

ANNEX 1. TERMS ANALYSIS - CALCULATION OF THE GRANT ELEMENT

1.1 Grant element formula and examples

The formulas below apply to three particular types of repayment: equal principal payments, annuity or lump sum repayment. In all other cases, the grant element calculation is based on the repayment schedule (see examples).

1. FORMULAS

Variables entering in the formulas:

M	= Maturity
G	= Grace period
A	= Number of repayments per year
INT	= Interval between the commitment date and the first repayment date minus the interval between two successive repayments = $G - 1/A$
DR	= Repayment duration = $M - INT$
I	= Discount rate (10% = 0.1)
R1	= Interest rate during grace period
R2	= Interest rate during repayment period
D	= Discount rate per period = $((1+I)^{(1/A)}) - 1$
NR	= Total number of repayments = $A * DR$
C1	= $(1+I)^{INT}$
C2	= $(1+I)^{DR}$
GE	= Grant element

- **Equal principal payments**

General formula

$$GE = 100 * (1 - ZG - ZM - ZX)$$

where

$$ZG = R1 * (1 - 1/C1) / (A * D)$$

$$ZM = (1/NR) * (1/C1) * ((1 - 1/C2) / D)$$

$$ZX = (R2 / (A * NR)) * (1/C1) * ((1/C2) - 1 + D * NR) / (D * D)$$

Simplified formula when the interest rate is the same for the whole period: $R1 = R2 = R$

$$\left[1 - \frac{R/A}{D} \right] * \left[1 - \frac{\frac{1}{(1+D)^{A*INT}} - \frac{1}{(1+D)^{A*M}}}{(A*M - A*INT)*D} \right]$$

The first bracket corresponds to the difference between the interest rate and the discount rate; the second bracket takes into account the repayment profile.

- **Annuity**

$$GE = 100*(1-ZG-ZX)$$

where

$$ZG = R1 * (1 - 1/C1) / (A * D)$$

$$ZM = 1 / ((1 + R2/A)^{NR} - 1) + 1$$

$$ZX = (R2/A) * ZM * (1/C1) * ((1 - 1/C2) / D)$$

- **Lump sum repayment (principal and interest)**

$$GE = 100 * (1 - (1 + R2*G) / (1+I)^M)$$

2. EXAMPLES

A loan of 1000 units is committed and disbursed on 1 January 2001. Its duration is 10 years, and the interest rate is 2.5% p.a. The examples below cover the following repayment options:

- *Example 1:* 16 six-monthly repayments starting on 1 July 2003, the first eight of 75 units, the next six of 60 units and the last two of 20 units;
- *Example 2:* Equal principal repayments by six-monthly instalments, commencing on 1 July 2003;
- *Example 3:* Annuities: equal six-monthly repayments (principal and interest combined), commencing on 1 July 2003;
- *Example 4:* Single lump sum repayment of principal and interest on 1 July 2011.

In the first three options, it is assumed that interest only is paid six-monthly from 1 January 2001 to 30 June 2003.

Applying the formulas

The variables take the following values:

M	= 10
G	= 2.5
A	= 2
INT	= 2
DR	= 8
I	= 0.1
R1	= 0.025
R2	= 0.025

Applying the formulas leads to the following results:

- *Example 1:* not applicable (see below for calculation on the basis of the repayment schedule)
- *Example 2: equal principal payments* **GE = 32.4 %**
- *Example 3: annuity* **GE = 32.9 %**
- *Example 4: lump sum repayment (principal and interest)* **GE = 51.8 %**

