EUROPEAN COMMISSION DIRECTORATE-GENERAL FOR FINANCIAL STABILITY, FINANCIAL SERVICES AND CAPITAL MARKETS UNION

EXAMPLES FOR THE CALCULATION OF THE ANNUAL PERCENTAGE RATE OF CHARGE FOR CREDIT AGREEMENTS FOR CONSUMERS RELATING TO RESIDENTIAL IMMOVABLE PROPERTY

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COUNTRY CODES

Country name	Country code	Currency code
Austria	AT	EUR
Belgium	BE	EUR
Bulgaria	BG	BGN
Croatia	HR	HRK
Cyprus	СҮ	EUR
Czech Republic	CZ	CZK
Denmark	DK	DKK
Estonia	EE	EUR
Finland	FI	EUR
France	FR	EUR
Germany	DE	EUR
Greece	GR	EUR
Hungary	HU	HUF
Ireland	IE	EUR
Italy	IT	EUR
Latvia	LV	EUR
Lithuania	LT	LTL
Luxembourg	LU	EUR
Malta	MT	EUR
Netherlands	NL	EUR
Poland	PL	PLN
Portugal	РТ	EUR
Romania	RO	RON
Slovakia	SK	EUR
Slovenia	SI	EUR
Spain	ES	EUR
Sweden	SE	SEK
United Kingdom	GB	GBP

ACRONYMS

APR(C)	Annual percentage rate (of charge)	
EU	European Union	
MS	Member States(s)	
ECB	European Central Bank	
тсс	Total cost of the credit (to the consumer)	

LEGAL ACTS AND RELATED DOCUMENTS

Directive 2008/48/EC	Directive 2008/48/EC of the European Parliament and of the Council of 23 April 2008 on credit agreements for consumers and repealing Council Directive 87/102/EEC, OJ L 133, 22 May 2008.
Directive 2011/90/EU	Commission Directive 2011/90/EU of 14 November 2011 amending Part II of Annex I to Directive 2008/48/EC of the European Parliament and of the Council providing additional assumptions for the calculation of the annual percentage rate of charge, OJ L 296, 15 November 2011.
Guidelines on the application of Directive 2008/48/EC	Guidelines on the application of Directive 2008/48/EC (Consumer Credit Directive) in relation to costs and the Annual Percentage Rate of Charge, Brussels, 8.5.2012, SWD(2012) 128 final.
Directive 2014/17/EU	Directive 2014/17/EU of the European Parliament and of the Council of 4 February 2014 on credit agreements for consumers relating to residential immovable property and amending Directives 2008/48/EC and 2013/36/EU and Regulation (EU) No 1093/2010, OJ L 60, 28 February 2014.

1. INTRODUCTION

This report presents the work carried out under contract number MARKT/2014/107/H3/TA/LV, aimed at the provision of a tool enabling the calculation of the Annual Percentage Rate of Charge (APR) of credits falling under the scope of Directive 2014/17/EU ('Mortgage Credit Directive', MCD), the instructions on how to use it and examples for the calculation of the APR.

As stated in Article 3(1) of the MCD, the scope of this Directive covers two types of credit. These include those credits whose purpose is to acquire or retain property rights in land or an existing or projected building and those credits which are secured either by a mortgage or by another comparable security commonly used in a Member State (MS) on residential immovable property or secured by a right related to residential immovable property. Both features can appear together and in the majority of MS the typical credit aimed at funding the purchase of a property is secured on that property, is described as a mortgage. However, the term 'secured credit' is rarely used to refer to credits with such a purpose. For this reason, and following previous works in this area¹, this report uses the term 'mortgage credit' to refer to the first type of credits (credits to purchase a property and that are either secured or not by the property) and 'secured credit' for other types of credits that are secured.

The APR is an essential element of transparency in credit products. Recital (49) refers to it in these terms: "In order to promote the establishment and functioning of the internal market and to ensure a high degree of protection for consumers throughout the Union, it is necessary to uniformly ensure the comparability of information relating to the APRC throughout the Union." It is for this reason that that the provisions in relation to the calculation of the APR are subject to maximum harmonisation (Article 2).

The APR provides a numerical and comparable representation of the cost of the credit to the consumer. Specifically, APR is defined in Article 4(15) of the MCD as "the total cost of the credit to the consumer, expressed as an annual percentage of the total amount of credit, where applicable, including the costs referred to in Article 17(2) and equates, on an annual basis, to the present value of all future or existing commitments (drawdowns, repayments and charges) agreed by the creditor and the consumer".

Article 17 gathers the main aspects for the calculation of the APR. Firstly, it refers to Annex I of the MCD for the mathematical formula that should be used for obtaining the APR. Secondly, it states the specific cost that should be included in the total cost of the credit (TCC) to the consumer under given circumstances and contextualise the calculation of the APR in a situation where the creditor and the consumer fulfill their contractual duties, thereby completing the definition of the TCC provided in Article 4(13). Thirdly, it states the cases where an additional illustrative APR should be provided to the consumer for credit where the

¹ See page 1 of the report 'The Costs and Benefits of Integration of EU Mortgage Markets', elaborated for the European Commission by London Economics in 2005.

borrowing rate changes. And finally, it refers to the additional assumptions set out in Annex I for the calculation of the APR.

Apart from the novelty of the additional illustrative APR introduced by the MCD, the elements of the APR article resemble those of Directive 2008/48/EC ('Consumer Credit Directive', CCD). Moreover, the mathematical formula is the same, and the remarks on the formula and the assumptions for the calculation of the APR are generally consistent with those of the CCD. In this respect, assumptions from Commission Directive 2011/90/EU amending Part II of Annex I to Directive 2008/48/EC are incorporated in the MCD with only minor changes and new assumptions have been included for specific credit products covered by the Directive.

This common basis is aimed to ensure consistency between the calculation of the APR for different types of credit (recital (54)), thus providing a consistent framework for consumers in the area of credit, at the same time that administrative burden for creditors and credit intermediaries is minimized (recital (20)), once they have adapted in the last years to regulatory framework introduced by the CCD.

In this context, previous work in relation to the calculation of the APR in consumer credit agreements subject to the CCD² is valuable for the MCD, but need to be adapted to the scope, changes and novel features introduced by the latter. That task is done in this document for two elements: the set of examples illustrating the calculation of the APR and the Excel simulator that allows replicating the examples, obtaining new examples and analysing the effect of different characteristics of credit agreements on the APR.

The adaption of the examples has consisted of:

- Retaining those examples that are relevant for the area of credit agreements for consumers relating to residential immovable property (i.e. mortgage credit and secured credit using the terminology stated above), tailoring them to the typical characteristics of this type of credit (e.g. the longer terms, higher amount or lower rates in relation to unsecured credits for consumption),
- Adapting these examples to the changes and novel features introducing by the MCD (e.g. to the minor changes in the assumptions and the requirement of disclosing an illustrative APR in certain credits),
- Deleting the examples which are unrealistic in this area (e.g. credit without set up costs, hire-purchase agreements or credit with a few number of repayments), and
- Creating new examples that illustrate the new assumptions, requirements and credit products relevant for the MCD (e.g. the assumptions related to bridging loans, shared equity loans, contingent liabilities or guarantees, or renegotiable credit with a long initial fixed rate period and foreign currency loans) while also reflecting the relevant

² These materials are available on the website of the Directorate General Health and Consumers at http://ec.europa.eu/consumers/rights/fin_serv_en.htm#credit.

features found in credit relating to residential immovable property (e.g. interest-only mortgage credits, multi-part credits and credits with exit costs).

The simulator has been adapted in relation to:

- The examples embedded, so they correspond to those described above.
- The texts, including explanatory texts, excerpts, comments and warnings, as they are tailored to the MCD.
- The information to be entered by the user, including additional data needed to obtain the illustrative APR, foreign currency data, and other features typical in credits relating to residential immovable property.
- The results provided by the simulator, increasing the maximum number of periods until repayment due to the longer term of the credits, providing the illustrative APR, and showing a summary table with annual and overall totals for the items included in the amortisation table.

The simulator is accompanied by a document of instructions which has been also adapted to the aforementioned changes.

All these working materials constitute a suitable companion of the MCD for all the parties involved, including regulators, consumers, creditors and credit intermediaries and other stakeholders, in respect to the technical task of calculating the APR.

The structure of this document is as follows. Section 2 discusses the explanation of the examples, shows the set of examples and provides amortisation tables together with step-by-step explanations on how to enter the characteristics of the credits in the simulator to obtain them. Section 3 provides general instructions on how to use the simulator. The simulator itself constitutes a separate Excel file.

2. EXAMPLES FOR THE CALCULATION OF THE APR

This section presents the set of examples for the calculation of the APR tailored to the MCD. As stated before, taking as a starting point the set of examples related to the CCD, we have deleted, changed and introduced new examples in order to adapt them to the regulatory framework established by the MCD as regards the scope, the formula, remarks and assumptions for the calculation of the APR and the disclosure of illustrative APRs for certain credits.

In this respect, it should be noted that the set of examples covers all the assumptions of the MCD by including examples of:

- credits with an unknown date of payments of capital, interest or other costs (ex_16, ex_19, ex_36, ex_37, ex_39),
- credits with flexibility in the repayments of capital (ex_17),

- credits where the length of the interval to the first repayment is unknown (ex_18),
- credits with indexed (ex_21, ex_22 includes a capped rate, ex_30 to ex_33) and renegotiable borrowing rates (ex_23, ex_24, ex_25),
- credits for an amount of credit not specified (ex_27, ex_34, ex_37),
- credits with drawdown limits (ex_32),
- credits with different ways of drawdown with different charges and borrowing rates (ex_36),
- credits with different borrowing rates and charges for a limited period (ex_36, ex_37),
- open-ended credits other than overdrafts and bridging loans (ex_31 to ex_37),
- overdrafts (ex_38, ex_39),
- bridging loans (ex_40, ex_41, ex_42),
- contingent liabilities or guarantees (ex_43),
- and shared equity credits (ex_44).

Also, one example (ex_2) is devoted to illustrating the application of remark (c). Interest-only credits (ex_8), multi-part credits (ex_26), and foreign currency loans (ex_28, ex_29) are also included in the set of examples because they are mentioned in the MCD, the latter in reference to the provision of information on the change of the amount of credit and the instalments due to exchange rate risk. And, finally, illustrative APRs are shown for the relevant credits (ex_21 to ex_26, ex_30 to ex_33).

As mentioned in recital (54) of the MCD, there might be assumptions brought from the CCD which are not of application to existing credit products relating to immovable property, but the inclusion of such assumptions in the MCD anticipating product innovation in this area, justify the inclusion of examples illustrating the application of such assumptions. The examples of secured credit cards (ex_36, ex_37), secured deferred debit card (ex_35) and secured overdrafts (ex_38, ex_39) should be, in fact, considered as examples of non-typical products in the EU markets nowadays, although their existence in certain countries indicates the direction of future innovation.

The diversity of EU credit markets has been taken into account in designing the characteristics, apart from those which derive from the assumptions, of the credit agreements described in the examples³. In this regard it is worth noting that the examples should be general enough to

³ For an overview of the trends, products and costs of credit agreements relating to residential immovable property see, for example, European Central Bank (2009): Housing Finance in the Euro Area, Structural Issues Report, and Lea, M. (2010): International Comparison of Mortgage Product Offering, Research Institute for Housing America. Other sources of information used have been the websites of credit providers, price comparison websites, and the MFI (Monetary financial institutions) interest rate

avoid losing suitability in a context where credit markets show remarkable national differences and are evolving continuously, but also specific enough to be able to reflect the main types of credit agreement and the different elements which might appear in them and have an effect on the APR. These include different drawdown and repayment mechanisms and fees and charges which spread differently along time.

In this regard, we have considered different types of costs, including costs which are paid as a single sum (we have included them in all the examples because credits relating to residential immovable property are typically subjected to e.g. high arrangement fees or costs of valuation of property); charges paid at regular intervals (e.g. we have considered home insurance in ex_3 and payment protection insurance in ex 4 and ex 5 where such insurance is obligatory in order to get the credit), costs which are financed with the credit thus increasing the amount owed (ex_5), and costs charged when the credit is paid off (these costs, known as exit costs, completion fee, deeds release fee or exit administration fee appear in ex_6). Also, in addition to the schemes of repayment considered in the assumptions and the typical repayment in equal monthly instalments which conforms the default example (ex_1), we have covered other schemes and features such as balloon payments (ex_7), increasing and decreasing instalments (ex 9 and ex 10), payment of a fixed amount of capital (ex 12) or of capital and interest (ex_11), repayment of capital in equal amounts (ex_13, ex_16, ex_19), payments given as a percentage of the balance outstanding of capital (ex_14 and ex_17) or of capital and interest (ex_15), possibility of postponing payments (ex_16) and the existence of a drawdown period followed by an amortization period (ex_30). With these additions, the set of examples covers a large variety of payment structures and charges which, either in isolation or in combination, are able to reproduce the main products available in the market.

Taking into account the reality of the market, we have chosen the amounts, durations, repayments and the level of charges considered in the examples. We have tried to find an equilibrium position between the use of reasonable levels and the gains in simplicity and comparability of the examples if round and similar but coherent figures are used throughout the examples, an approach which is possible given that the examples are expressed in general terms and refer to basic structures, as indicated above. This is also coherent with the diversity that can be found across EU credit markets in the EU. From this analysis we have adopted the following decisions:

Amount: In mortgage credits, bridging loans and shared equity credits we assume an amount of credit of €200000, reflecting the high amounts usually provided in this type of credits, whose purpose is to acquire or retain property rights in land or a building. This amount takes into account the value of residential properties in the EU as a whole, and the fact that the typical loan-to-value (LTV) for a first-time house buyer is around 80% in the majority of MS. A much lower amount of €30000 have been used

statistics of the European Central Bank. As noted in the report 'The Costs and Benefits of Integration of EU Mortgage Markets' (op.cit.), the range of products available and their characteristics differ substantially across EU markets, being UK the country that has the most developed mortgage market at present.

for secured lines of credit (in the set of examples these are represented by credits with freedom of drawdown up to a certain ceiling where the credit may be used repeatedly as the borrower uses the sum used and which are not overdraft facilities, credit cards or deferred debit cards) because their purpose is typically different and of a lower amount (e.g. consumption, renovation of immovable property, or debt consolidation) and the fact that they are usually secured by the equity in the consumer's residential property and not by the full value of the property⁴. We have also used this amount for contingent liabilities, whose purpose is to act as a guarantee of another separate transactions (e.g. of a guarantor loan, where the borrower needs of a third-party guarantor who should be a homeowner and who promise to make the borrower's repayment if the borrower does not pay). Finally, we have used a lower amount of €3000 for secured credit cards, secured deferred debit cards and secured overdrafts, due to their typical usage as a temporal financing solution and the fact that accession to these credits in their secured form might be due to a poor credit history or a low income of the consumer. Note, however, that in all cases the amount are higher than those considered in the CCD examples for similar credits (€1000 for open-ended credits, including cards, and overdraft facilities and $\in 6000$ for fixed term credits), which is justified by the purpose (for mortgage credit) or the existence of a guarantee (for secured credit) in the credit agreements falling under the MCD.

Terms: Our aim to show the corresponding amortisation tables for the examples have led us to choose, for mortgage credits, a duration of the repayment period of 20 years, a term which is on the lower part of the range of typical terms, which extends from 20 to 30 years⁵. For secured credits other than overdrafts, in line with the lower amounts and higher risk for creditors, we have considered repayment periods of 10 years, sometimes in the form of a maximum term until full repayment, or we have not fixed the duration at all (in these two latter cases, the credit becomes open-ended, according to assumption (k)). An intermediate maturity of 15 years have been chosen for specific credit agreements, such as the multi-part credit (because credits with a fixed rate have typically a lower duration, and this credit is part fixed rate and part variable rate), the credit with flexibility in the amounts of the repayment of capital, the balloon-payment mortgage (where we have used the scheme 30 due in 15, meaning that the monthly payments are based on a 30-year amortization period but the balance should be cleared in year 15th by a high amount payment, the balloon payment, which provides full repayment of the credit), and the shared equity credit (where a lower fixed rate is offered in exchange for a share of the appreciated value of

⁴ The equity is the difference between the property fair market value and the outstanding balance of all liens on the property (e.g. a mortgage credit). The property's equity increases when the property value appreciates and/or as the debtor makes payments against the mortgage outstanding balance.

⁵ Following the ESIS instructions, our amortisation tables show for the first repayment year the information for each instalment (they are monthly in our examples), for the following years the annual totals and conclude with a final row with the overall total. Additionally, we include the annual total for the first year. As a result and adding a row for separation, the number of rows to be shown is 35.

the property). The assumption applicable to overdraft facilities contemplates the case of an unknown duration of the credit, for which reason we provide an example of an overdraft facility with a fixed duration and another example of an overdraft with unknown duration. Due to the temporary nature of the financing this product provides, we have chosen a short period, 6 months, as the fixed duration and a maximum duration of 2 years for the overdraft with an unknown duration (the duration is unknown because the credit can last more or less depending on the consumer's choice). The assumption applicable to bridging loans also contemplates the case of a no fixed duration, which even appears as a possibility in the definition the MCD provides for this type of credits, which are also of a transitory nature. Therefore, we also provide three examples of bridging loans with similar durations: two examples of duration of 6 months and one example of a maximum duration of 2 years⁶. Finally, for the contingent liability we have considered rolling periods of 1 year and a repayment period of 10 years from the date of drawdown, in line with secured credits. Apart from these explicit durations, it should be noted that there are cases where the duration is obtained implicitly from the scheme of repayments (i.e. in credits whose repayments are given as a percentage of the balance outstanding or as a constant amount known in advance). In these cases, we have limited the duration to a convenient number of periods by a sensible choice of the amount of the repayments (e.g. in mortgage credits, the amounts and percentages considered lead to repayment periods which range between 18 years and 5 months and 19 years and 5 months, thus being around the 20 years mentioned above). As regards the frequency of payments, we have used monthly payments.

