirements of subsection 51(1) of the Act are satisfied. Similarly, if plant or equipment is used or installed ready for use for the purpose of producing assessable income, a deduction may be available for the interest component of each of the instalments paid. No deduction is available for the capital component of any instalment. It is therefore necessary to distinguish between the two components.

12. The question addressed by this Ruling is how to calculate the interest component of each instalment.

Methods for calculating interest

13. There are various methods which can be used in apportioning interest over the life of a fixed interest loan or extended credit transaction. Each method provides that the same total interest is payable under the agreement. However each method will provide a different apportionment of the total interest between the instalments.

14. Well known methods include:

The "Rule of 78"

The Actuarial Method

The Flat Rate Method

The "Rule of 78"

15. The "Rule of 78" apportions the total interest payable under a loan in accordance with an arithmetic progression. Under the rule the early instalments include larger interest components than the later ones.

16. To calculate the interest component of any particular instalment the total interest payable under the loan is multiplied by the fraction applicable to that instalment. The denominator of the applicable fraction is always the sum of the number of instalments, so that the denominator for a loan of 18 monthly instalments is 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18 = 171. The numerator is the total number of instalments minus the number of

instalments already passed. With a loan of 18 months the interest component for the first instalment will be 18/171 x total interest payable, for the second (18 - 1)/171 x total interest payable and for the third (18 -2)/171 x total interest payable and so on for the remaining instalments.

17. This method is known as the "Rule of 78" after the sum of the numbers from 1 to 12 which is the applicable denominator for a one year loan of 12 monthly instalments. Typically this method is applied to loans with duration of less than 18 months.

The Actuarial Method

18. Under the actuarial method the effective interest rate is used to calculate the interest and principal component of each instalment. At the time of each instalment the outstanding balance is multiplied by the interest rate applicable to the instalment period.

19. The interest component of each instalment decreases as the principal repayments increase and the outstanding principal reduces. This method reflects the fact that the interest being charged on the loan is at a constant rate. The interest figures determined under this method may be similar to those obtained under the "Rule of 78". The degree of variation between the two methods tends to increase with the duration of the agreement.

The Flat Rate Method

20. Under the flat rate method the total interest payable under the agreement is allocated equally between each instalment. For example, where an asset is being acquired under an instalment sale agreement and the interest component is expressed as being $100 per annum then the flat rate method is being used. As the interest component of each of the instalments remains constant despite the reduction in the outstanding principal, with the flat rate method the effective rate of interest increases with each instalment.

21. Financiers may use any of these methods for calculating the interest paid under their agreements. They may or may not inform their customers of the method used.

If the amount of interest is known

22. In some cases the amount of interest included in each instalment paid during the year is known. Some financiers may provide regular accounts or statements showing a break-up of instalments between principal and interest components. Where such statements are issued,

they must ordinarily be used as the basis for determining a claim for an interest deduction. In these circumstances it is not acceptable to estimate the amount of interest paid.

If the amount of interest is not known

23. If the taxpayer does not know amount of interest, the taxpayer must take reasonable steps to ascertain this amount from the financier. Reasonable steps include paying charges made by the financier for providing this information.

24. Factors to be taken into account in determining if it is reasonable to acquire the precise information from the financier include:

- the basis on which the interest on the loan was calculated in prior years;
- the costs involved (in comparison with the amount to be claimed);
- knowledge of the actual method used by the financier in relation to the particular agreement. For example, if it is known that the financier itself calculates the interest using a particular method then it will be acceptable for the taxpayer to make a calculation using this method;
- knowledge of the usual method used by the financier in relation to type of agreement under consideration;
- industry practice in relation to that type of agreement.

If the method used by the financier is known

25. In some instances the financier may not advise the exact amount of interest paid during the year but the method which it used to calculate interest may be known. In these circumstances this method should be used for calculating the deduction.

26. In Taxation Ruling IT 2065 it was determined that the "Rule of 78" and the actuarial method were both appropriate methods for ascertaining the amount of interest accrued on a "flat rate" loan for the purposes of the then home loan interest rebate schemes. Although this position was adopted by the Commissioner in relation to the home loan rebate schemes, it is considered that these methods are inappropriate for the purpose of calculating a deduction for interest paid on a "flat rate" loan where that loan is not made in relation to the

home loan rebate schemes. If the interest payable on a loan during the year was actually charged in accordance with the flat rate method, then this method must be used as the basis for calculating any deduction.