Calculation on the basis of the repayment schedules

- *Example 1*

Date payment due	Period (p)	Principal outstanding	Future payments			Six-month factor at 10% p.a. (1.10) ^p	Present value of future payments
			Principal	Interest	Total		
01/01/2001							
01/07/2001	0.5	1000.0		12.5	12.5	1.05	11.9
01/01/2002	1	1000.0		12.5	12.5	1.10	11.4
01/07/2002	1.5	1000.0		12.5	12.5	1.15	10.8
01/01/2003	2	1000.0		12.5	12.5	1.21	10.3
01/07/2003	2.5	1000.0	75.0	12.5	87.5	1.27	68.9
01/01/2004	3	925.0	75.0	11.6	86.6	1.33	65.0
01/07/2004	3.5	850.0	75.0	10.6	85.6	1.40	61.3
01/01/2005	4	775.0	75.0	9.7	84.7	1.46	57.8
01/07/2005	4.5	700.0	75.0	8.8	83.8	1.54	54.5
01/01/2006	5	625.0	75.0	7.8	82.8	1.61	51.4
01/07/2006	5.5	550.0	75.0	6.9	81.9	1.69	48.5
01/01/2007	6	475.0	75.0	5.9	80.9	1.77	45.7
01/07/2007	6.5	400.0	60.0	5.0	65.0	1.86	35.0
01/01/2008	7	340.0	60.0	4.3	64.3	1.95	33.0
01/07/2008	7.5	280.0	60.0	3.5	63.5	2.04	31.1
01/01/2009	8	220.0	60.0	2.8	62.8	2.14	29.3
01/07/2009	8.5	160.0	60.0	2.0	62.0	2.25	27.6
01/01/2010	9	100.0	60.0	1.3	61.3	2.36	26.0
01/07/2010	9.5	40.0	20.0	0.5	20.5	2.47	8.3
01/01/2011	10	20.0	20.0	0.3	20.3	2.59	7.8
							sum = 695.7

$$GE = (1000 - 695.68)/1000 = \mathbf{30.4 \%}$$

• Example 2: Equal principal payments

	Date payment due	Period (p)	Principal outstanding	Future payments			Six-month factor at 10% p.a. $(1.10)^p$	Present value of future payments
				Principal	Interest	Total		
Maturity	01/01/2001							
	01/07/2001	0.5	1000.0		12.5	12.5	1.05	11.9
	01/01/2002	1	1000.0		12.5	12.5	1.10	11.4
	01/07/2002	1.5	1000.0		12.5	12.5	1.15	10.8
	01/01/2003	2	1000.0		12.5	12.5	1.21	10.3
	01/07/2003	2.5	1000.0	62.5	12.5	75.0	1.27	59.1
	01/01/2004	3	937.5	62.5	11.7	74.2	1.33	55.8
	01/07/2004	3.5	875.0	62.5	10.9	73.4	1.40	52.6
	01/01/2005	4	812.5	62.5	10.2	72.7	1.46	49.6
	01/07/2005	4.5	750.0	62.5	9.4	71.9	1.54	46.8
	01/01/2006	5	687.5	62.5	8.6	71.1	1.61	44.1
	01/07/2006	5.5	625.0	62.5	7.8	70.3	1.69	41.6
	01/01/2007	6	562.5	62.5	7.0	69.5	1.77	39.2
	01/07/2007	6.5	500.0	62.5	6.3	68.8	1.86	37.0
	01/01/2008	7	437.5	62.5	5.5	68.0	1.95	34.9
	01/07/2008	7.5	375.0	62.5	4.7	67.2	2.04	32.9
	01/01/2009	8	312.5	62.5	3.9	66.4	2.14	31.0
	01/07/2009	8.5	250.0	62.5	3.1	65.6	2.25	29.2
	01/01/2010	9	187.5	62.5	2.3	64.8	2.36	27.5
	01/07/2010	9.5	125.0	62.5	1.6	64.1	2.47	25.9
01/01/2011	10	62.5	62.5	0.8	63.3	2.59	24.4	
								sum = 676.1

$GE = (1000 - 676.1)/1000 = 32.4 \%$

- *Example 3: Annuity*

Date payment due	Period (p)	Principal outstanding	Future payments			Six-month factor at 10% p.a. (1.10) ^p	Present value of future payments
			Principal	Interest	Total		
01/01/2001							
01/07/2001	0.5	1000.0		12.5	12.5	1.05	11.9
01/01/2002	1	1000.0		12.5	12.5	1.10	11.4
01/07/2002	1.5	1000.0		12.5	12.5	1.15	10.8
01/01/2003	2	1000.0		12.5	12.5	1.21	10.3
01/07/2003	2.5	1000.0	56.8	12.5	69.3	1.27	54.6
01/01/2004	3	943.2	57.6	11.8	69.3	1.33	52.1
01/07/2004	3.5	885.6	58.3	11.1	69.3	1.40	49.7
01/01/2005	4	827.3	59.0	10.3	69.3	1.46	47.4
01/07/2005	4.5	768.3	59.7	9.6	69.3	1.54	45.2
01/01/2006	5	708.6	60.5	8.9	69.3	1.61	43.1
01/07/2006	5.5	648.1	61.2	8.1	69.3	1.69	41.1
01/01/2007	6	586.8	62.0	7.3	69.3	1.77	39.1
01/07/2007	6.5	524.8	62.8	6.6	69.3	1.86	37.3
01/01/2008	7	462.0	63.6	5.8	69.3	1.95	35.6
01/07/2008	7.5	398.5	64.4	5.0	69.3	2.04	33.9
01/01/2009	8	334.1	65.2	4.2	69.3	2.14	32.4
01/07/2009	8.5	268.9	66.0	3.4	69.3	2.25	30.8
01/01/2010	9	202.9	66.8	2.5	69.3	2.36	29.4
01/07/2010	9.5	136.1	67.6	1.7	69.3	2.47	28.0
01/01/2011	10	68.5	68.5	0.9	69.3	2.59	26.7
							sum = 670.9