Borrowing rates: We have established three different levels of borrowing rates to which the credits have been assigned according to their risk. The lowest level corresponds to 6% of fixed borrowing rate or Euribor-360 plus a spread of 1.5% if the borrowing rate is variable. The second level is 7.5% fixed or Euribor-360 plus a spread of 3% if variable. And the third level is 9% fixed or Euribor-360 plus a spread of 4.5% if variable. Mortgage credits are assumed to have the lowest rates⁷, lines of credit, bridging loans and contingent liabilities have the intermediate rates, and secured credit cards and overdrafts are assigned the highest rates. As special cases, for the mortgage with a discount in the borrowing rate for the first period we have chosen a

⁶ Article 4(23) defines bridging loans as credit agreements either of no fixed duration or repayable within 12 months. In the examples the duration of 6 months was chosen for a credit repayable within 12 months; the length of no fixed duration credit is not determined but for the purpose of this exercise a maximum duration of 2 years was chosen (the consumer being able to terminate the credit without additional expenses before the expiration of the maximal length). Note that loans that are of a fixed duration longer than 12 months cannot be considered as 'bridging loans' under the MCD. This has two implications: first such loan would not fall under the possible exemption foreseen under Article 3 and second, the calculation of the APRC for such loan would not use assumption (j).

⁷ The spread of 1.5% over the Euribor is highly realistic for this type of credits in the long run, as noted in the report on mortgage markets integration in the EU elaborated by London Economics (op.cit.).

discount of 1%, for the foreign currency mortgage credit the borrowing rate is assumed to be 5% (also 1% less than mortgage credits in general, being this lower rate the benefit of borrowing in a foreign currency), the secured deferred debit card is interest-free (as is typical in this type of products), and the shared equity credit is interest-free for a initial period of 5 years and afterwards it is charged with a borrowing rate of 4% (being the lower rates the benefit in costs for the consumer in exchange of giving the creditor a share in the value of the property). As to the type of borrowing rate, fixed or variable, firstly it should be noted that whole-of-term fixed rate mortgages are not common in EU markets. Variable rate mortgage credits (sometimes with a short initial period of fixed rate) or credits carrying an initial fixed rate period of several years (after which the rate is renegotiated or revert to a variable rate) are prevalent, but only one of this types dominates in each MS⁸. However, for secured credits the borrowing rate is usually variable. As can be inferred from the definition of our three levels, when the borrowing rate is variable, it is usually indexed to the Euribor, although differences appear again among MS⁹, and also among products. For example, for credit cards and overdrafts the borrowing rate is usually determined by the creditor, while for lines of credit the indexation to market rates (normally to Euribor) is the usual practice. Given this diversity, in an attempt to simplify the examples, we have opted for considering variable borrowing rates only for lines of credit and for those credits where the focus is in the change from a fixed rate to a variable rate, being the variable rate always expressed as the Euribor-360 plus the corresponding spread. The initial fixed rate in the latter case is assumed to be always a 5%, and the Euribor-360 is assumed to be at a level of 4% in all the cases at the time the credits are concluded.

For obtaining the illustrative APRs in credits allowing for variations in the borrowing rate, except for the specific case of Article 17(5), the MCD requires using the highest borrowing rate in at the least the last 20 years (or the longest period for which such data is available), 'based on the highest value of any external reference used in calculating the borrowing rate where applicable or the highest value of a benchmark rate specified by a competent authority or EBA where the creditor does not use an external reference rate'¹⁰. According to this, for variable borrowing rates the maximum level of the Euribor-360 has been taken, being 5.39% reached in July 2008, and for fixed rates to be negotiated after a period of less than 5 years, we have assumed that

⁸ For example, in Belgium, Germany, France and Netherlands, mortgage credits with large fixation periods prevail. In fact, according to the ECB (op.cit.), less than 20% of new mortgages are 'pure' variable rate credits. Quite the opposite, in countries like Spain, Luxemburg, Portugal or Finland the percentage of variable rate loans is 90% or more. Factors related to the demand and supply of credit and institutional factors explain the differences among MS.

⁹ For example, within the group of MS with a prevalence of fixed rates in mortgage credits, in Germany and Netherlands variable rates are usually indexed to long-term market rates, while in France they are indexed to Euribor-360.

¹⁰ Quoted from the instructions to complete section 4 of the ESIS, point 2.

the benchmark rate is the agreed rate on new loans with initial rate fixation over five and up to ten years applied by monetary and financial institutions to euro area households loans for house purchase; the highest level of this rate was reached in October 2000 and is 7.30%¹¹. As regards adjustment periods, we have chosen an intermediate frequency of 6 months. Finally, it should be noted that we include an example of a mortgage credit where there is a cap that limits the deviation of the borrowing rate from its initial level; we have considered two different levels of the cap, given as a maximum deviation of 1% and 2%.

Other charges: Mortgage and secured credits are subject to rather high charges because of e.g. the higher administrative burden in comparison to non secured credits, or some additional requirements, such as the valuation of the property or contracting insurance. For this reason, in all the examples we have considered the existence of initial costs (to be considered within the total cost of credit to the consumer, as defined in Article 4(13)) given as 2% of the amount of credit. The only exception comes from the contingent liability, where the initial cost is assumed to be 0.5% of the amount of credit and the remaining 1.5% is charged at the time of the event of drawdown. Some examples include additional cost to these initial costs in order to illustrate the effect of costs with different payment schemes or which have an effect on other relevant elements of the credit. For example, the caps on the borrowing rate mentioned above are assumed to have an annual cost of €360 and €240 spread over the monthly repayments. Also there is an example of a foreign currency loan with a cap which limits the variation of the exchange rate; the cost of the cap is also €360 each year. Other additional costs included in the examples are home insurance of €200 each year also spread over the monthly repayments, payment protection insurance of 1% of the amount of the credit per year spread over the monthly repayments, a singlesum payment protection insurance premium which is financed with the credit and given as 4% of the amount of credit for 4 years, an exit cost to be paid for closing the mortgage account after full repayment of €100, exchange rate conversion fees of 0.2% of the amount converted in the foreign mortgage credit, an annual fee of €100 in the secured deferred debit card, annual costs of €25 in secured credit cards and administrative charges of €2.5% per month in one of the secured overdrafts. It should be noted that also in this matter, the differences between MS are large, but that the amounts and schemes chosen are in line with what can be found in the market¹². Also

¹¹ We have chosen the rate for house purchases because all the examples where we have needed this rate are of mortgage credits. As regards the term, the period where the new fixed rate is applied in our examples is longer than 10 years. However, we have used the 5 to 10-year rate because the series for this rate is longer. It starts in 2000 while the series for the more than 10-year rate starts in 2003 and thus, it does not register the highest levels reached at the end of 2000, The series can be found in the Statistical Data Warehouse of the European Central Bank (Navigation path: Home > Economic Concepts > Monetary and financial statistics > MFI interest rates > MFI interest rates > Loans) and the ECB Monthly Bulletin (MFI interest rates on euro-denominated deposits and loans by euro area residents).

¹² For example, the ECB (op.cit.) reports that the costs for taking out a mortgage credit can vary from 3.5% of the amount of credit in Belgium to close to zero in Finland.

note that the insurance costs are included on the basis of the Member State having exercised the discretion provided by Article 12(4)

A last guideline we have followed during the elaboration of the examples has been the provision of instructive examples. In this regard we have used two tactics:

- Introduce changes in a progressive way throughout the examples, trying to go from the basics to the most complicated agreements and avoiding the simultaneous appearance of multiple variations which might hinder a simple and proper identification and valuation of them.
- Provide self-contained examples, in the sense that any information needed to calculate the examples is supplied. This feature should be considered a requirement because it is desirable for the reader to be able to replicate all the examples manually or using the Excel simulator. Moreover, for completeness and better comprehension, the amortisation table of each example calculated by the simulator is provided in section 2.2, together with step-by-step explanations on how to obtain it¹³.

The examples introduced following these guidelines make up the set of examples, which includes the forty-four examples¹⁴ shown in Table 1. The table includes a brief description of the examples, their most distinguishing features, their relationship with the examples of the CCD (if any)¹⁵, and the assumptions used. The requirement of additional illustrative APRs is also mentioned in the last column by referring to points (5) and (6) of Article 17 of the MCD and in the third column.

Number	Description	Feature	Relation to CCD examples	Assumptions used
1	Mortgage credit with monthly instalments and single sum cost	Default example in the Excel simulator	5	
2	Mortgage credit with non regular periods of repayment	Non regular periods of payment	4	

TABLE 1. SET OF EXAMPLES

¹³ It should be noted that calculations using the precision of the numbers as shown in the examples might lead to small differences in the results. For example, a handmade sum of the present value of cash flows using the amounts with two decimals showed in the amortisation table might give several euro cents instead of zero, but it is only due to the number of decimal places displayed. In fact, the sum of the values in the Excel simulator gives zero, as required by the APR.

¹⁴ The number of examples tailored to the CCD is similar, 41.

¹⁵ The examples of the CCD are included in the 'Study on the calculation of the Annual Percentage Rate of Charge for consumer credit agreements', revised version October 2013, available at: http://ec.europa.eu/consumers/documents/study_apr_2013_final.pdf

Number	Description	Feature	Relation to CCD examples	Assumptions used
3	Mortgage credit with regular charges	Regular charges	6	
4	Mortgage credit with regular payment protection insurance premiums	Regular insurance premiums	7	
5	Mortgage credit with single sum payment protection insurance premium which is financed	Financed cost	8	
6	Mortgage credit with exit costs	Exit costs	-	
7	Balloon-type mortgage credit	Balloon payment	11	
8	Interest-only mortgage credit	Regular payment of interest and repayment of capital at the end	18	17(4) and 17(6)
		Includes additional illustrative APR due to variations in the borrowing rate		
9	Mortgage credit with increasing instalments	Increasing instalments	14	
10	Mortgage credit with decreasing instalments	Decreasing instalments	15	
11	Mortgage credit with regular payment of a fixed amount known in advance	Regular payment of a fixed amount known in advance	16	
12	Mortgage credit with regular payment of interest and a fixed amount known in advance	Regular payment of interest and a fixed amount known in advance	17	
13	Mortgage credit with regular payment of interest plus equal amounts of capital	Regular payment of interest and equal amounts of capital	20	
14	Mortgage credit with regular payment of interest plus a percentage of the balance outstanding of capital	Regular payment of interest plus a percentage of the balance outstanding of capital	21	
15	Mortgage credit with regular repayment of a percentage	Regular payment of a percentage of the	22	

Number	Description	Feature	Relation to CCD examples	Assumptions used
	of the balance outstanding of capital plus interest	balance outstanding of capital plus interest		
16	Mortgage credit with regular payment of interest plus equal amounts of capital and with the possibility to postpone the payments within certain limits	Flexibility in the dates of payment of capital and interest	25	g(i), h(i)
17	Mortgage credit with regular payment of interest plus a minimum percentage of the balance outstanding of capital and a final payment	Flexibility in the amounts of the repayments of capital	26	(g)(i)
18	Mortgage credit with equal instalments, where the length of the interval to the first repayment depends on the date the agreement is concluded	Unknown length of the interval to the first repayment	27	(g)(ii)
19	Mortgage credit with equal repayments of capital and with costs whose date of payment is unknown	Unknown date of payment of charges	28	(h)
20	Mortgage credit with different borrowing rates	Different borrowing rates	29	
21	Mortgage credit where the borrowing rate is fixed for an initial period and subsequently it is periodically adjusted according to an agreed indicator	Fixed borrowing rate period followed by a variable rate period Includes additional illustrative APR due to variations in the borrowing rate	30	17(6) and (e)
22	Mortgage credit where the borrowing rate is fixed for an initial period and subsequently it is periodically adjusted according to an agreed indicator for which there is a cap	Cap on the variable borrowing rate Includes 2 examples with additional illustrative APR due to variations in the borrowing rate, including one example based on the cap rate	-	17(6) and (e)
23	Mortgage credit where the borrowing rate is fixed for an	Fixed borrowing rate period which might be	31	17(4) and

Number	Description	Feature	Relation to CCD examples	Assumptions used
	initial period after which a new fixed rate may be agreed instead of proceed with a variable rate	followed by a period with a variable rate or a new fixed rate		17(6)
		Includes additional illustrative APR due to variations in the borrowing rate		
24	Mortgage credit where the borrowing rate is fixed for an initial period of at least 5 years after which a new fixed rate will be agreed	Fixed borrowing rate period of at least 5 years followed by a period with a negotiated and new fixed rate	-	17(4) and 17(5)
		Includes additional illustrative APR which assumes full repayment of the credit at the end of the fixed rate period		
25	Mortgage credit where the borrowing rate is fixed for an initial period shorter than 5 years after which a new fixed rate will be agreed	Fixed borrowing rate period shorter than 5 years followed by a period with a negotiated and new fixed rate	-	17(4) and 17(6)
		Includes additional illustrative APR due to variations in the borrowing rate		
26	Multi-part mortgage credit	Part fixed borrowing rate and part variable rate	-	17(4) and 17(6)
		Includes additional illustrative APR due to variations in the borrowing rate		
27	Mortgage credit for an amount not specified	Ceiling of the credit not specified	-	(f)
28	Foreign currency mortgage credit	Foreign currency	-	
		Includes additional		

Number	Description	Feature	Relation to CCD examples	Assumptions used
		information due to variations in the exchange rate		
29	Foreign currency mortgage credit with a cap on the exchange rate	Cap on the exchange rate	-	
		Includes additional information due to variations in the exchange rate		
30	Secured credit with a variable borrowing rate, a drawdown period and an	Drawdown period followed by an amortization period	-	17(4), 17(6) and (c)
	amortization schedule	Includes additional illustrative APR due to variations in the borrowing rate		
31	Open-ended secured credit with a variable borrowing rate, freedom of drawdown	Open-ended credit	33	17(4), 17(6), (a) and(k)
	and regular repayment of a minimum percentage of the balance outstanding of capital plus interest	Includes additional illustrative APR due to variations in the borrowing rate		
32	Open-ended secured credit with a variable borrowing rate, drawdown limits and regular repayment of a minimum percentage of the	Drawdown limits with regard to the amount of credit and the period of time	36	17(4), 17(6), (c) and (k)
	balance outstanding of capital plus interest	Includes additional illustrative APR due to variations in the borrowing rate		
33	Open-ended secured credit with freedom of drawdown, where the borrowing rate is fixed for an initial period and	Fixed borrowing rate period followed by a variable rate period	37	17(6), (a), (d), (e) and (k)
	subsequently it is periodically adjusted according to an agreed indicator	Includes additional illustrative APR due to variations in the borrowing rate		
34	Open-ended secured credit for an amount not specified with freedom of drawdown and repayment but with	Ceiling of the credit not specified, maximum periods until full repayment and	34	(a), (f), (h)(i) and (k)

Number	Description	Feature	Relation to CCD examples	Assumptions used
	maximum periods until full repayment	unknown dates and amounts of interest charges		
35	Open-ended secured credit without interest costs and with freedom of drawdown where the capital must be repaid only in full in respect of each payment period (charge/deferred debit card)	Capital repayable only in full in respect of each payment period	35	(a) and (k)
36	Secured credit card with annual costs, different ways of drawdown with different charges and borrowing rates and regular repayment of a minimum percentage of the balance outstanding of capital plus interest	Freedom of drawdown, different ways of drawdown with different charges and borrowing rates and unknown date of payment of annual costs	38	(a), (b), (k) and (h)(iii)
37	Secured credit card for an amount not specified and with annual costs, an initial interest-free period and regular repayment of a minimum percentage of the balance outstanding of capital plus interest	Ceiling of the credit not specified, initial interest-free period and unknown date of payment of annual costs	39	(a), (k), (h)(iii), (f), and (d)
38	Secured overdraft with an unknown duration and regular payment of costs of the credit	Overdraft facility with an unknown duration	40	(i)
39	Secured overdraft with a fixed duration and unknown date of payment of interest charges	Unknown date of payment of interest charges	41	(i) and (h)(i)
40	Bridging loan with a known duration and payment of capital and interest at the end	Bridging loan with payment of capital and interest at the end	19	(j)
41	Bridging loan with a known duration, retained interest and payment of capital at the end	Bridging loan with retained interest and payment of capital at the end	-	(j)
42	Bridging loan with an unknown duration and regular payment of interest	Bridging loan with an unknown duration	-	(j)

Number	Description	Feature	Relation to CCD examples	Assumptions used
43	Contingent liability or guarantee	Contingent liability or guarantee	-	(1)
44	Shared equity credit	Shared equity credit	-	(m)

2.1. SET OF EXAMPLES

The following examples illustrate the calculation of the APR on credit agreements regulated by the MCD. Therefore, the MCD constitutes the regulatory framework for assessing these examples. For the application of the assumptions which are consistent with the CCD (namely, assumptions (a) to (d), (g) to (i) and partly assumptions (e), (k) and (f)), the Guidelines on the application of Directive 2008/48/EC are also relevant.

The examples cover a wide range of elements and characteristics found in these products. They should be interpreted as notional examples in the sense that the amounts, charges or interest rates assumed are only illustrative of the market, and market products might combine the elements of different examples.

As stated above, in the examples we use 'mortgage credit' to refer to a credit whose purpose is to acquire or retain properties rights in land or an existing or projected building (secured or not by the property) and 'secured credit' for the rest of credits that are secured.