27. With every fixed term loan or extended credit transaction it is possible to calculate the total interest payable over the life of the agreement and to express that interest in terms of a flat rate. However, the fact that a person may know what the flat rate of interest on an agreement is, does not necessarily mean that the flat rate method was used by the financier in actually charging interest during the year. The financier may have calculated the interest charged during the year by using the "Rule of 78", the actuarial method, or some other method and if so, the interest so calculated must be used as the basis for calculating any deduction.

Using an estimate

28. If the amount of interest is not known and cannot be reasonably ascertained from the financier, it is acceptable to calculate the interest component using either the "Rule of 78", the actuarial method, the flat rate method or some other appropriate method. Whichever method is adopted must be used consistently over the life of the agreement. Arbitrary or non-commercial methods are not considered to be appropriate methods.

29. Although taxpayers may choose which method to use, they should, where possible, ensure the method is appropriate as well as consistent. In general, with long term loans such as loans to acquire rental properties, the actuarial method will be the most appropriate method since that is the method most likely to be used by the financier.

30. The size of the instalments themselves may indicate what is and what is not an appropriate method. Under some agreements the size of the instalments may vary. This factor should be taken into account in determining the appropriate method of estimation to be used. In some cases it may be appropriate to use a combination of two methods. The Rule of 78 should not be used by itself where the instalments are not equal. For example, some agreements provide for a number of regular instalments together with a large payment known as a balloon payment at the end of the agreement. The regular instalments paid during the course of the such an agreement will include interest on both the reducing balance of the principal and the principal constituted by the balloon payment.

31. Where there is an agreement with a balloon payment and the amount of interest which has been paid is known, that amount must be

used as the basis for claiming any deduction. Where the amount of interest is not known and the financier does not or refuses to provide this information, an estimate may be used. In making this estimate, a separate calculation may be made in respect of the amount of principal represented by the balloon payment and because this payment is not reduced during the course of the agreement it is appropriate that the annual interest on this amount be calculated using the flat rate method. As the non-balloon component part of the principal is reducing over the course of the agreement a second calculation is required, and for this calculation it is appropriate to use the "Rule of 78". To avoid using two different methods with two separate calculations, the actuarial method may be used for an agreement with a balloon payment.

Examples

Example 1

32. Jane has a fixed term loan from a bank. The regular statements sent out by the bank disclose the interest and principal repaid each instalment. Jane must use these figures as the basis for any claim for deduction.

Example 2

33. A company acquires a piece of heavy equipment under an instalment sales contract. Total payments under the contract for the first year are $120,000. The company does not know the exact amount of interest paid during the year. The company is not sure which method is being used by the finance company. The finance company charges for the provision of this information. The company should obtain the information from the finance company.

Example 3

34. Tom acquires a piece of equipment under a hire purchase agreement from XYZ Co. (It is assumed that the hire purchase agreement does not capitalise the interest and include it in the cost for depreciation purposes.) The equipment is used in his construction business. Tom paid 11 instalments during the last income year. The total paid was $2,450. XYZ Co. does not routinely provide details of the break-up of the instalments paid into its principal and interest components.

35. Tom contacts XYZ Co. which informs him that it will provide him with the relevant information for a $50 fee. Tom decides to

consult his accountant. His accountant informs him that XYZ Co. usually calculates interest repayments on hire purchase agreements using the "Rule of 78".

36. Tom has a choice, he can pay the $50 fee and obtain the figures from XYZ Co. or he can arrange to have his accountant make his own calculation using the "Rule of 78". Should Tom elect to make his own calculation, then full details of the calculation should be kept.

Example 4

37. Jill took out a fixed term loan in July 1988. For two years she was not informed of the amount of interest she had paid. In her returns for these years Jill claimed a deduction for interest based on the "Rule of 78". For the third year of the loan, statements were issued which showed the exact amount of interest paid. The interest shown was calculated in accordance with the actuarial method. Jill should continue to claim her deduction for interest based on the "Rule of 78", or request amendments to her prior year assessments to reflect the fact that the actuarial method should have been used in those years.

Example 5

38. Joe borrowed $8,000 on fixed terms. His bank does not disclose interest paid each instalment. Joe knows that the total interest payable over the course of the loan was calculated at a flat rate but does not know the method the bank uses to allocate the interest between instalments. He contacts the bank but is unable to obtain more information. He should calculate his deduction for interest using either the "Rule of 78", the actuarial method or the flat rate method.

Example 6

39. John took out a ten year fixed term loan to fund the acquisition of a rental property. John was not advised of the amount of interest paid on the loan during the year or the method used by the financier in calculating interest. Despite taking reasonable steps to ascertain this information, he has been unable to do so. As John has a long fixed term loan, the actuarial method is the most appropriate method for him to use to estimate the interest paid during the year.

Commissioner of Taxation

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legislative references
- ITAA 51(1)