$$GE = (1000 - 670.9)/1000 = \mathbf{32.9\%}$$

- *Example 4: Lump sum repayment (principal and interest)*

Date payment due	Period (p)	Principal outstanding	Future payments			Six-month factor at 10% p.a. (1.10) ^p	Present value of future payments
			Principal	Interest	Total		
01/01/2001							
01/07/2001	0.5	1000				1.05	
01/01/2002	1	1000				1.10	
01/07/2002	1.5	1000				1.15	
01/01/2003	2	1000				1.21	
01/07/2003	2.5	1000				1.27	
01/01/2004	3	1000				1.33	
01/07/2004	3.5	1000				1.40	
01/01/2005	4	1000				1.46	
01/07/2005	4.5	1000				1.54	
01/01/2006	5	1000				1.61	
01/07/2006	5.5	1000				1.69	
01/01/2007	6	1000				1.77	
01/07/2007	6.5	1000				1.86	
01/01/2008	7	1000				1.95	
01/07/2008	7.5	1000				2.04	
01/01/2009	8	1000				2.14	
01/07/2009	8.5	1000				2.25	
01/01/2010	9	1000				2.36	
01/07/2010	9.5	1000				2.47	
01/01/2011	10	1000	1000	250	1250	2.59	481.9

GE = (1000 - 481.9)/1000 = **51.8 %**

- Reporting “Other” type of repayment: example form

Reporting country	CRS Identification Number	Compilation date (DD/MM/YYYY)	Currency in which amounts reported	Date payment due		Estimated future payments	
				Month	Year	Principal	Interest
See Annex 3 for list of Donor Codes	991045	31/12/1999	See Annex 3 for list of Donor / Currency Codes	6	2005	2500	525
	991045	31/12/1999		12	2005	2500	499
	991045	31/12/1999		6	2006	2500	472
	991045	31/12/1999		12	2006	2500	446

	991045	31/12/1999		6	2009	2500	315
	991045	31/12/1999		12	2009	2500	289
	991045	31/12/1999		6	2010	416	263
	991045	31/12/1999		12	2010	416	258
	991045	31/12/1999		6	2011	416	254
	991045	31/12/1999		12	2011	416	249

	991045	31/12/1999		6	2019	416	184
	991045	31/12/1999		12	2019	416	180
	991045	31/12/1999		6	2020	417	175
	991045	31/12/1999		12	2020	417	171
	991045	31/12/1999		6	2021	417	166
	991045	31/12/1999		12	2021	417	162

	991045	31/12/1999		6	2039	417	9
991045	31/12/1999	12	2039	417	4		

1.2 Recommendation on Terms and Conditions of Aid (1978)

(See the 1978 DAC Chair Report on Development Co-operation)

PREAMBLE

The Development Assistance Committee, having reviewed the Recommendation on Terms and Conditions of Aid adopted by the DAC at its High Level Meeting on 16th to 18th October, 1972,

Approving the progress made towards fulfilling or surpassing the objectives set out in this Recommendation, and noting the favourable average terms of aid provided by DAC Members as a group,

Recognising the desirability for further improvement in the financial terms of Members' programmes of Official Development Assistance, considered not only as a whole but also in their application to the specific needs of individual developing countries,

Reaffirming that equal attention must also be given to the provision of an adequate and sustained volume of Official Development Assistance,

Recognising that the continuing differences in the terms provided by Member countries impair the spirit of the common effort and render more difficult the maintenance of the most liberal standards of terms,

Bearing in mind the special needs of the least-developed countries,

Renewing its resolve to seek appropriate ways and means of advancing towards untying national aid programmes and urging its Members in the meantime to mitigate as much as possible the adverse effects of aid tying,

Adopts - one country having reserved its position¹ - the following Recommendation which supersedes that of 1972:

I. Coverage of the Terms Objectives

1. The objectives of this Recommendation apply to Official Development Assistance (ODA) commitments, made on and after the 1st of January, 1978. ODA is defined as those flows to developing countries and multilateral institutions provided by official agencies, including state and local governments, or by their executive agencies, each transaction of which meets the following tests:

- a) it is administered with the promotion of the economic development and welfare of developing countries as its main objective, and
- b) it is concessional in character and contains a grant element² of at least 25 %.