As regards borrowing rates, the examples of mortgage credits, bridging loans, contingent liabilities, and shared equity credits (examples 1 to 29 and 40 to 44), unless otherwise stated, use nominal annual rates which are charged periodically using a proportional conversion method. The examples of secured lines of credit, credit cards, deferred debit cards and overdraft facilities (examples 30 to 39), unless otherwise stated, use effective annual rates which are charged periodically using the corresponding compounding frequency. For example, a nominal rate of 6% implies monthly interest charges of 6/12=0.50% on capital, and an effective rate of 7.5% implies monthly interest charges of $(1+0.075)^{(1/12)-1}=0.604\%$ on capital. In general, if *n* is the number of periods of payment in a year, the periodic rate is given by *i*/*n* or $(1+r)^{(1/n)-1}$, where *i* and *r* are the nominal and effective rate, respectively. The use of these rates and methods is only hypothetical.

Finally, it should be noted that whenever possible the basic equation which establishes the APR formula of Annex I of the MCD is simplified using the formula for a geometric series (i.e., the sum of the numbers in a geometric progression). A geometric series of scale factor *s* and common ratio *c* is given as:

$$sc^{k} + sc^{k+1} + \ldots + sc^{k+n} = s \frac{c^{k} - c^{k+n}c}{1-c}$$

This is very convenient in credits payable in equal instalments because the sum of the present value of *N* equal instalments of amount *A* payable at a frequency of *f* instalments per year can be given as:

$$A\frac{1}{(1+X)^{1/f}} + A\frac{1}{(1+X)^{2/f}} + \dots + A\frac{1}{(1+X)^{N/f}} = A\frac{1 - \frac{1}{(1+X)^{N/f}}}{(1+X)^{1/f} - 1}$$

EXAMPLE 1

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 equal monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement¹⁶.

The monthly instalment which provides full repayment of the credit is €1432.86.

The equation becomes:

$$200000 = 4000 + 1432.86 \frac{1}{(1+X)^{1/12}} + 1432.86 \frac{1}{(1+X)^{2/12}} + \ldots + 1432.86 \frac{1}{(1+X)^{240/12}}$$

or:

$$200000 = 4000 + 1432.86 \frac{1 - \frac{1}{(1+X)^{20}}}{(1+X)^{1/12} - 1}$$

giving X= 6.434412%, i.e. an APR of 6.4%.

EXAMPLE 2

Mortgage credit agreement is for a total amount of credit of €200000 repayable in equal instalments over a period of 20 years, where the intervals between dates cannot be expressed as a whole number of weeks, months or years. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

¹⁶ All references to the conclusion of the agreement are references to the date the agreement is executed. This is usually the date when the agreement is signed by the parties involved (and not when it comes to an end).

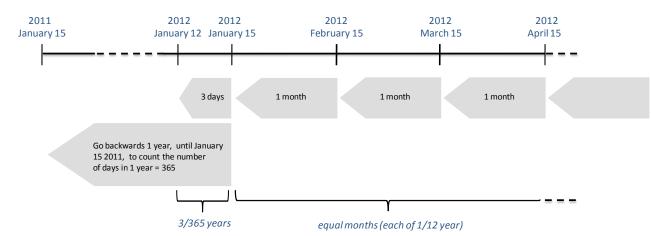
This example illustrates the application of remark (c) when the intervals between dates cannot be expressed as a whole number of regular periods (weeks, months or years). Remark (c) provides a precise method to obtain the intervals between dates using regular periods in combination with a number of days. Three different cases are exemplified in the following.

<u>Case 1</u>. The agreement is signed on January 12 2012 and payments are to be made on the 15th of each of the 240 succeeding months, from February 2012 to January 2032.

For this agreement, as the frequency of repayments is monthly, regular periods are given as months, and the intervals between the date of the first drawdown and the successive payments are expressed as a combination of months and days:

- Payment on February 15 2012: the interval is expressed as 3/365+1/12 (1 month from February 15 2012 to January 15 2012 plus 3 days from January 15 2012 to January 12 2012 within a year from January 15 2012 to January 15 2011 with 365 days).
- Payment on March 15 2012: 3/365+2/12 (2 months from March 15 2012 to January 15 2012 plus 3 days from January 15 2012 to January 12 2012 within a year from January 15 2012 to January 15 2011 with 365 days; equivalently, it can be obtained adding 1 month to the interval of the previous payment to obtain March 15 2012).
- Payment on April 15 2012: 3/365+3/12 (add 1 month to the interval of the previous payment to obtain April 15 2012)
- And so on, until the payment on January 2032.

These intervals are shown in the following scheme:



The monthly instalment which provides full repayment of the credit is \leq 1433.57, and the equation becomes:

$$200000 = 4000 + 1433.57 \frac{1}{(1+X)^{3/365+1/12}} + 1433.57 \frac{1}{(1+X)^{3/365+2/12}} + \dots + 1433.57 \frac{1}{(1+X)^{3/365+240/12}} = 4000 + \frac{1}{(1+X)^{3/365}} \left[1433.57 \frac{1}{(1+X)^{1/12}} + 1433.57 \frac{1}{(1+X)^{2/12}} + \dots + 1433.57 \frac{1}{(1+X)^{240/12}} \right]$$

$$200000 = 4000 + 1433.57 \times \frac{1}{(1+X)^{3/365}} \times \frac{1 - \frac{1}{(1+X)^{20}}}{(1+X)^{1/12} - 1}$$

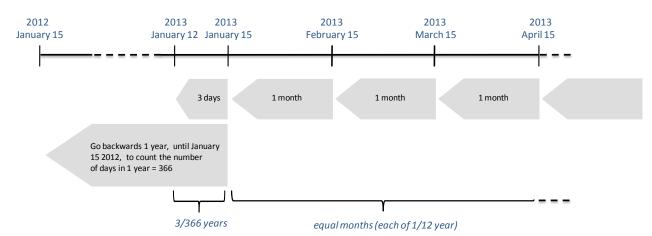
giving X= 6.434185%, i.e. an APR of 6.4%.

<u>Case 2</u>. The agreement is signed one year later, on January 12 2013 and payments are to be made again on the 15th of each of the 240 succeeding months, from February 2013 to January 2033.

In this case, the period of days belongs to a leap year. Specifically, the intervals between the date of the first drawdown and the successive payments are:

- Payment on February 15 2013: the interval is expressed as 3/366+1/12 (1 month from February 15 2013 to January 15 2013 plus 3 days from January 15 2013 to January 12 2013 within a year from January 15 2013 to January 15 2012 with 366 days).
- Payment on March 15 2013: 3/366+2/12 (add 1 month to the interval of the previous payment to obtain March 15 2013).
- Payment on April 15 2013: 3/366+3/12 (add 1 month to the interval of the previous payment to obtain April 15 2013).
- And so on, until the payment on January 2033.

These intervals are shown in the following scheme:



The monthly instalment becomes 1 cent lower, and amounts to €1433.56. The new equation becomes:

or:

$$200000 = 4000 + 1433.56 \frac{1}{(1+X)^{3/366+1/12}} + 1433.56 \frac{1}{(1+X)^{3/366+2/12}} + \dots + 1433.56 \frac{1}{(1+X)^{3/366+240/12}} = 4000 + \frac{1}{(1+X)^{3/366}} \left[1433.56 \frac{1}{(1+X)^{1/12}} + 1433.56 \frac{1}{(1+X)^{2/12}} + \dots + 1433.56 \frac{1}{(1+X)^{240/12}} \right]$$

or:

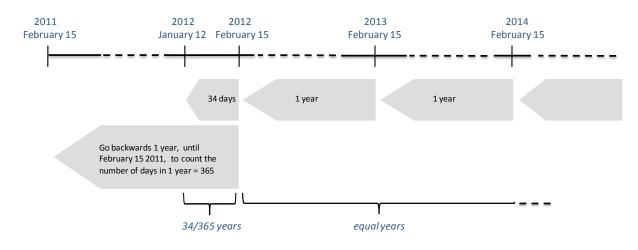
$$200000 = 4000 + 1433.56 \times \frac{1}{(1+X)^{3/366}} \times \frac{1 - \frac{1}{(1+X)^{20}}}{(1+X)^{1/12} - 1}$$

giving X= 6.434111%, i.e. an APR of 6.4%.

<u>Case 3</u>. The agreement is signed on January 12 2012, as in case 1, but payments are to be made now yearly, being due on the 15th of February of each year from 2012 to 2031.

For this agreement, as the frequency of repayments is yearly, regular periods are given as years, and the intervals between the date of the first drawdown and the successive payments are expressed as a combination of years and days:

- Payment on February 15 2012: the interval is expressed as 34/365 (34 days from February 15 2012 to January 12 2012 within a year from February 15 2012 to February 15 2011 with 365 days).
- Payment on February 15 2013: 34/365+1 (add 1 year to the interval of the previous payment to obtain February 15 2013).
- Payment on February 15 2014: 34/365+2 (add 1 year to the interval of the previous payment to obtain February 15 2014).
- And so on, until the payment on February 2031.



These intervals are shown in the following scheme:

The annual instalment which provides full repayment of the credit is €16541.86, and the equation becomes:

$$200000 = 4000 + 16541.86 \frac{1}{(1+X)^{34/365}} + 16541.86 \frac{1}{(1+X)^{34/365+1}} + \dots + 16541.86 \frac{1}{(1+X)^{34/365+19}} = 4000 + \frac{1}{(1+X)^{34/365-1}} \left[16541.86 \frac{1}{(1+X)} + 16541.86 \frac{1}{(1+X)^2} + \dots + 16541.86 \frac{1}{(1+X)^{20}} \right]$$

or:

$$200000 = 4000 + 16541.86 \times \frac{1}{(1+X)^{34/365-1}} \times \frac{1 - \frac{1}{(1+X)^{20}}}{X} = 16541.86 \times \frac{1 - \frac{1}{(1+X)^{20}}}{X(1+X)^{34/365-1}}$$

giving X= 6.282070%, i.e. an APR of 6.3%.

EXAMPLE 3

Mortgage credit agreement is for a total amount of credit of ≤ 200000 repayable in 240 equal monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement plus home insurance costs of ≤ 200 per year spread over the monthly repayments.

The costs associated with home insurance must be included in the total cost of the credit if this insurance is compulsory in order to obtain the credit or to obtain it on the terms and conditions marketed. It is assumed this is the case.

The monthly instalment which provides full repayment of the credit is €1432.86, and the monthly payment including home insurance costs becomes:

$$A = 1432.86 + \frac{200}{12} = 1432.86 + 16.67 = €1449.53$$

The equation becomes:

$$200000 = 4000 + 1449.53 \frac{1}{(1+X)^{1/12}} + 1449.53 \frac{1}{(1+X)^{2/12}} + \ldots + 1449.53 \frac{1}{(1+X)^{240/12}}$$

or:

$$200000 = 4000 + 1449.53 \frac{1 - \frac{1}{(1+X)^{20}}}{(1+X)^{1/12} - 1}$$

giving X= 6.588554%, i.e. an APR of 6.6%.

Compared to example 1, the APR increases as a result of the additional costs.

EXAMPLE 4

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 equal monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement plus payment protection insurance costs of 1% of the total amount of credit per year spread over the repayments.

The costs associated with payment protection insurance premiums must be included in the total cost of the credit if this insurance is compulsory in order to obtain the credit or to obtain it on the terms and conditions marketed. It is assumed this is the case.

The monthly instalment which provides full repayment of the credit is €1432.86, and the monthly payment including insurance costs becomes:

$$A = 1432.86 + \frac{1\% \times 200000}{12} = 1432.86 + 0.0833333\% \times 200000 = €1599.53$$

The equation becomes:

$$200000 = 4000 + 1599.53 \frac{1}{(1+X)^{1/12}} + 1599.53 \frac{1}{(1+X)^{2/12}} + \ldots + 1599.53 \frac{1}{(1+X)^{240/12}}$$

or:

$$200000 = 4000 + 1599.53 \frac{1 - \frac{1}{(1 + X)^{20}}}{(1 + X)^{1/12} - 1}$$

giving X= 7.946625%, i.e. an APR of 7.9%.

Compared to example 1, the APR increases as a result of the additional costs.

EXAMPLE 5

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 equal monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement plus single-sum payment protection insurance

costs of 4% of the total amount of credit which are financed. The insurance provides protection during the first 4 years.

The costs associated with payment protection insurance premiums must be included in the total cost of the credit if this insurance is compulsory in order to obtain the credit or to obtain it on the terms and conditions marketed. It is assumed this is the case.

The amount owed is given by the sum of the amount of the credit and the insurance costs:

 $200000 + 4\% \times 200000 = \texttt{E}208000$

This amount increased by the financed cost should not be confused with the total amount of credit because in coherence with Article 4 points (12), (13) and (14), the total amount of credit does not include the amounts devoted to the payment of charges. In fact, these amounts are costs of the credit by virtue of Article 4(13). Also, Article 4(14), by referring to Article 3(h) of Directive 2008/48/EC, defines the total amount payable by the consumer as total amount of the credit plus total cost of the credit; thus these amounts cannot be included in both terms otherwise they would be counted twice to obtain the amount payable by the consumer (i.e., the consumer would have to pay them twice). And finally, these amounts are not available to the consumer, and hence are not included in the total amount of credit as defined by Article 4(12), which refers to Article 3(I) of Directive 2008/48/EC.

The monthly instalment which provides full repayment of the amount financed is €1490.18.

The equation becomes:

$$200000 = 4000 + 1490.18 \frac{1}{(1+X)^{1/12}} + 1490.18 \frac{1}{(1+X)^{2/12}} + \ldots + 1490.18 \frac{1}{(1+X)^{240/12}}$$

or:

$$200000 = 4000 + 1490.18 \frac{1 - \frac{1}{(1 + X)^{20}}}{(1 + X)^{1/12} - 1}$$

giving X= 6.961575%, i.e. an APR of 7.0%.

Compared to example 1, the APR increases as a result of the additional costs.

EXAMPLE 6

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 equal monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit

payable at the conclusion of the agreement plus exit cost to be paid for closing the mortgage account after full repayment of ≤ 100 .

The monthly instalment which provides full repayment of the credit is €1432.86.

The equation becomes:

$$200000 = 4000 + 1432.86 \frac{1}{(1+X)^{1/12}} + 1432.86 \frac{1}{(1+X)^{2/12}} + \ldots + (1432.86 + 100) \frac{1}{(1+X)^{240/12}}$$

or:

$$200000 = 4000 + 100 \frac{1}{(1+X)^{20}} + 1432.86 \frac{1 - \frac{1}{(1+X)^{20}}}{(1+X)^{1/12} - 1}$$

giving X= 6.436359%, i.e. an APR of 6.4%.

Compared to example 1, the increase in the APR due to the additional cost, the exit cost, is only noticed using an accuracy of at least three decimal places. This is because the amount of the cost is very low compared to the total amount of credit and also because it is charged at a very distant time, in 20 years. Notwithstanding, the total cost of credit clearly reflects the increase of €100 in the costs, now amounting to 147886.40+100=€147986.40.

EXAMPLE 7

Balloon-type mortgage credit agreement is for a total amount of credit of €200000 which features equal monthly payments based on a 30-year amortization period but where the outstanding balance should be paid at the end of the 15th year by a balloon payment. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

The monthly instalment which provides full repayment of the credit in 30 years is ≤ 1199.10 . This is the amount to be paid by the consumer each month of the first 15 years (from months 1 to 180), and in the last month of this period (month 180) the balance outstanding after the monthly payment (≤ 142097.69) is added to the monthly instalment to obtain the amount to be paid at that time. As a result, the credit is fully repaid at the end of the 15th year.

The equation becomes:

$$200000 = 4000 + 1199.10 \frac{1}{(1+X)^{1/12}} + \ldots + 1199.10 \frac{1}{(1+X)^{180/12}} + 142097.69 \frac{1}{(1+X)^{180/12}}$$

or:

$$200000 = 4000 + 1199.10 \frac{1 - \frac{1}{(1+X)^{15}}}{(1+X)^{1/12} - 1} + 142097.69 \frac{1}{(1+X)^{15}}$$

giving X= 6.409523%, i.e. an APR of 6.4%.

EXAMPLE 8

Interest-only mortgage credit agreement is for a total amount of credit of €200000 for a period of 20 years. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit agreement provides for payment of interest charges every month. The borrowing rate (nominal rate) is adjusted twice a year according to the 1-year Euribor rate plus a spread of 3%. The 1-year Euribor rate is 4% at the time of calculating the APR. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. For the scenario of change in the borrowing rate, the highest level of 1-year Euribor rate is 5.39%.

In interest-only credits the total amount of credit is still owed at the end of the duration of the agreement, meaning that the consumer will need to make a separate arrangement to repay such amount. The calculation of the APR takes into account such repayment, which is the counterpart of the drawdown that takes place at the beginning of the agreement.

As regards the borrowing rate, Article 17(4) should be applied on the basis that this rate cannot be quantified at the time of the calculation of the APR. Accordingly, the APR will be calculated on the assumption that the borrowing rate will remain fixed in relation to the level set at the conclusion of the agreement, which is 4+3=7%.

Given that the amount of credit and the borrowing rate remain constant over the duration of the agreement, interest charges are also a constant amount. The monthly payment of interest charges is:

$$A = 200000 \times \frac{7\%}{12} = \text{€}1166.67$$

The equation becomes:

$$200000 = 4000 + 1166.67 \frac{1}{(1+X)^{1/12}} + 1166.67 \frac{1}{(1+X)^{2/12}} + \dots$$
$$\dots + 1166.67 \frac{1}{(1+X)^{239/12}} + (1166.67 + 200000) \frac{1}{(1+X)^{240/12}}$$

or:

$$200000 = 4000 + 1166.67 \frac{1 - \frac{1}{(1+X)^{20}}}{(1+X)^{1/12} - 1} + 200000 \frac{1}{(1+X)^{20}}$$

giving X= 7.430479%, i.e. an APR of 7.4%.

The credit agreement allows for variations in the borrowing rate, and hence Article 17(6) should be applied. As a result, an additional illustrative APR should be provided. According to the instructions to complete the ESIS, this additional APR will be calculated on the basis that the borrowing rate rises at the earliest possible opportunity to the highest level foreseen in the credit agreement. This is determined by the highest value of the reference rate, the 1-year Euribor, in at least the last 20 years, or for the longest period of less than 20 years for which data is available, unless the borrowing rate is capped at a lower level, in which case this lower level should be used. As there is no cap on the borrowing rate in this example, the highest level of the 1-year Euribor rate, 5.39%, should be used for the payments taking place from the 7th month because the borrowing rate is adjusted every 6 months. From then on, the monthly payment of interest charges is:

$$A^* = 200000 \times \frac{8.39\%}{12} = €1398.33$$

The equation becomes:

$$200000 = 4000 + 1166.67 \frac{1}{(1+X)^{1/12}} + \dots + 1166.67 \frac{1}{(1+X)^{6/12}} + \\ + 1398.33 \frac{1}{(1+X)^{7/12}} + \dots + 1398.33 \frac{1}{(1+X)^{239/12}} + (1398.33 + 20000) \frac{1}{(1+X)^{240/12}} \\ = 4000 + 1166.67 \frac{1}{(1+X)^{1/12}} + \dots + 1166.67 \frac{1}{(1+X)^{6/12}} + \\ + 1398.33 \frac{1}{(1+X)^{6/12}} \left[\frac{1}{(1+X)^{1/12}} + \dots + \frac{1}{(1+X)^{234/12}} \right] + 200000 \frac{1}{(1+X)^{240/12}}$$

or:

$$200000 = 4000 + 1166.67 \frac{1 - \frac{1}{(1+X)^{6/12}}}{(1+X)^{1/12} - 1} + 1398.33 \frac{1}{(1+X)^{6/12}} \times \frac{1 - \frac{1}{(1+X)^{234/12}}}{(1+X)^{1/12} - 1} + 200000 \frac{1}{(1+X)^{20}}$$

giving X= 8.869280%, i.e. an illustrative APR of 8.9%.

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EXAMPLE 9

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 monthly instalments (20 years). The amount of the instalments increases 3% each year. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

The monthly instalments which provide full repayment of the credit are €1130.33 for the first year and increase 3% each year up to an amount of €1982.05 for the last year.

The equation becomes:

$$200000 = 4000 + 1130.33 \frac{1}{(1+X)^{1/12}} + \dots + 1130.33 \frac{1}{(1+X)^{12/12}} + \dots$$
$$\dots + 1982.05 \frac{1}{(1+X)^{229/12}} + \dots + 1982.05 \frac{1}{(1+X)^{240/12}}$$
$$= 4000 + 1130.33 \left[\frac{1}{(1+X)^{1/12}} + \dots + \frac{1}{(1+X)^{6/12}} \right] + \dots$$
$$\dots + 1982.05 \frac{1}{(1+X)^{228/12}} \left[\frac{1}{(1+X)^{1/12}} + \dots + \frac{1}{(1+X)^{12/12}} \right]$$

or:

$$200000 = 4000 + 1130.33 \frac{1 - \frac{1}{(1+X)}}{(1+X)^{1/12} - 1} + \dots + 1982.05 \frac{1}{(1+X)^{228/12}} \times \frac{1 - \frac{1}{(1+X)}}{(1+X)^{1/12} - 1} = 4000 + \left(1130.33 + \dots + 1982.05 \frac{1}{(1+X)^{19}}\right) \times \frac{1 - \frac{1}{(1+X)}}{(1+X)^{1/12} - 1}$$

giving X= 6.406400%, i.e. an APR of 6.4%.

EXAMPLE 10

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 monthly instalments (20 years). The amount of the instalments decreases 3% each year. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

The monthly instalments which provide full repayment of the credit are €1778.58 for the first year and decrease 3% each year down to an amount of €997.09 for the last year.

The equation becomes:

$$200000 = 4000 + 1778.58 \frac{1}{(1+X)^{1/12}} + \dots + 1778.58 \frac{1}{(1+X)^{12/12}} + \dots$$
$$\dots + 997.09 \frac{1}{(1+X)^{229/12}} + \dots + 997.09 \frac{1}{(1+X)^{240/12}}$$
$$= 4000 + 1778.58 \left[\frac{1}{(1+X)^{1/12}} + \dots + \frac{1}{(1+X)^{6/12}} \right] + \dots$$
$$\dots + 997.09 \frac{1}{(1+X)^{228/12}} \left[\frac{1}{(1+X)^{1/12}} + \dots + \frac{1}{(1+X)^{12/12}} \right]$$

or:

$$200000 = 4000 + 1778.58 \frac{1 - \frac{1}{(1+X)}}{(1+X)^{1/12} - 1} + \dots + 997.09 \frac{1}{(1+X)^{228/12}} \times \frac{1 - \frac{1}{(1+X)}}{(1+X)^{1/12} - 1} = 4000 + \left(1778.58 + \dots + 997.09 \frac{1}{(1+X)^{19}}\right) \times \frac{1 - \frac{1}{(1+X)}}{(1+X)^{1/12} - 1}$$

giving X= 6.468360%, i.e. an APR of 6.5%.

Compared to example 9, the APR is higher due to the earlier repayments of capital. However, charging interest on a lower balance outstanding implies a lower cost of the credit. The total cost of the credit in this example is $4000+124559.08 = \pounds 128559.08$, while in example 9 is $4000 + 12469.64 = \pounds 168469.64$.

EXAMPLE 11

Mortgage credit agreement is for a total amount of credit of €200000 to be drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit agreement provides for payment of a fixed amount specified in advance of €1500 every month until the complete repayment of the credit is made. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

The scheme of the repayments determines that the credit is completely repaid in 221 months (18 years and 5 months). According to the amortisation table, the amount of the last payment is only A221=407.70, which corresponds to the amount owed at the end of month 221.

The equation becomes:

$$200000 = 4000 + 1500 \frac{1}{(1+X)^{1/12}} + 1500 \frac{1}{(1+X)^{2/12}} + \ldots + 1500 \frac{1}{(1+X)^{220/12}} + 407.70 \frac{1}{(1+X)^{221/12}}$$

$$200000 = 4000 + 1500 \frac{1 - \frac{1}{(1+X)^{220/12}}}{(1+X)^{1/12} - 1} + 407.70 \frac{1}{(1+X)^{221/12}}$$

giving X= 6.452756%, i.e. an APR of 6.5%.

EXAMPLE 12

Mortgage credit agreement is for a total amount of credit of €200000 to be draw down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit agreement provides for payment of interest plus a fixed amount specified in advance of €900 every month until the complete repayment of the credit is made. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

The scheme of payments determines that the credit is completely repaid in 223 months (18 years and 7 months). The monthly payments can be obtained from the amortisation table, being the payment in the first month A1 = 1900 and the payment in the last month A223 = 201. Note that the last payment is lower than the fixed amount of €900 because the amount owed is lower than such amount.

The equation becomes:

$$200000 = 4000 + 1900 \frac{1}{(1+X)^{1/12}} + 1895.50 \frac{1}{(1+X)^{2/12}} + \dots$$
$$\dots + 905.50 \frac{1}{(1+X)^{222/12}} + 201 \frac{1}{(1+X)^{223/12}}$$

giving X= 6.492533%, i.e. an APR of 6.5%.

EXAMPLE 13

Mortgage credit agreement is for a total amount of credit of €200000 for a period of 20 years. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit agreement provides for payment of interest and equal repayments of capital every month. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

The 240 monthly payments are comprised of a constant quota of capital of 200000/240 =€833.33 and the interest charges generated each month, which are of a decreasing amount.

The payments can be obtained from the amortisation table, being the payment in the first month A1 = 1833.33 and the payment in the last month A240 = 837.50.

The equation becomes:

$$200000 = 4000 + 1833.33 \frac{1}{(1+X)^{1/12}} + 1829.17 \frac{1}{(1+X)^{2/12}} + \ldots + 841.67 \frac{1}{(1+X)^{239/12}} + 837.50 \frac{1}{(1+X)^{240/12}} + 837.50 \frac{1}{(1+X)^{240/12}} + \frac{1}{(1+X)^{2$$

giving X= 6.476009%, i.e. an APR of 6.5%.

EXAMPLE 14

Mortgage credit agreement is for a total amount of credit of ≤ 200000 to be draw down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit agreement provides for payment of interest every month plus a monthly payment of 2% of the outstanding balance of capital with a minimum of ≤ 100 . The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

The scheme of payments determines that the credit is completely repaid in 233 months (19 years and 5 months). The monthly payments can be obtained from the amortisation table, being the payment in the first month A1 = 5000 and the payment in the last month A240 = 59.38. Note that the last repayment is lower than the minimum amount because the amount owed is lower than the minimum amount.

The equation becomes:

$$200000 = 4000 + 5000 \frac{1}{(1+X)^{1/12}} + 4900 \frac{1}{(1+X)^{2/12}} + \ldots + 100.80 \frac{1}{(1+X)^{232/12}} + 59.38 \frac{1}{(1+X)^{233/12}}$$

giving X= 6.818859%, i.e. an APR of 6.8%.

EXAMPLE 15

Mortgage credit agreement is for a total amount of credit of $\notin 200000$ to be draw down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit agreement provides for a monthly payment of 2% of the outstanding balance of capital and interest with a minimum of $\notin 300$. The borrowing rate (nominal rate) is 6%. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

The scheme of payments determines that the credit is completely repaid in 228 months (19 years). The monthly payments can be obtained from the amortisation table, being the payment in the first month A1 = 4020 and the payment in the last month A228 = 274.76. Note that the last repayment is lower than the minimum amount because the amount owed is lower than the minimum amount.

The equation becomes:

$$200000 = 4000 + 4020 \frac{1}{(1+X)^{1/12}} + 3959.30 \frac{1}{(1+X)^{2/12}} + \ldots + 300 \frac{1}{(1+X)^{227/12}} + 274.76 \frac{1}{(1+X)^{228/12}}$$

giving X= 6.695965%, i.e. an APR of 6.7%.

EXAMPLE 16

Mortgage credit agreement is for a total amount of credit of €200000 for a period of 20 years. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit agreement provides for payment of interest and equal repayments of capital every month, but the borrower is allowed to postpone each year two monthly payments of capital, interest or both for three months without costs. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

This example differs from example 13 in the flexibility in payments. In order to determine the dates of the payments in this credit agreement with fixed duration (not open-ended), assumptions (g)(i) and (h)(i) should be applied. According to assumption (g)(i), the dates of the repayments of capital shall be deemed to be the earliest dates provided for in the credit agreement. According to assumption (h)(i), the interest charges shall be deemed to be paid together with the repayments of capital. Therefore, the postponement of payments is discarded for the calculation of the APR and the calculations coincide with example 13, which provided an APR of 6.5%.

EXAMPLE 17

Mortgage credit agreement is for a total amount of credit of ≤ 200000 for a period of 15 year. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit agreement provides for payment of interest every month plus a minimum monthly repayment of 2% of the outstanding balance of capital with a minimum of ≤ 100 . A final payment at the end of the 15-year period is compulsory and must provide full repayment of the credit. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. This example differs from example 14 in the flexibility in the repayments of capital, now established as minimum repayments, and the duration of the credit, which decreases from 19 years and 5 months to 15 years to accommodate the possibility of higher repayments. In order to determine the amounts of the repayments of capital in this credit agreement with fixed duration (not open-ended), assumption (g)(i) should be applied. Accordingly, these amounts shall be deemed to be the lowest amounts for which the credit agreement provides, that is, 2% of the outstanding balance of capital with a minimum of ≤ 100 for months before the last one, and the residual payment which clears the balance for the last month.

The payments can be obtained from the amortisation table, being the payment in the first month A1 = 5000 and the payment in the last month A180 = 5403.361.

The equation becomes:

$$200000 = 4000 + 5000 \frac{1}{(1+X)^{1/12}} + 4900 \frac{1}{(1+X)^{2/12}} + \ldots + 137.15 \frac{1}{(1+X)^{179/12}} + 5403.36 \frac{1}{(1+X)^{180/12}}$$

giving X= 6.822923%, i.e. an APR of 6.8%.

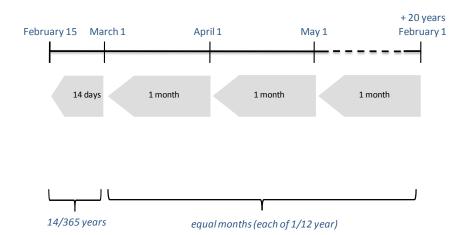
EXAMPLE 18

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 equal monthly instalments. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. If the drawdown occurs before or on the 15th day of a month the first instalment is due on the first calendar day of the following month; otherwise the first instalment is due the first calendar day of the second following month. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

In this example, the length of the interval to the first instalment is only known when the agreement is concluded (and the drawdown is made). For earlier stages (in advertising or at the pre-contractual stage), assumption (g)(ii) should be used to determine the length of such an interval.

Case 1. Advertising and pre-contractual stage.

According to assumption g(ii), if the interval between the date of initial drawdown and the date of the first payment to be made by the consumer cannot be ascertained, it shall be assumed to be the shortest interval. The shortest interval is 14 days (as the shortest possible period is February 15 to March 1 in a non-leap year). This interval should be used for the first instalment and the remaining intervals are obtained adding 1 month successively, in accordance with remark (c) and as shown in the figure.



The monthly instalment which provides full repayment of the credit is €1429.01

The equation becomes:

$$200000 = 4000 + 1429.01 \frac{1}{(1+X)^{14/365}} + 1429.01 \frac{1}{(1+X)^{14/365+1/12}} + \dots + 1429.01 \frac{1}{(1+X)^{14/365+239/12}} = 4000 + (1+X)^{1/2-14/365} \left[1429.01 \frac{1}{(1+X)^{1/12}} + 1429.01 \frac{1}{(1+X)^{2/12}} + \dots + 1429.01 \frac{1}{(1+X)^{240/12}} \right]$$

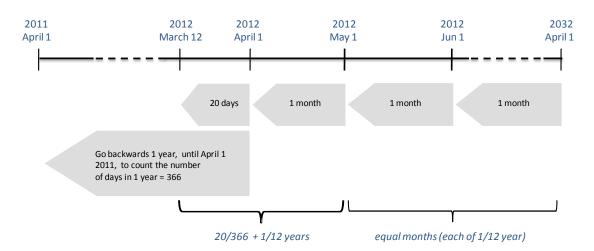
or:

$$200000 = 4000 + 1429.01 \times (1+X)^{1/2 - 14/365} \times \frac{1 - \frac{1}{(1+X)^{20}}}{(1+X)^{1/12} - 1}$$

giving X= 6.435937%, i.e. an APR of 6.4%.

Case 2. Contractual stage

At the contractual stage, the date of drawdown becomes known, and the length of the interval to the first instalment is obtained from it. For example, if the agreement is signed on March 12 2012, the date of drawdown is that same date; and as the drawdown occurs before the 15th of the month, the first instalment becomes due the first calendar day of the second following month, on the 1st of May. The length of the first interval is then 20/366 + 1/12 years (1 month from May 1 2012 to April 1 2012 plus 20 days from April 1 2012 to March 12 2012 within a year from April 1 2012 to April 1 2011 with 366 days). The remaining 239 instalments are payable at monthly intervals from May 1 2012 to April 1 2012 to Apr



The monthly instalment which provides full repayment of the credit is €1437.54 The equation becomes:

$$200000 = 4000 + 1437.54 \frac{1}{(1+X)^{20/366+1/12}} + 1437.54 \frac{1}{(1+X)^{20/366+2/12}} + \dots + 1437.54 \frac{1}{(1+X)^{20/366+240/12}} = 4000 + \frac{1}{(1+X)^{20/366}} \left[1437.54 \frac{1}{(1+X)^{1/12}} + 1437.54 \frac{1}{(1+X)^{2/12}} + \dots + 1437.54 \frac{1}{(1+X)^{240/12}} \right]$$

or:

$$200000 = 4000 + 1437.54 \times \frac{1}{(1+X)^{20/366}} \times \frac{1 - \frac{1}{(1+X)^{20}}}{(1+X)^{1/12} - 1}$$

giving X= 6.432478%, i.e. an APR of 6.4%.

EXAMPLE 19

Mortgage credit agreement is for a total amount of credit of $\pounds 200000$ for a period of 20 years. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit agreement provides for equal repayments of capital every month but is silent about the date of payment of charges, consisting of interest calculated by applying a borrowing rate (nominal rate) of 6%, a single sum (lump sum) cost of 2% of the total amount of credit and ten costs of $\pounds 100$.

The dates of the payment of charges are determined by assumption (h). Specifically, according to (h)(i), interest charges shall be deemed to be paid together with the repayments of capital (i.e. monthly); the single sum cost of 2% of the total amount of credit shall be deemed to be paid at the date of the conclusion of the credit agreement by virtue of (h)(ii); and according to

(h)(iii) the ten costs of ≤ 100 shall be deemed to be paid at regular intervals, commencing with the date of the first repayment of capital (as the remaining duration of the credit starting and including the month of the first repayment is 240 months and 240/10 = 24 months, these costs are paid every two years in months 1, 25, 49, 73, and so on.

The payments include a constant quota of capital of 200000/240 = &833.33 and can be obtained from the amortisation table, being the payment in the first month A1 = 1933.33 and the payment in the last month A240 = 837.50.

The equation becomes:

$$200000 = 4000 + 1933.33 \frac{1}{(1+X)^{1/12}} + 1829.17 \frac{1}{(1+X)^{2/12}} + \ldots + 841.67 \frac{1}{(1+X)^{239/12}} + 837.50 \frac{1}{(1+X)^{240/12}} + \frac{1}{(1+X)^{240/12}}$$

giving X= 6.523259%, i.e. an APR of 6.5%.