¹ Italy lifts its reservation in 1993.

II. Objectives for Financial Terms

2. In order to achieve a further softening of overall financial terms of ODA, Members should endeavour fully to maintain or achieve as soon as possible an average grant element in their ODA commitments of at least 86 per cent. In this connection the special value of grant assistance is recognised.

3. Countries whose ODA commitments as a percentage of GNP are significantly below the DAC average will not be considered as having met the terms target.

III. Recognition of Circumstances of Individual Recipient Countries and Harmonisation of Terms

4. Members should relate the terms of aid on a case-by-case basis to the circumstances of each developing country or group of countries. In particular, Members should provide a substantial part of the assistance given to developing countries with the severest economic problems in the form of grants or on very soft terms. Member countries which already extend a large proportion of their assistance on soft terms, but concentrate it on a limited number of recipients, should aim to grant increasingly soft terms also on their assistance to other recipients whose circumstances also call for soft terms.

5. The Development Assistance Committee will continue to review the current position and prospects regarding the income level, the development performance, the balance of payments, the debt servicing burden, etc. This should assist individual donors in formulating their terms policies and may provide the basis for a common view on the terms appropriate to individual developing countries or group of countries.

6. Members should make concerted efforts to harmonise terms at the level of the recipient country. They should make use of consortia, consultative groups or other concerted aid operations, where these exist, in co-operation as appropriate with the international bodies involved, in order to reach a common view as to the appropriate terms at which assistance should be provided. Where no such co-ordinating arrangements exist, terms harmonisation should be sought through an appropriate form of consultation, the nature of which might be the subject of an exchange of views in the DAC.

7. The absence of harmonisation of donors' aid terms is liable to be particularly harmful to poorer developing countries. In extending aid to such countries Members should not only take account of the circumstances of the country itself but also be guided by the terms of the donors extending their aid at soft terms to that country. Members who hitherto have provided funds on harder terms, should do their best to come as close as possible to the average terms of all bilateral DAC donors to the individual country.

IV. Special Terms for Least-Developed Countries

8. A group of least-developed countries has been identified by the UN for which, apart from any other special measures, the softest possible terms of aid are appropriate. Official Development Assistance to these countries should be essentially in the form of grants and, as a minimum, the average grant element of all commitments from a given donor should either be at least 86 per cent to each least-developed

² "Grant element" is the difference between the face value of a financial loan commitment and the discounted present value (using a 10% discount rate) of the service payments to be made by the borrower during the lifetime of the loan, expressed as a percentage of the face value.

country over a period of three years, or at least 90 per cent annually for the least-developed countries as a group.

9. DAC Members should endeavour fully to extend their ODA commitments to other countries whose needs are the greatest on the best grant element possible.

V. Regular Review of Implementation

10. The achievements of individual Member countries in implementing the agreed objectives set out above will be regularly appraised in the DAC as part of the Aid Reviews. In addition, the DAC will review each year the progress under the various provisions of this Recommendation.

VI. Need for Non-Project Assistance and Local Cost Financing

11. While acknowledging the advantages of the project approach, Members recognise that it is necessary to consider the overall needs of the developing country as well as its balance of payments and other factors, and that it may be appropriate to provide aid to finance general import costs or local costs of development, or both. With respect to local cost financing, Members shall take into account the Guidelines on Local Cost Financing adopted by the DAC on 27th October, 1977.

VII. Review of Other Officially Extended or Supported Flows³

12. The objectives of the Recommendation apply to Official Development Assistance. In addition, however, other officially extended or supported flows are of continued importance as a source of finance. DAC Members, therefore, agree to review more fully, in consultation with other interested Committees of the OECD, their basic approaches to extending such flows to developing countries, and their relationship to aid and development considerations. Further, the DAC will keep itself informed of the incidence of other officially extended or supported flows and their geographic distribution, especially with respect to those developing countries with severe external debt situations.

³ Including officially extended and officially guaranteed private export credits as well as officially guaranteed private foreign investment.