EXAMPLE 20

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 monthly instalments. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. A discount rate of 5% is charged during the first 2 years, after which the full rate of 6% is charged, both expressed as nominal rates. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

Assumption (d), which refers to the case where different borrowing rates and charges are offered for a limited period or amount, should not be applied in this example. This is because this assumption should be applied when, at the date of the calculation of the APR, the relevant elements of the credit which determine the application and the effect on the APR of different interest rates or charges are not known. This follows from the Guidelines on the application of Directive 2008/48/EC, which also include this assumption as assumption (i). In this example, all these elements are known and the effects on the APR are certain and quantifiable; in fact, none of the assumptions in Annex I are used for calculating the APR. Therefore, the calculation of the APR will take into account the different borrowing rates. This is different to the case where, for example, the credit is open-ended or it gives freedom of drawdown and/or repayment (either completely or within limits) to the consumer. In these and similar cases assumption (d) should be applied (see examples 33 and 37).

The monthly instalments which provide full repayment of the credit are \leq 1319.91 for the period with a borrowing rate of 5% and \leq 1423.41 for the period with a borrowing rate of 6%.

$$200000 = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{24/12}} + \\ + 1423.41 \frac{1}{(1+X)^{25/12}} + \dots + 1423.41 \frac{1}{(1+X)^{240/12}} \\ = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{24/12}} + \\ + \frac{1}{(1+X)^{24/12}} \times \left[1423.41 \frac{1}{(1+X)^{1/12}} + \dots + 1423.41 \frac{1}{(1+X)^{216/12}} \right]$$

or:

$$200000 = 4000 + 1319.91 \times \frac{1 - \frac{1}{(1+X)^2}}{(1+X)^{1/12} - 1} + 1423.41 \times \frac{1}{(1+X)^2} \times \frac{1 - \frac{1}{(1+X)^{1/12}}}{(1+X)^{1/12} - 1}$$

giving X= 6.190654%, i.e. an APR of 6.2%.

EXAMPLE 21

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is fixed at 5% for 9 months and after that it is adjusted twice a year according to the 1-year Euribor rate plus a spread of 1.5%. The 1-year Euribor rate is 4% at the time of calculating the APR. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. For the scenario of change in the borrowing rate, the highest level of 1-year Euribor rate is 5.39%.

Application of assumptions (e) and (d) should be assessed in this example. Assumption (e), which refers to those agreements where a fixed borrowing rate is agreed in relation to an initial period after which the borrowing rate is periodically adjusted according to an agreed indicator or internal reference rate, should be applied to determine the rate following the end of the initial fixed-rate period. Specifically, for the variable-rate period, the borrowing rate is assumed to be determined by the value of the agreed indicator or internal reference rate at the time of calculating the APR, provided that is not less than the fixed borrowing rate. The rate is 5.5% (i.e. 4% + spread of 1.5%), which is higher than the fixed borrowing rate, and then this level is assumed to be charged from the 10th month until the end of the credit agreement. As regards assumption (d), which refers to the case where different borrowing rates and charges are offered for a limited period or amount, this assumption should not be applied. Similar to example 20, the relevant elements of the credit which determine the application and the effect on the APR of different interest rates or charges are known and the effects on the APR are certain and quantifiable.

The monthly instalments which provide full repayment of the credit are €1319.91 for the fixedrate period with a borrowing rate of 5% and €1374.06 for the variable-rate period with an assumed borrowing rate of 5.5%.

The equation becomes:

$$200000 = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{9/12}} + \\ + 1374.06 \frac{1}{(1+X)^{10/12}} + \dots + 1374.06 \frac{1}{(1+X)^{240/12}} \\ = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{9/12}} + \\ + \frac{1}{(1+X)^{9/12}} \times \left[1374.06 \frac{1}{(1+X)^{1/12}} + \dots + 1374.06 \frac{1}{(1+X)^{231/12}} \right]$$

or:

$$200000 = 4000 + 1319.91 \times \frac{1 - \frac{1}{(1+X)^{9/12}}}{(1+X)^{1/12} - 1} + 1374.06 \times \frac{1}{(1+X)^{9/12}} \times \frac{1 - \frac{1}{(1+X)^{231/12}}}{(1+X)^{1/12} - 1}$$

giving X= 5.853526%, i.e. an APR of 5.9%.

The credit agreement allows for variations in the borrowing rate, and hence Article 17(6) should be applied. As a result, an additional illustrative APR should be provided. According to the instructions to complete the ESIS, this additional APR will be calculated on the basis that the borrowing rate rises at the earliest possible opportunity to the highest level foreseen in the credit agreement. This is determined by the highest value of the reference rate, the 1-year Euribor, in at least the last 20 years, or for the longest period of less than 20 years for which data is available, unless the borrowing rate is capped at a lower level, in which case this lower level should be used. As there is no cap on the borrowing rate in this example, the highest level of the 1-year Euribor rate, 5.39%, should be used for the payments taking place after the fixed rate period, i.e. from the 10^{th} month. From then on, the borrowing rate becomes 6.89% (i.e. 5.39% + spread of 1.5%) and the monthly instalment €1530.61.

The equation becomes:

$$200000 = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{9/12}} + \\ + 1530.61 \frac{1}{(1+X)^{10/12}} + \dots + 1530.61 \frac{1}{(1+X)^{240/12}} \\ = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{9/12}} + \\ + \frac{1}{(1+X)^{9/12}} \times \left[1530.61 \frac{1}{(1+X)^{1/12}} + \dots + 1530.61 \frac{1}{(1+X)^{231/12}} \right]$$

or:

$$200000 = 4000 + 1319.91 \times \frac{1 - \frac{1}{(1+X)^{9/12}}}{(1+X)^{1/12} - 1} + 1530.61 \times \frac{1}{(1+X)^{9/12}} \times \frac{1 - \frac{1}{(1+X)^{231/12}}}{(1+X)^{1/12} - 1}$$

giving X= 7.199734%, i.e. an illustrative APR of 7.2%.

EXAMPLE 22

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is fixed at 5% for 9 months and after that it is adjusted twice a year according to the 1-year Euribor rate plus a spread of 1.5%. The 1-year Euribor rate is 4% at the time of calculating the APR. There is a cap in the borrowing rate which limits its level to a stated maximum and whose cost is spread over the monthly payments. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. For the scenario of change in the borrowing rate, the highest level of 1-year Euribor rate is 5.39%.

This example differs from example 21 as there is a cap on the borrowing rate. This has two effects. On the one hand, application of assumptions (e) should take into account that the borrowing rate for the variable-rate period cannot be higher than the capped rate (as it constitutes a maximum limit for the borrowing rate). This is relevant when determining the level of the borrowing rate based on the value of the agreed indicator or internal reference rate and also when assessing the substitution of the variable borrowing rate by the initial fixed rate when the latter is higher. On the other hand, for the scenario of change in the borrowing rate (illustrative APR) the capped rate will be considered to be the highest possible borrowing rate if it is lower than the rate obtained from historical data.

<u>Case 1</u>. The capped rate is 6.5% and has an annual cost of \in 360 spread over the monthly payments.

As in example 21, the rate obtained from the level of the 1-year Euribor at the time of calculating the APR is 5.5% (i.e. 4% + spread of 1.5%) and is higher than the fixed borrowing rate. It is also lower than the capped rate, and hence this level of 5.5% is assumed to be charged from the 10^{th} month until the end of the credit agreement.

The monthly instalments which provide full repayment of the credit are ≤ 1319.91 for the fixedrate period with a borrowing rate of 5% and ≤ 1374.06 for the variable-rate period with an assumed borrowing rate of 5.5%. To these amounts the monthly cost of the cap of $360/12 = \leq 30$ is added to obtain the new monthly payments.

$$200000 = 4000 + 1349.91 \frac{1}{(1+X)^{1/12}} + \dots + 1349.91 \frac{1}{(1+X)^{9/12}} + \\ + 1404.06 \frac{1}{(1+X)^{10/12}} + \dots + 1404.06 \frac{1}{(1+X)^{240/12}} \\ = 4000 + 1349.91 \frac{1}{(1+X)^{1/12}} + \dots + 1349.91 \frac{1}{(1+X)^{9/12}} + \\ + \frac{1}{(1+X)^{9/12}} \times \left[1404.06 \frac{1}{(1+X)^{1/12}} + \dots + 1404.06 \frac{1}{(1+X)^{231/12}} \right]$$

or:

$$200000 = 4000 + 1349.91 \times \frac{1 - \frac{1}{(1+X)^{9/12}}}{(1+X)^{1/12} - 1} + 1404.06 \times \frac{1}{(1+X)^{9/12}} \times \frac{1 - \frac{1}{(1+X)^{231/12}}}{(1+X)^{1/12} - 1}$$

giving X= 6.134668%, i.e. an APR of 6.1%.

As regards the scenario of change in the borrowing rate, the borrowing rate determined in example 21 from the highest level of the 1-year Euribor rate, given as 6.89% (i.e. 5.39% + spread of 1.5%), is higher than the capped rate of 6.5%, and hence the capped rate is used in this case. The monthly instalment from the 10th month falls to €1485.81 and adding the cost of the cap the monthly payment becomes €1515.81.

The equation becomes:

$$200000 = 4000 + 1349.91 \frac{1}{(1+X)^{1/12}} + \dots + 1349.91 \frac{1}{(1+X)^{9/12}} + \\ + 1515.81 \frac{1}{(1+X)^{10/12}} + \dots + 1515.81 \frac{1}{(1+X)^{240/12}} \\ = 4000 + 1349.91 \frac{1}{(1+X)^{1/12}} + \dots + 1349.91 \frac{1}{(1+X)^{9/12}} + \\ + \frac{1}{(1+X)^{9/12}} \times \left[1515.81 \frac{1}{(1+X)^{1/12}} + \dots + 1515.81 \frac{1}{(1+X)^{231/12}} \right]$$

or:

$$200000 = 4000 + 1349.91 \times \frac{1 - \frac{1}{(1+X)^{9/12}}}{(1+X)^{1/12} - 1} + 1515.81 \times \frac{1}{(1+X)^{9/12}} \times \frac{1 - \frac{1}{(1+X)^{231/12}}}{(1+X)^{1/12} - 1}$$

giving X= 7.093592%, i.e. an illustrative APR of 7.1%.

Compared to example 21, the cap on the borrowing rate implies a higher APR for the credit due to the cost of the cap (6.1% versus 5.9%) and a lower APR in the scenario of change in the

borrowing rate (7.1% versus 7.2%) because the highest borrowing rate is limited to a lower level (the capped rate).

<u>Case 2</u>. The capped rate is 7.5% and has an annual cost of \leq 240 spread over the monthly payments.

The capped rate is higher than in case 1 and its cost is lower. As a result, the level of the variable borrowing rate is assumed to be the same as in case 1, and also the instalments comprised of capital and interest which provide full repayment of the credit. However, the lower cost of the cap now given as 240/12 = €20 each month leads to lower monthly payments, which are of €1339.91 and €1394.06 for the fixed-rate and the variable-rate periods, respectively.

The equation becomes:

$$200000 = 4000 + 1339.91 \frac{1}{(1+X)^{1/12}} + \dots + 1339.91 \frac{1}{(1+X)^{9/12}} + \\ + 1394.06 \frac{1}{(1+X)^{10/12}} + \dots + 1394.06 \frac{1}{(1+X)^{240/12}} \\ = 4000 + 1339.91 \frac{1}{(1+X)^{1/12}} + \dots + 1339.91 \frac{1}{(1+X)^{9/12}} + \\ + \frac{1}{(1+X)^{9/12}} \times \left[1394.06 \frac{1}{(1+X)^{1/12}} + \dots + 1394.06 \frac{1}{(1+X)^{231/12}} \right]$$

or:

$$200000 = 4000 + 1339.91 \times \frac{1 - \frac{1}{(1+X)^{9/12}}}{(1+X)^{1/12} - 1} + 1394.06 \times \frac{1}{(1+X)^{9/12}} \times \frac{1 - \frac{1}{(1+X)^{231/12}}}{(1+X)^{1/12} - 1}$$

giving X= 6.041228%, i.e. an APR of 6.1%.

As regards the scenario of change in the borrowing rate, the capped rate in this case is higher than the borrowing rate determined in example 21 from the highest level of the 1-year Euribor rate, given as 6.89% (i.e. 5.39% + spread of 1.5%). Thus, this second rate is used in this case. The monthly instalment from the 10th month remains as in example 21, amounting to €1530.61 and adding the cost of the cap the monthly payment increases to €1550.61.

$$200000 = 4000 + 1339.91 \frac{1}{(1+X)^{1/12}} + \dots + 1339.91 \frac{1}{(1+X)^{9/12}} + \\ + 1550.61 \frac{1}{(1+X)^{10/12}} + \dots + 1550.61 \frac{1}{(1+X)^{240/12}} \\ = 4000 + 1339.91 \frac{1}{(1+X)^{1/12}} + \dots + 1339.91 \frac{1}{(1+X)^{9/12}} + \\ + \frac{1}{(1+X)^{9/12}} \times \left[1550.61 \frac{1}{(1+X)^{1/12}} + \dots + 1550.61 \frac{1}{(1+X)^{231/12}} \right]$$

or:

$$200000 = 4000 + 1339.91 \times \frac{1 - \frac{1}{(1+X)^{9/12}}}{(1+X)^{1/12} - 1} + 1550.61 \times \frac{1}{(1+X)^{9/12}} \times \frac{1 - \frac{1}{(1+X)^{231/12}}}{(1+X)^{1/12} - 1}$$

giving X= 7.379073%, i.e. an illustrative APR of 7.4%.

Compared to case 1, the higher capped rate implies a lower APR of the credit (6.041228% versus 6.134668%) due to the lower cost of the cap but a higher APR in the scenario of change in the borrowing rate (7.4% versus 7.1%). Moreover, when compared to example 21, the higher cost of the credit due to the cost of the cap comes without any benefit in terms of a reduction of the APR in the scenario of change in the borrowing rate, because the capped rate considered is too high when compared with the highest borrowing rate that derives from historical data on the reference rate.

EXAMPLE 23

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is fixed at 5% for 9 months and after that it is adjusted twice a year according to the 1-year Euribor rate plus a spread of 1.5% or a new fixed rate could be agreed. The 1-year Euribor rate is 4% at the time of calculating the APR. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. For the scenario of change in the borrowing rate, the highest level of 1-year Euribor rate is 5.39% and the highest level of the benchmark rate for the fixed borrowing rate is 7.30%.

The difference between this example and example 21 is that in this example the change of the rate to a variable rate is only a possibility as a new fixed rate might be agreed. This implies that assumption (e) should not be applied because it only applies when it is known that the variable borrowing rate period follows the fixed rate period. This follows from the Guidelines on the application of Directive 2008/48/EC in relation to assumption (j) of this Directive, which is similar to assumption (e) of Directive 2014/07/EU. Instead, Article 17(4) should be applied on the basis that the borrowing rate cannot be quantified at the time of the calculation of the

APR. Accordingly, the initial borrowing rate of 5% shall be assumed to be fixed until the end of the credit agreement.

Using this borrowing rate, the monthly instalment which provides full repayment of the credit is €1319.91.

The equation becomes:

$$200000 = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + 1319.91 \frac{1}{(1+X)^{2/12}} + \dots + 1319.91 \frac{1}{(1+X)^{240/12}}$$

or:

$$200000 = 4000 + 1319.91 \frac{1 - \frac{1}{(1 + X)^{20}}}{(1 + X)^{1/12} - 1}$$

giving X= 5.370286%, i.e. an APR of 5.4%.

The credit agreement allows for variations in the borrowing rate, and hence Article 17(6) should be applied. Article 17(5) does not apply in this example. As a result, the additional illustrative APR should be provided on the basis that the borrowing rate rises at the earliest possible opportunity to the highest level foreseen in the credit agreement. As in this example the change of the rate to a variable rate is only a possibility because a new fixed rate might be agreed, the highest level might corresponds to the fixed or to the variable rate. The higher of the two rates should be selected because the rationale for the scenario of change in the borrowing rate is to illustrate the 'maximum' payments and APR in the 'worst case scenario'. For the variable rate, the highest level of the 1-year Euribor rate, 5.39%, plus the spread of 1.5% should be considered, giving a borrowing rate of 6.89%. For the fixed rate of 7.30% is then used for the payments taking place after the initial fixed rate period, i.e. from the 10th month. From then on, the borrowing rate becomes 7.30% and the monthly instalment €1578.43.

The equation becomes:

$$200000 = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{9/12}} + \\ + 1578.43 \frac{1}{(1+X)^{10/12}} + \dots + 1578.43 \frac{1}{(1+X)^{240/12}} \\ = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{9/12}} + \\ + \frac{1}{(1+X)^{9/12}} \times \left[1578.43 \frac{1}{(1+X)^{1/12}} + \dots + 1578.43 \frac{1}{(1+X)^{231/12}} \right]$$

or:

$$200000 = 4000 + 1319.91 \times \frac{1 - \frac{1}{(1+X)^{9/12}}}{(1+X)^{1/12} - 1} + 1578.43 \times \frac{1}{(1+X)^{9/12}} \times \frac{1 - \frac{1}{(1+X)^{231/12}}}{(1+X)^{1/12} - 1}$$

giving X= 7.597578%, i.e. an illustrative APR of 7.6%.

EXAMPLE 24

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is fixed at 5% for 5 years and after that a negotiation on the borrowing rate takes place to agree on a new fixed rate for the rest of the agreement. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

Article 17(4) should be applied in this example on the basis that the borrowing rate for the period following the initial fixed rate period cannot be quantified at the time of the calculation of the APR. Accordingly, the initial borrowing rate of 5% shall be assumed until the end of the credit agreement.

Using this borrowing rate, the monthly instalment which provides full repayment of the credit is €1319.91.

The equation becomes:

$$200000 = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + 1319.91 \frac{1}{(1+X)^{2/12}} + \dots + 1319.91 \frac{1}{(1+X)^{240/12}}$$

or:

$$200000 = 4000 + 1319.91 \frac{1 - \frac{1}{(1 + X)^{20}}}{(1 + X)^{1/12} - 1}$$

giving X= 5.370286%, i.e. an APR of 5.4%.

Article 17(5), which refers to credit agreements for which a fixed borrowing rate is agreed in relation to the initial period of at least five years, at the end of which a negotiation on the borrowing rate takes place to agree on a new fixed rate for a further material period, should be applied in this example. As a result, an additional illustrative APR should be provided on the basis that at the end of the initial fixed-rate period, the balance outstanding is repaid. This amount can be obtained from the amortisation table as it corresponds to the final balance at the end of the 60^{th} month, which amounts to €166909.73

$$200000 = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{60/12}} + 166909.73 \frac{1}{(1+X)^{60/12}}$$

or:

$$200000 = 4000 + 1319.91 \frac{1 - \frac{1}{(1+X)^5}}{(1+X)^{1/12} - 1} + 166909.73 \frac{1}{(1+X)^5}$$

giving X= 5.635609%, i.e. an illustrative APR of 5.6%.

EXAMPLE 25

Mortgage credit agreement is for a total amount of credit of €200000 repayable in 240 monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is fixed at 5% for 9 months and after that a negotiation on the borrowing rate takes place to agree on a new fixed rate for the rest of the agreement. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. For the scenario of change in the borrowing rate, the highest level of the benchmark rate for the fixed borrowing rate is 7.30%.

The difference between this example and example 24 is that in this example the initial fixedrate period is lower than 5 years. This does not alter the calculation of the APR of the credit. However, it has an effect on the illustrative APR, which in this example should be calculated in accordance with Article 17(6), instead of Article 17(5). According to the instructions to complete the ESIS, this additional APR will be calculated on the basis that the borrowing rate rises at the earliest possible opportunity to the highest level foreseen in the credit agreement. This is determined by the highest value of the benchmark rate for the fixed borrowing rate in at least the last 20 years, or for the longest period of less than 20 years for which data is available, unless the borrowing rate is capped at a lower level, in which case this lower level should be used. As there is no cap on the borrowing rate in this example, the highest level of the benchmark rate, 7.30%, is used for the payments taking place after the initial fixed rate period, i.e. from the 10th month. From then on, the borrowing rate becomes 7.30% and the monthly instalment €1578.43 (as obtained before in example 23).

$$200000 = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{9/12}} + \\ + 1578.43 \frac{1}{(1+X)^{10/12}} + \dots + 1578.43 \frac{1}{(1+X)^{240/12}} \\ = 4000 + 1319.91 \frac{1}{(1+X)^{1/12}} + \dots + 1319.91 \frac{1}{(1+X)^{9/12}} + \\ + \frac{1}{(1+X)^{9/12}} \times \left[1578.43 \frac{1}{(1+X)^{1/12}} + \dots + 1578.43 \frac{1}{(1+X)^{231/12}} \right]$$

or:

$$200000 = 4000 + 1319.91 \times \frac{1 - \frac{1}{(1+X)^{9/12}}}{(1+X)^{1/12} - 1} + 1578.43 \times \frac{1}{(1+X)^{9/12}} \times \frac{1 - \frac{1}{(1+X)^{231/12}}}{(1+X)^{1/12} - 1}$$

giving X= 7.597578%, i.e. an illustrative APR of 7.6%.

EXAMPLE 26

Multi-part mortgage credit agreement is for a total amount of credit of €200000 repayable in 180 equal monthly instalments (15 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. A half of the amount of credit is provided at a fixed borrowing rate (nominal rate) of 6% and the other half at a variable borrowing rate which is adjusted twice a year according to the 1-year Euribor rate plus a spread of 1.5%. The 1-year Euribor rate is 4% at the time of calculating the APR. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. For the scenario of change in the borrowing rate, the highest level of 1-year Euribor rate is 5.39%.

In this example the two parts of the credit are dealt separately to obtain all the relevant amounts which are subsequently added up to obtain the APR figures.

For the fixed-rate part, the monthly instalment which provides full repayment of the credit of \pounds 100000 is \pounds 843.86. For the variable-rate part, Article 17(4) should be applied to determine the variable borrowing rate on the basis that this rate cannot be quantified at the time of the calculation of the APR. Accordingly, it is assumed that the borrowing rate will remain fixed in relation to the level set at the conclusion of the contract, which is 4+1.5=5.5%. The resulting monthly instalment which provides full repayment of this part of the credit of \pounds 100000 is \pounds 817.08. The total monthly instalment is thus 843.86+817.08= \pounds 1660.94.

$$200000 = 4000 + 1660.94 \frac{1}{(1+X)^{1/12}} + 1660.94 \frac{1}{(1+X)^{2/12}} + \dots + 1660.94 \frac{1}{(1+X)^{180/12}}$$

$$200000 = 4000 + 1660.94 \times \frac{1 - \frac{1}{(1 + X)^{15}}}{(1 + X)^{1/12} - 1}$$

giving X= 6.237362%, i.e. an APR of 6.2%.

The credit agreement allows for variations in the borrowing rate in the variable-rate part, and hence Article 17(6) should be applied. As a result, an additional illustrative APR should be provided. According to the instructions to complete the ESIS, this additional APR will be calculated on the basis that the variable borrowing rate rises at the earliest possible opportunity to the highest level foreseen in the credit agreement. This is determined by the highest value of the reference rate, the 1-year Euribor, in at least the last 20 years, or for the longest period of less than 20 years for which data is available, unless the borrowing rate is capped at a lower level, in which case this lower level should be used. As there is no cap on the variable borrowing rate in this example, the highest level of the 1-year Euribor rate, 5.39%, should be used for the payments taking place from the 7th month because the variable borrowing rate is adjusted every 6 months. From then on, for the variable-rate part the borrowing rate becomes 6.89% (i.e. 5.39% + spread of 1.5%) and the monthly instalment €890.52. The fixed-rate part does not experience changes in the borrowing rate, and then the monthly instalment for this part of the credit remains the same, amounting to €843.86. The total monthly instalment in the scenario of change in the borrowing rate is thus 843.86+817.08=€1660.94 for the first 6 months and 843.86+890.52=€1734.38 afterwards.

The equation becomes:

$$200000 = 4000 + 1660.94 \frac{1}{(1+X)^{1/12}} + \dots + 1660.94 \frac{1}{(1+X)^{6/12}} + \\ + 1734.38 \frac{1}{(1+X)^{7/12}} + \dots + 1734.38 \frac{1}{(1+X)^{180/12}} \\ = 4000 + 1660.94 \frac{1}{(1+X)^{1/12}} + \dots + 1660.94 \frac{1}{(1+X)^{6/12}} + \\ + \frac{1}{(1+X)^{6/12}} \times \left[1734.38 \frac{1}{(1+X)^{1/12}} + \dots + 1734.38 \frac{1}{(1+X)^{174/12}} \right]$$

or:

$$200000 = 4000 + 1660.94 \times \frac{1 - \frac{1}{(1+X)^{6/12}}}{(1+X)^{1/12} - 1} + 1734.38 \times \frac{1}{(1+X)^{6/12}} \times \frac{1 - \frac{1}{(1+X)^{174/12}}}{(1+X)^{1/12} - 1}$$

giving X=6.925014%, i.e. an illustrative APR of 6.9%.

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or:

Mortgage credit agreement is for a total amount of credit not specified repayable in 240 equal monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 6%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

In this example the amount of the credit is not specified, and hence assumption (f) should be applied to determine it. Between the two amounts appearing in the assumption, the amount of €170000 is chosen because the agreement is for a mortgage credit, which according to our definitions is the typical loan used to purchase a property.

The monthly instalment which provides full repayment of the credit of €170000 is €1217.93.

The equation becomes:

$$170000 = 3400 + 1217.93 \frac{1}{(1+X)^{1/12}} + 1217.93 \frac{1}{(1+X)^{2/12}} + \ldots + 1217.93 \frac{1}{(1+X)^{240/12}}$$

or:

$$170000 = 3400 + 1217.93 \frac{1 - \frac{1}{(1 + X)^{20}}}{(1 + X)^{1/12} - 1}$$

giving X= 6.434402%, i.e. an APR of 6.4%.

EXAMPLE 28

Foreign currency mortgage credit is for a total amount of credit of \$200000 repayable in 240 equal monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 5%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. Payments are withdrawn from the consumer's domestic currency account using the exchange rate prevailing at the beginning of each month and applying an exchange rate conversion fee of 0.2% of the amount converted. The exchange rate applied at the conclusion of the agreement is $1.25 \notin/\$$.

The costs associated with currency conversion must be included in the total cost of the credit if the use of the consumer's domestic currency account is compulsory in order to obtain the credit or to obtain it on the terms and conditions marketed. It is assumed this is the case.

The monthly instalment which provides full repayment of the credit is \$1319.91, and the monthly payment including the currency conversion fee for this amount becomes:

 $A = 1319.91 \times (1 + 0.002) = 1322.55

The equation becomes:

$$200000 = 4000 \times (1 + 0.002) + 1322.55 \frac{1}{(1 + X)^{1/12}} + 1322.55 \frac{1}{(1 + X)^{2/12}} + \ldots + 1322.55 \frac{1}{(1 + X)^{240/12}}$$

or:

$$200000 = 4008 + 1322.55 \frac{1 - \frac{1}{(1+X)^{20}}}{(1+X)^{1/12} - 1}$$

giving X= 5.396096%, i.e. an APR of 5.4%.

For foreign currency loans as defined in Article 4(28), the Directive requires showing how changes to the relevant exchange rate may affect the amount of payments to be made by the consumer and the amount of capital denominated in the consumer's currency. The scenario of change in the exchange rate consists of a 20 % reduction in the value of the consumer's currency, unless there is a cap which limits that reduction to less than 20%, in which case this lower reduction should be used. As there is no cap in this example, the highest depreciation rate of 20% should be used, affecting the capital owed and the payments taking place from the 2^{nd} month because the level of the exchange rate applied to the credit can change every month. Specifically, the balance outstanding at the beginning of the 2nd month of \$199513.42, which corresponds to an amount of \$199513.42/1.25=€159610.74 at the initial level of the exchange rate, would increase in €159610.74x0.2=€31922.15, meaning that the total payments of capital over the duration of the credit would increase from \$200000/1.25=€160000 to €160000+€31922.15=€191922.15. As regard the monthly payments, the payments of the single-sum cost and its currency conversion cost in period 0 and the payments of capital and interest and their currency conversion costs in period 1 remain the same, amounting to \$4008/1.25=€3206.4 and \$1322.55/1.25=€1058.04, respectively. However, from period 2 the payments increase in 20% up to €1058.04x(1+0.2)=€1269.65. As a result, the total payments to be made by the consumer would increase from \$321420/1.25=€257136 to €307710.31.

EXAMPLE 29

Foreign currency mortgage credit is for a total amount of credit of \$200000 repayable in 240 equal monthly instalments (20 years). The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The borrowing rate (nominal rate) is 5%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. Payments are withdrawn from the consumer's domestic currency account using the exchange rate prevailing at the beginning of each month and applying a currency conversion fee of 0.2% of the amount

converted. The exchange rate applied at the conclusion of the agreement is 1.25€/\$. There is a cap that limits the variation of the exchange rate to 10% and has an annual cost of \$360 spread over the monthly payments.

This example differs from example 28 as there is a cap that limits exchange rate risk.

The costs associated with currency conversion must be included in the total cost of the credit if the use of the consumer's domestic currency account is compulsory in order to obtain the credit or to obtain it on the terms and conditions marketed. It is assumed this is the case.

The monthly instalment which provides full repayment of the credit is \$1319.91, and the monthly payment including the cost of the cap and the related currency conversion fees becomes:

$$A = \left(1319.91 + \frac{360}{12}\right) \times (1 + 0.002) = \$1352.61$$

The equation becomes:

$$200000 = 4000 \times (1 + 0.002) + 1352.61 \frac{1}{(1 + X)^{1/12}} + 1352.61 \frac{1}{(1 + X)^{2/12}} + \ldots + 1352.61 \frac{1}{(1 + X)^{240/12}}$$

or:

$$200000 = 4008 + 1352.61 \frac{1 - \frac{1}{(1 + X)^{20}}}{(1 + X)^{1/12} - 1}$$

giving X=5.682613%, i.e. an APR of 5.7%.

For foreign currency loans as defined in Article 4(28), the Directive requires showing how changes to the relevant exchange rate may affect the amount of payments to be made by the consumer and the amount of capital denominated in the consumer's currency. The scenario of change in the exchange rate consists on a 20% reduction in the value of the consumer's currency, unless there is a cap which limits that reduction to less than 20%, in which case this lower reduction should be used. Such a cap exists in this example and limits the depreciation of the exchange rate to 10%. Such depreciation affects the capital owed and the payments taking place from the 2nd month because the level of the exchange rate applied to the credit can change every month. Specifically, the balance outstanding at the beginning of the 2nd month of \$199513.42, which corresponds to an amount of \$199513.42/1.25=€159610.74 at the initial level of the exchange rate, would increase in €159610.74x0.1=€15961.07 (a half of the amount obtained in example 28), meaning that the total payments of capital over the duration of the would increase from \$200000/1.25=€160000 credit to €160000+€15961.07=€175961.07. As regard the monthly payments, the payments of the single-sum cost and its currency conversion cost in period 0 and the payments of capital, interest and cost of the cap and their currency conversion costs in period 1 remain the same, amounting to \$4008/1.25=€3206.4 and \$1352.61/1.25=€1082.09, respectively. However, from

period 2 the payments increase in 10% up to $\leq 1082.09x(1+0.1) = \leq 1190.30$. As a result, the total payments to be made by the consumer would increase from $\leq 328634.40/1.25 = \leq 262907.52$ to ≤ 288769.42 .

Compared to example 28, the cap on the exchange rate increases the APR of the credit but limits the amount of payments to be made by the consumer in case of high depreciation of the exchange rate.

EXAMPLE 30

Credit agreement for a secured line of credit is for a maximum amount of €30000 for a period of 15 years. The credit agreement provides freedom of drawdown within the first 5 years and after that no further drawdowns are allowed and also after that period the credit is repaid in equal monthly repayments of capital. Interest charges are paid every month. The borrowing rate (effective rate) is adjusted twice a year according to the 1-year Euribor rate plus a spread of 3%. The 1-year Euribor rate is 4% at the time of calculating the APR. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. For the scenario of change in the borrowing rate, the highest level of 1-year Euribor rate is 5.39%.

The credit agreement gives freedom of drawdown but with a limitation with regard the period of time, and hence assumption (c) should be applied to determine the date of drawdown. According to this assumption, the amount of credit will be assumed to be drawn down on the earliest date (or dates) provided for in the agreement and in accordance to these limits. This implies that in this example the total amount of credit is assumed to be drawdown at the conclusion of the agreement.

As regards the borrowing rate, Article 17(4) should be applied on the basis that this rate cannot be quantified at the time of calculating the APR. Accordingly, the APR will be calculated on the assumption that the borrowing rate will remain fixed in relation to the level set at the conclusion of the agreement, which is 4+3=7%.

Given that the amount of credit and the borrowing rate remain constant over the first 5 years, interest charges are also a constant amount. The monthly payment of interest charges during this period is:

$$A = 30000 \times \left[\left(1 + 0.07 \right)^{1/12} - 1 \right] = €169.62$$

During the next 10 years the credit is repaid in equal repayments of capital of 30000/120=€250, and interest charges vary over time according to the outstanding balance of the credit.

$$30000 = 600 + 169.62 \frac{1}{(1+X)^{1/12}} + 169.62 \frac{1}{(1+X)^{2/12}} + \dots + 169.62 \frac{1}{(1+X)^{60/12}} + \\ + 419.62 \frac{1}{(1+X)^{61/12}} + 418.21 \frac{1}{(1+X)^{62/12}} + \dots + 251.41 \frac{1}{(1+X)^{180/12}}$$

or:

$$30000 = 600 + 169.62 \frac{1 - \frac{1}{(1+X)^5}}{(1+X)^{1/12} - 1} + \\ + 419.62 \frac{1}{(1+X)^{61/12}} + 418.21 \frac{1}{(1+X)^{62/12}} + \dots + 251.41 \frac{1}{(1+X)^{180/12}}$$

giving X= 7.302956%, i.e. an APR of 7.3%.

The credit agreement allows for variations in the borrowing rate, and hence Article 17(6) should be applied. As a result, an additional illustrative APR should be provided. According to the instructions to complete the ESIS, this additional APR will be calculated on the basis that the borrowing rate rises at the earliest possible opportunity to the highest level foreseen in the credit agreement. This is determined by the highest value of the reference rate, the 1-year Euribor, in at least the last 20 years, or for the longest period of less than 20 years for which data is available, unless the borrowing rate is capped at a lower level, in which case this lower level should be used. As there is no cap on the borrowing rate in this example, the highest level of the 1-year Euribor rate, 5.39%, should be used for the payments taking place from the 7th month because the borrowing rate is adjusted every 6 months. From then until the end of the 5th year, the monthly payment of interest charges is:

$$A = 30000 \times \left[\left(1 + 0.0839 \right)^{1/12} - 1 \right] = \text{€202.09}$$

$$30000 = 600 + 169.62 \frac{1}{(1+X)^{1/12}} + \dots + 169.62 \frac{1}{(1+X)^{6/12}} + \\ + 202.09 \frac{1}{(1+X)^{7/12}} + \dots + 202.09 \frac{1}{(1+X)^{60/12}} + \\ + 452.09 \frac{1}{(1+X)^{61/12}} + 450.41 \frac{1}{(1+X)^{62/12}} + \dots + 251.68 \frac{1}{(1+X)^{180/12}} \\ = 600 + 169.62 \frac{1}{(1+X)^{1/12}} + \dots + 169.62 \frac{1}{(1+X)^{6/12}} + \\ + 202.09 \frac{1}{(1+X)^{6/12}} \left[\frac{1}{(1+X)^{1/12}} + \dots + \frac{1}{(1+X)^{54/12}} \right] + \\ + 452.09 \frac{1}{(1+X)^{61/12}} + 450.41 \frac{1}{(1+X)^{62/12}} + \dots + 251.68 \frac{1}{(1+X)^{180/12}}$$

$$30000 = 600 + 169.62 \frac{1 - \frac{1}{(1+X)^{6/12}}}{(1+X)^{1/12} - 1} + 202.09 \times \frac{1}{(1+X)^{6/12}} \times \frac{1 - \frac{1}{(1+X)^{54/12}}}{(1+X)^{1/12} - 1} + 452.09 \frac{1}{(1+X)^{61/12}} + 450.41 \frac{1}{(1+X)^{62/12}} + \dots + 251.68 \frac{1}{(1+X)^{180/12}}$$

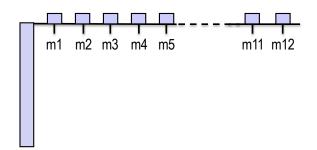
giving X= 8.61132%, i.e. an illustrative APR of 8.6%.

EXAMPLE 31

Credit agreement for an open-ended secured line of credit is for a maximum amount of \notin 30000. The agreement gives freedom of drawdown and the credit may be used repeatedly as the borrower repays the sum used. The credit agreement provides for a minimum monthly payment of 2% of the outstanding balance of capital and interest with a minimum of \notin 300. The borrowing rate (effective rate) is adjusted twice a year according to the 1-year Euribor rate plus a spread of 3%. The 1-year Euribor rate is 4% at the time of calculating the APR. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. For the scenario of change in the borrowing rate, the highest level of 1-year Euribor rate is 5.39%.

This example is of open-ended credit. That is, it does not have a fixed duration. This is due to two reasons: the revolving features of the credit and the scheme of repayments. Assumptions (a) and (k) are relevant in this type of credits. Assumption (a) determines that if the agreement gives the consumer freedom of drawdown, the total amount of credit shall be deemed to be drawn down immediately and in full. Also, as clarified in the Guidelines on the application of Directive 2008/48/EC in relation to the same assumption, the concept of additional drawdowns on the basis of the amount of the credit repaid is not a factor in the calculation of the APR unless it applies by virtue of assumption (k). Assumption (k) determines the duration and scheme of repayments of the credit to be assumed. Specifically, point (i) establishes an assumed duration of 1 or 20 years depending on the purpose of the credit and the drawdown mechanism and point (ii) determines the scheme of repayment, which in general (being the case of this example) consists of equal monthly repayments of capital.

According to our definitions of secured credit and mortgage credit, the purpose of a secured credit is not to acquire or retain rights in immovable property, and hence the duration of 1 year is assumed in this example, and the equal monthly repayments of capital occur within the 1-year period. The combination of the two assumptions is illustrated in the figure below. The downward bar represents the immediate drawdown of the credit limit, \leq 30000 in this example, and the upward bars for months 1 to 12 represent the equal repayments of 1/12 of such amount, i.e. 30000/12 = \leq 2500.



As regards interest and other charges point (ii) establishes that they shall be applied in accordance with these drawdowns and repayments of capital and as provided for in the credit agreement. Therefore, the single sum cost of 2% of the total amount of credit is paid on the date the agreement is concluded and interest charges are paid at a monthly frequency.

For the determination of the borrowing rate, Article 17(4) should be applied on the basis that this rate cannot be quantified at the time of the calculation of the APR. Accordingly, the APR will be calculated on the assumption that the borrowing rate will remain fixed in relation to the level set at the conclusion of the agreement, which is 4+3=7%.

The 12 monthly payments, comprised of a constant quota of capital of \notin 2500 and the interest charges generated each month, can be obtained from the amortisation table, being A1 = 2669.62, A2 = 2655.49, A3 = 2641.35, A4 = 2627.22, A5 = 2613.08, A6 = 2598.95, A7 = 2584.81, A8 = 2570.68, A9 = 2556.54, A10 = 2542.41, A11 = 2528.27, A12 = 2514.14.

The equation becomes:

$$30000 = 600 + 2669.62 \frac{1}{(1+X)^{1/12}} + 2655.49 \frac{1}{(1+X)^{2/12}} + \ldots + 2514.14 \frac{1}{(1+X)^{12/12}}$$

giving X= 11.164789%, i.e. an APR of 11.2%.

The credit agreement allows for variations in the borrowing rate, and hence Article 17(6) should be applied. As a result, an additional illustrative APR should be provided. According to the instructions to complete the ESIS, this additional APR will be calculated on the basis that the borrowing rate rises at the earliest possible opportunity to the highest level foreseen in the credit agreement. This is determined by the highest value of the reference rate, the 1-year Euribor, in at least the last 20 years, or for the longest period of less than 20 years for which data is available, unless the borrowing rate is capped at a lower level, in which case this lower level should be used. As there is no cap on the borrowing rate in this example, the highest level of the 1-year Euribor rate, 5.39%, should be used for the payments taking place from the 7th month because the borrowing rate is adjusted every 6 months.

The equation becomes:

$$30000 = 600 + 2669.62 \frac{1}{(1+X)^{1/12}} + 2655.49 \frac{1}{(1+X)^{2/12}} + \ldots + 2516.84 \frac{1}{(1+X)^{12/12}}$$

giving X= 11.542158%, i.e. an illustrative APR of 11.5%.

Credit agreement for an open-ended secured line of credit is for a maximum amount of €30000. The agreement gives freedom of drawdown but with the limit that no more than a 25% of the amount of credit can be drawdown each of the first two quarters of the first year; from the third quarter no limitation exists. The credit may be used repeatedly as the borrower repays the sum used within the previous limits. The credit agreement provides for a minimum monthly payment of 2% of the outstanding balance of capital and interest with a minimum of €300. The borrowing rate (effective rate) is adjusted twice a year according to the 1-year Euribor rate plus a spread of 3%. The 1-year Euribor rate is 4% at the time of calculating the APR. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. For the scenario of change in the borrowing rate, the highest level of 1-year Euribor rate is 5.39%.

This example differs from example 31 in the existence of drawdown limits with regard to the amounts of drawdown and periods of time. Assumption (c) should be applied in this case, instead of assumption (a). According to assumption (c), the amount of credit will be assumed to be drawn down on the earliest date (or dates) provided for in the agreement and in accordance to these limits. As regards duration and repayments, assumption (k) is still of application, implying that the credit, whose purpose is not to acquire or retain rights in immovable property, is provided for a period of 1 year starting from the date of the initial drawdown and that capital is repaid in equal monthly repayments within this 1-year period and commencing 1 month after the date of the initial drawdown.

The combination of both assumptions implies the following plan of drawdowns and repayments of capital:

- a first drawdown after the conclusion of the agreement (this date is the earliest date of drawdown provided for in the agreement) of 25% of the amount of the credit (i.e. €7500), whose repayment starts at the end of the first month in monthly amounts of 7500/12=€625,
- a second drawdown of 25% after the end of the 3rd month, which increases the monthly repayments of capital from the 4th month in 7500/9=€833.33 up to €1458.33, and
- a final drawdown after the end of the 6th month of the remaining 50% of the credit, which increases the monthly repayments of capital from the 7th month in 15000/6=€2500 up to €3985.33.

The monthly payments to be made by the consumer are comprised of these repayments of capital plus interest charges. For the determination of the borrowing rate, Article 17(4) should be applied on the basis that this rate cannot be quantified at the time of the calculation of the APR. Accordingly, the APR will be calculated on the assumption that the borrowing rate will remain fixed in relation to the level set at the conclusion of the agreement, which is 4+3=7%.

The 12 monthly payments can be obtained from the amortisation table, being A1 = 667.41, A2 = 663.87, A3 = 660.34, A4 = 1532.54, A5 = 1524.3, A6 = 1516.05, A7 = 4092.62, A8 = 4070.24, A9 = 4047.86, A10 = 4025.48, A11 = 4003.1, A12 = 3980.71.

The equation becomes:

$$7500 + 7500 \frac{1}{(1+X)^{3/12}} + 15000 \frac{1}{(1+X)^{6/12}} = 600 + 667.41 \frac{1}{(1+X)^{1/12}} + \ldots + 3980.71 \frac{1}{(1+X)^{12/12}}$$

giving X= 13.063818%, i.e. an APR of 13.1%.

The credit agreement allows for variations in the borrowing rate, and hence Article 17(6) should be applied. As a result, an additional illustrative APR should be provided. According to the instructions to complete the ESIS, this additional APR will be calculated on the basis that the borrowing rate rises at the earliest possible opportunity to the highest level foreseen in the credit agreement. This is determined by the highest value of the reference rate, the 1-year Euribor, in at least the last 20 years, or for the longest period of less than 20 years for which data is available, unless the borrowing rate is capped at a lower level, in which case this lower level should be used. As there is no cap on the borrowing rate in this example, the highest level of the 1-year Euribor rate, 5.39%, should be used for the payments taking place from the 7th month because the borrowing rate is adjusted every 6 months.

The equation becomes:

$$7500 + 7500 \frac{1}{(1+X)^{3/12}} + 15000 \frac{1}{(1+X)^{6/12}} = 600 + 667.41 \frac{1}{(1+X)^{1/12}} + \ldots + 3985 \frac{1}{(1+X)^{12/12}}$$

giving X= 13.945824%, i.e. an illustrative APR of 13.9%.

EXAMPLE 33

Credit agreement for an open-ended secured line of credit is for a maximum amount of \notin 30000. The agreement gives freedom of drawdown and the credit may be used repeatedly as the borrower repays the sum used. The credit agreement provides for a minimum monthly payment of 2% of the outstanding balance of capital and interest with a minimum of \notin 300. The borrowing rate (effective rate) is fixed at 5% for 9 months and after that it is adjusted twice a year according to the 1-year Euribor rate plus a spread of 3%. The 1-year Euribor rate is 4% at the time of calculating the APR. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. For the scenario of change in the borrowing rate, the highest level of 1-year Euribor rate is 5.39%.

This example adds to example 31 the existence of a variable borrowing rate after an initial period where the borrowing rate is fixed. As in example 31, assumptions (a) and (k) should be applied and, in respect to the variable borrowing rate, the application of assumptions (e) and (d) should be assessed (as in example 21).

Specifically, for this example assumption (e) should be applied because it is known that the variable borrowing rate period will follow the fixed-rate period (similar to examples 21 and 22 but different to example 23). According to this assumption, for the variable-rate period, the borrowing rate is assumed to be determined by the value of the agreed indicator or internal reference rate at the time of calculating the APR, provided that it is not less than the fixed borrowing rate. Therefore, the borrowing rate of the credit after the first year is assumed to be 7% (i.e. 4% + spread of 3%). Note that this assumption (e) is coherent and more specific for the case than Article 19(4), and then a reference to this article is not needed.

As regards assumption (d), which refers to the case where different borrowing rates and charges are offered for a limited period or amount, this assumption should be also applied in this example (different to example 22) because for the agreement of this example relevant elements of the credit which determine the application and the effect on the APR of different interest rates or charges are unknown. Specifically, the agreement is open-ended and hence it does not have a fixed duration, and the dates and amounts of drawdowns and repayments are not certain. This implies that the borrowing rate is assumed to be the highest rate, i.e. 7%, for the whole duration of the credit agreement. As explained in the Guidelines on the application of Directive 2008/48/EC, this is regardless of whether this highest rate is payable later than the assumed duration of the credit, which is 1 year by virtue of assumption (k) because the purpose of the credit of this example is not to acquire or retain rights in immovable property.

The solution of the example then coincides with example 31 as regards the calculation of the APR. However, the scenario of change in the borrowing rate resulting from application of Article 17(6) differs in the fact that while in example 31 the highest borrowing rate obtained from historical data is applied after the first adjustment of the borrowing rate, i.e. from the 7th month, now it applies for the whole duration of the agreement, leading to a higher illustrative APR.

The equation for the illustrative APR then becomes:

$$30000 = 600 + 2702.09 \frac{1}{(1+X)^{1/12}} + 2685.25 \frac{1}{(1+X)^{2/12}} + \ldots + 2516.84 \frac{1}{(1+X)^{12/12}}$$

giving X= 12.625685%, i.e. an illustrative APR of 12.6%.

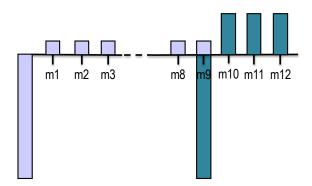
EXAMPLE 34

Credit agreement for an open-ended secured line of credit is for a maximum amount not specified. The agreement gives freedom of drawdown and repayment but requires full repayment of the credit within a period of 9 months before the credit can be draw down again. The borrowing rate (effective rate) is 7.5%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

In this example the amount of the credit is not specified, and hence assumption (f) should be applied to determine it. Between the two amounts appearing in the assumption, the amount of €1500 is chosen because the purpose of the secured credit of this example is not to acquire

or retain rights in immovable property, according to our distinction between mortgage and secured credits.

Similar to example 31, assumptions (a) and (k) should be applied in this example, with the difference that the recurrent periods until full repayment should be respected. Therefore, the assumed duration of 1 year (again because the purpose of the credit is not to acquire or retain rights in immovable property) is split into two periods which start with a drawdown of the total amount of credit followed by monthly and equal repayments of the capital at within each one of these periods, as shown in the figure below. The first period has a length of 9 months and the second period covers the remaining duration of the credit agreement until 1 year, i.e. 3 months. Therefore, the payments of capital are ≤ 166.67 (1500/9) for the first period and ≤ 500 (1500/3) for the second period.



As regards the costs of the credit, the single sum is paid on the date the agreement is concluded, as provided for the agreement, and interest charges should be determined by assumption (h)(i) because the agreement does not stipulates anything about them. Accordingly, interest charges are assumed to be paid together with the repayments of capital and for an amount given as the amount of interest accrued up to the date of each repayment of capital.

The 12 monthly payments can be obtained from the amortisation table, being A1 = 175,73, A2 = 174,73, A3 = 173,72, A4 = 172,71, A5 = 171,7, A6 = 170,7, A7 = 169,69, A8 = 168,68, A9 = 167,67, A10 = 509,07, A11 = 506,04, A12 = 503,02.

The equation becomes:

$$1500 + 1500 \frac{1}{(1+X)^{9/12}} = 30 + 175.73 \frac{1}{(1+X)^{1/12}} + 174.73 \frac{1}{(1+X)^{2/12}} + \ldots + 503.02 \frac{1}{(1+X)^{12/12}}$$

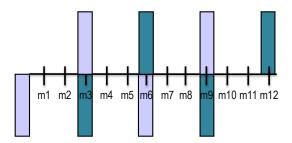
giving X= 11,415822%, i.e. an APR of 11.4%.

EXAMPLE 35

Credit agreement for an open-ended secured credit is for a maximum amount of €3000 involving the use of a deferred debit card for drawdowns. The agreement gives freedom of

drawdown but requires full repayment of the amount of the credit draw down in a single payment each three months (no revolving balance is allowed from one period to another). No interest is charged but an annual fee of €100 is payable at the first quarter of each year. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

As in the previous example, assumptions (a) and (k) should be applied in this case. What is specific of this example is that the scheme of repayments requires the capital to be repaid only in full, in a single payment, within each payment period. As a result, the special scheme of successive drawdowns and repayments established in the second sentence of point (ii) of assumption (k) should be applied. This scheme is illustrated in the figure below. For the payment periods of 3 months considered in this example, successive drawdowns (represented by downward bars) and repayments (upward bars) of the entire capital (i.e. \leq 3000) are assumed to occur each three months over the duration of the credit agreement, which is 1-year according to (k)(i).



Taking into account the absence of interest charges and the only existence of the single-sum cost of 2% of the amount of credit payable at the conclusion of the agreement and the cost of €100 payable at month 3, the equation becomes:

$$3000 + \frac{3000}{(1+X)^{3/12}} + \frac{3000}{(1+X)^{6/12}} + \frac{3000}{(1+X)^{9/12}} = 60 + \frac{100 + 3000}{(1+X)^{3/12}} + \frac{3000}{(1+X)^{6/12}} + \frac{3000}{(1+X)^{9/12}} + \frac{3000}{(1+X)^{9/12}} + \frac{3000}{(1+X)^{12/12}} + \frac{3000}{$$

Note that in the left side of this equation all of the terms except the first one cancel with terms on the right side. Thus, the equation simplifies to:

$$3000 = 60 + 100 \frac{1}{(1+X)^{3/12}} + 3000 \frac{1}{(1+X)^{12/12}}$$

giving X= 5.583621%, i.e. an APR of 5.6%.

EXAMPLE 36

Credit agreement for an open-ended secured credit is for a maximum amount of €3000 involving the use of a credit card for drawdowns. The agreement gives freedom of drawdown and the credit may be used repeatedly as the borrower repays the sum used. The credit

agreement provides for a minimum monthly payment of 20% of the outstanding balance of capital and interest with a minimum of ≤ 20 . Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. The card has an annual cost of ≤ 25 . Other costs are as follows:

Drawdown mechanism	Borrowing rate (effective rate)	Fee payable on the date of drawdown
Cash advances	12%	4% or €4 whichever is greater
Purchases (most common)	9%, with 0% for the first 2 months	None
Balance transfers	9%	3%

Several assumptions are required for this example. Firstly, freedom of drawdown is dealt with assumption (a), whereby the total amount of credit is deemed to be drawn down immediately and in full. Secondly, the open-ended nature of the agreement implies the application of assumption (k), which establishes an assumed duration of 1 year for credit cards and an scheme of repayments consisting of equal monthly repayments of capital within the 1 year period (as first showed in example 31). Thirdly, the agreement is silent about the date of the payment the annual cost of the card, leading to the application of point (iii) of assumption (h), which assumes that non-interest charges expressed as several payments are paid at regular intervals, commencing with the date of the first repayment of capital; therefore, the cost of the card is assumed to be paid the first month of each year coinciding with the first repayment of capital of the year. Fourthly, assumption (b) should be applied to determine the borrowing rate and drawdown fees. This assumption deals with the existence of different forms of drawdown with different charges and/or borrowing rates and implies using the highest charge and borrowing rate applied to the most common drawdown mechanism for the type of credit agreement considered. According to the table, purchases are the most common drawdown mechanism, being the highest charges corresponding to this mechanism a borrowing rate of 9% and no fee charged on drawdowns.

The 12 monthly payments to be made by the consumer are then comprised of a constant quota of capital of 3000/12=€250 and the interest charges generated during the month using a borrowing rate (effective rate) of 9%, to which the annual cost of the card of €25 is added in the first payment. These payments can be obtained from the amortisation table, being A1 = 296.62, A2 = 269.82, A3 = 268.02, A4 = 266.22, A5 = 264.41, A6 = 262.61, A7 = 260.81, A8 = 259.01, A9 = 257.21, A10 = 255.41, A11 = 253.6, A12 = 251.8.

The equation becomes:

$$3000 = 60 + 296.62 \frac{1}{(1+X)^{1/12}} + 269.82 \frac{1}{(1+X)^{2/12}} + \ldots + 251.8 \frac{1}{(1+X)^{12/12}}$$

giving X= 15.10627%, i.e. an APR of 15.1%.

Credit agreement for an open-ended secured credit is for a maximum amount not specified involving the use of a credit card for drawdowns. The agreement gives freedom of drawdown and the credit may be used repeatedly as the borrower repays the sum used. The credit agreement provides for a minimum monthly payment of 20% of the outstanding balance of capital and interest with a minimum of €20. The borrowing rate (effective rate) is 0% for the first two months and 9% afterwards. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. The card has annual costs of €25.

This example requires assumptions (a), (k) and point (iii) of assumption (h) as applied in the previous example. However, assumption (b) is meaningless here, as there are not differences in costs depending on the mechanism of drawdown. In fact, the charges corresponding to purchases in the previous example have been retained here as the only applicable charges. These charges contemplate an introductory rate of 0% for the first two months. While this introductory rate was discarded in the previous example by virtue of assumption (b), in this example this rate should be assessed under assumption (d). This assumption, which refers to the case where different borrowing rates and charges are offered for a limited period or amount, should be applied in this example (as in example 33) because for the agreement of this example relevant elements of the credit which determine the application and the effect on the APR of different interest rates or charges are unknown. Specifically, the agreement is open-ended and hence it does not have a fixed duration, and the dates and amounts of drawdowns and repayments are not certain. This implies that the borrowing rate is assumed to be the highest rate, i.e. 9%, for the whole duration of the credit agreement. Finally, as the maximum amount of the credit is not specified, assumption (f) should be applied and because the credit is for a credit card, a ceiling of €1500 is assumed.

The above implies that the 12 monthly payments to be made by the consumer are comprised of a constant quota of capital of 1500/12 = 125 and the interest charges generated during the month using a borrowing rate (effective rate) of 9%, to which the annual cost of the card of 125 is added in the first payment. These payments can be obtained from the amortisation table, being A1 = 160.81, A2 = 134.91, A3 = 134.01, A4 = 133.11, A5 = 132.21, A6 = 131.31, A7 = 130.41, A8 = 129.5, A9 = 128.6, A10 = 127.7, A11 = 126.8, A12 = 125.9.

The equation becomes:

$$1500 = 30 + 160.81 \frac{1}{(1+X)^{1/12}} + 134.91 \frac{1}{(1+X)^{2/12}} + \ldots + 125.9 \frac{1}{(1+X)^{12/12}}$$

giving X= 16.991403%, i.e. an APR of 17.0%.

The higher APR of this example compared to example 36 (17.0% versus 15.1%) is exclusively due to the lower amount of credit used in this example, which increases the effect on the APR of the annual cost of the card (especially because this cost is independent from the amount of credit). This highlights the relevance of using the same amount of credit in cases where it is not specified, by virtue of assumption (f).

Credit agreement is for a maximum amount of ≤ 3000 in the form of a secured overdraft facility for a period up to 2 years. The credit agreement does not impose any requirements in terms of repayment of capital, but provides for monthly payment of the cost of the credit. The borrowing rate (effective rate) is 9%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement. Administrative charges amount to ≤ 2.5 per month.

The overdraft facility of this example has an unknown duration because there is not a specific date of termination of the credit; its length can either be shortened or lengthened, but is not fixed. In fact, the consumer can terminate the credit whenever and without additional expenses, and not exclusively to the expiration of the maximal length. Also, the date of drawdown and the scheme of repayments are not established. Therefore, assumption (i), which is specific for overdraft facilities, should be used to determine the drawdown and repayment of capital and also the duration of the credit. Accordingly, it is assumed that the duration of the credit is 3 months and the capital is drawdown in full and for the whole duration of the credit, implying that the capital is paid entirely in 3 months.

As the amount owed remains constant at a level of €3000 during the 3 months, the monthly interest charges are also constant, being:

$$3000 \times \left[\left(1 + 0.09 \right)^{1/12} - 1 \right] = \text{€21.62}$$

The monthly payment of interest and charges is then given by:

and the equation becomes:

$$3000 = 60 + 24.12 \frac{1}{(1+X)^{1/12}} + 24.12 \frac{1}{(1+X)^{2/12}} + (24.12 + 3000) \frac{1}{(1+X)^{3/12}}$$

or:

$$3000 = 60 + 24.12 \frac{1 - \frac{1}{(1+X)^{3/12}}}{(1+X)^{1/12} - 1} + 3000 \frac{1}{(1+X)^{3/12}}$$

giving X= 19.429412%, i.e. an APR of 19.4%.

Credit agreement is for a maximum amount of ≤ 3000 in the form of a secured overdraft facility. The credit should be repaid in 6 months. The borrowing rate (effective rate) is 9%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

Unlike example 38, here the duration of the credit is fixed because there is no flexibility in repayment. Therefore, the agreed duration of 6 months is used for the calculation of the APR. Also, the scheme of repayment is coherent with the first sentence of assumption (i), for which reason it is also respected. The agreement, however, does not specify the date of payment of interest charges and hence assumption (h)(i) should be used to determine it as the date at which the capital is repaid.

The interest charges are:

$$3000 \times \left[\left(1 + 0.9 \right)^{6/12} - 1 \right] = €132.09$$

and the equation becomes:

$$3000 = 60 + 3132.09 \frac{1}{(1+X)^{6/12}}$$

giving X= 13.494231%, i.e. an APR of 13.5%.

EXAMPLE 40

Bridging loan¹⁷ is for a total amount of credit of €200000 for a period of 6 months. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. Interest is charged monthly, but the credit agreement provides for payment of the balance outstanding of capital and interest at the end of the agreement. The borrowing rate (nominal rate) is 7.5%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

Assumption (j), which is specific for bridging loans, establishes the scheme of drawdown and repayment of capital, and also the duration of the loan when this duration is unknown. In this example the duration of the loan is known and the scheme of drawdown and repayment is coherent with the assumption.

As interest charges are debited monthly but are not paid, they increase the balance outstanding every month. This balance amounts to:

¹⁷ Directive 2014/17/EU defines bridging loans in Article 4(23).

$$200000 \left(1 + \frac{7.5\%}{12}\right)^6 = \text{€207618.17}$$

at the end of the 6-month period, being the amount to be paid at that time.

The equation becomes:

$$200000 = 4000 + 207618.17 \frac{1}{(1+X)^{6/12}}$$

giving X= 12.206644%, i.e. an APR of 12.2%.

EXAMPLE 41

Bridging loan¹⁸ is for a total amount of credit of ≤ 200000 for a period of 6 months. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The total sum of interest charges obtained applying the borrowing rate at a monthly basis are retained in order to meet the monthly payments of interest; no interest is credited or paid to the borrower on this amount of retained interest. The amount of credit is repaid at the end of the agreement. The borrowing rate (nominal rate) is 7.5%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

Assumption (j), which is specific for bridging loans, establishes the scheme of drawdown and repayment of capital, and also the duration of the loan when this duration is unknown. In this example the duration of the loan is known and the scheme of drawdown and repayment is coherent with the assumption.

The amount retained at the conclusion of the agreement to meet the six payments of interest charges is given as:

$$200000\frac{7.5\%}{12} \times 6 = €7500$$

The equation becomes:

$$200000 = 4000 + 7500 + 200000 \frac{1}{(1+X)^{6/12}}$$

giving X= 12.573788%, i.e. an APR of 12.6%.

¹⁸ Directive 2014/17/EU defines bridging loans in Article 4(23).

Bridging loan is for a total amount of credit of €200000 for a period up to 2 years. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit agreement provides for payment of interest charges every month and repayment of the capital at the end. The borrowing rate (nominal rate) is 7.5%. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

Similar to example 38, the bridging loan in this example has an unknown duration because there is not a specific date of termination of the credit; its length can either be shortened or lengthened, but is not fixed. In fact, the consumer can terminate the credit whenever and without additional expenses, and not exclusively at the expiration of the maximum duration. Therefore, assumption (j) should be used in this case to determine the duration of the loan, which is assumed to be 12 months. As in examples 40 and 41, the scheme of drawdown and repayment agreed is in accordance with the first sentence of assumption (j).

As the amount owed remains constant at a level of ≤ 200000 during the year, the monthly interest charges are also constant, being:

$$200000 \times \frac{7.5\%}{12} = €1250$$

and the equation becomes:

$$200000 = 4000 + 1250 \frac{1}{(1+X)^{1/12}} + 1250 \frac{1}{(1+X)^{2/12}} + \dots + (1250 + 200000) \frac{1}{(1+X)^{12/12}}$$

or:

$$200000 = 4000 + 1250 \frac{1 - \frac{1}{(1+X)}}{(1+X)^{1/12} - 1} + 200000 \frac{1}{(1+X)}$$

giving X=10.039962%, i.e. an APR of 10.0%.

EXAMPLE 43

Contingent liability or guarantee¹⁹ is for a total amount of credit of \notin 30000. The total amount of credit is drawn down in the event of non-payment by the debtor of an ancillary transaction within the duration of the guarantee. The credit should be repaid in 120 equal monthly

¹⁹ Directive 2014/17/EU defines contingent liabilities or guarantees in Article 4(24).

instalments (10 years) after the date of drawdown. The borrowing rate (nominal rate) is 7.5%. Single sum (lump sum) cost of 0.5% of the total amount of credit payable at the conclusion of the agreement and 1.5% at the time of the event of drawdown. The agreement rolls over on a yearly basis provided that no drawdowns are made.

The example corresponds to a contingent liability or guarantee, for which Directive 2014/17/EU provides a specific assumption which regulates the drawdown of the credit. Specifically, assumption (I) establishes that the total amount of credit shall be deemed to be drawn down in full as a single amount at the earlier of two dates: (a) the latest draw down date permitted under the credit agreement being the potential source of the contingent liability or guarantee; or (b) in the case of a rolling credit agreement at the end of the initial period prior to the rollover of the agreement.

The example is of a rolling agreement, and then there are two dates to compare: the 1-year period before the first rollover of the agreement, and the latest draw down date permitted under the credit agreement. In this example, this second date is only limited by the duration of the guarantee and hence, it will not be sooner than the last date of the initial period prior to the rollover of the agreement. Therefore, the drawdown of the total amount of credit and the payment of the cost of 1.5% of such amount will be assumed to be 1 year after undertaking the contingent liability or guarantee and following such drawdown, the repayment of the credit will take place in equal monthly instalments during a period of 10 years. The instalment which provides full repayment of the credit during such period is ξ 356.11. Taking into account the initial cost of 0.5% of the amount of credit, the equation becomes:

$$30000 = 150(1+X)^{12/12} + 450 + 356.11\frac{1}{(1+X)^{1/12}} + 356.11\frac{1}{(1+X)^{2/12}} + \ldots + 356.11\frac{1}{(1+X)^{120/12}}$$

or:

$$30000 = 150(1+X) + 450 + 356.11 \frac{1 - \frac{1}{(1+X)^{10}}}{(1+X)^{1/12} - 1}$$

giving X= 8.269278%, i.e. an APR of 8.3%.

Note that the equation uses intervals of time calculated from the date of the first drawdown, as indicated in remark (b) of Annex I of Directive 2014/17/EU.

EXAMPLE 44

Shared equity credit agreement²⁰ is for a total amount of credit of €200000 repayable in 180 equal monthly instalments (15 years). The total amount of the credit is drawn down

²⁰ Directive 2014/17/EU defines shared equity credit agreements in Article 4(25).

immediately and in full at the conclusion of the agreement; further drawdowns are not allowed. The credit is interest-free for the five first years and after that period a reduced borrowing rate (nominal rate) of 4% is agreed, in exchange for the payment of a share of 25% in the increase in value of the property when the credit is fully repaid. The property has a purchase price of €250000 (the loan-to-value, LTV, of the credit is 80%) and is located in a country where the level of inflation is 2.8% and the central bank target inflation rate is 2% at the time the agreement is concluded. Single sum (lump sum) cost of 2% of the total amount of credit payable at the conclusion of the agreement.

Assumption (m) applies specifically to this type of agreements. The assumption establishes that the payments made by the consumer should be deemed to occur at the latest date/s permitted under the credit agreement and equates the increases in value of the property and the rate of any inflation index referred to in the agreement to the higher of the current central bank target inflation rate or the level of inflation in the Member State where the property is located at the time of conclusion of the credit agreement, with a minimum of 0%.

For the credit in this example, there is no flexibility in the dates of payment, and hence the first part of the assumption is not necessary, but the second part. According to it, the percentage of increase in value of the property is assumed to be 2.8% annual. This implies that the assumed increase in value of the property after 15 years is:

$$250000 \times \left[(1 + 0.028)^{15} - 1 \right] = \text{€}128300.34$$

and the additional payment to be made by the consumer at the end of that period is:

$$128300.34 \times 25\% = {\small {\textcircled{}}}{32075.08}$$

The monthly instalments which provides full repayment of the credit of ≤ 200000 are ≤ 1111.11 for the initial interest-free period of 5 years and ≤ 1349.94 for the rest of the agreement, when the reduced borrowing rate of 4% applies.

Then, the equation becomes:

$$200000 = 4000 + 1111.11 \frac{1}{(1+X)^{1/12}} + \dots + 1111.11 \frac{1}{(1+X)^{60/12}} + \\ + 1349.94 \frac{1}{(1+X)^{61/12}} + \dots + 1349.94 \frac{1}{(1+X)^{179/12}} + \\ + (1349.94 + 32075.08) \frac{1}{(1+X)^{180/12}} \\ = 4000 + 1111.11 \frac{1}{(1+X)^{1/12}} + \dots + 1111.11 \frac{1}{(1+X)^{60/12}} + \\ + \frac{1}{(1+X)^{60/12}} \left[1349.94 \frac{1}{(1+X)^{1/12}} + \dots + 1349.94 \frac{1}{(1+X)^{120/12}} \right] + \\ + 32075.08 \frac{1}{(1+X)^{180/12}}$$

or:

$$200000 = 4000 + 1111.11 \times \frac{1 - \frac{1}{(1+X)^5}}{(1+X)^{1/12} - 1} + 1349.94 \times \frac{1}{(1+X)^5} \times \frac{1 - \frac{1}{(1+X)^{10}}}{(1+X)^{1/12} - 1} + 32075.08 \frac{1}{(1+X)^{15}}$$

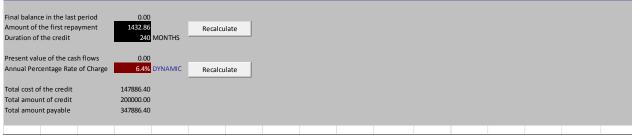
giving X= 3.470057%, i.e. an APR of 3.5%.

2.2. CREDIT INFORMATION AND AMORTISATION TABLES

As this is the default example, just click on the button *Reset* to automatically specify the data and obtain the main results and the amortisation table.

Description of the credit product	
MAIN FEATURES OF THE CREDIT PRODUCT	
A) To tal amount of the credit	
Tick the box for an illust	ustrative scenario if the credit is in a foreign currency
B) Con ditions governing drawdowns	
Soloci Immediately and Inful	
C) Conditions governing repayments (D YN AM IC)	
Frequency of repayments menthy 🖉 NOTE: This will determ	mine the length of regular periods shown in the table as: <u>NONTHS</u>
Amount Equal Intellects (to be calculated)	
Special Payments (*) Advance payment* Nof the crudt link	
Advance payment" Nof the crede linit 💌	
Ennal vayment: Rate and re	
The long to at the held period of repayment is different	
D) Duration of the credit agreement	
Duration Fixed 💌 of 🍽 🗰 periods	
COSTS OF THE CREDIT	
A) Borrowing rate	
Lovel Same level for the entire credit term 💌 Defined as Homital (annual)	OWNAMIC Tick the bex for an illustrative scenario if the credit allows variations in the borrowing rate
Percentage and	
B) Other cost included in the Total Cost of the Credit	
	% Financed Date of charge
Cost2 % of the credit init	Z No ⁴ V At conclusion V No ⁴ V At conclusion V
Cost1 % of the creat limb Cost2 % of the creat limb Cost2 % of the creat limb Cost3 % of the dward in each parted	No* •
Cost4 % of the balance outstanding (soptal + interact) in each pariod 💌	16* x
CostS % of the balance outstanding (only capital) in each period 💌	16* x
Cost6 % of the credit not used at the beginning of each period .	le* 📼
Cost7 % of the final balance in each pariod 💌	
Examples	Obs (*) Obs (*)
Shared equity credit	

Main results



			Bala	0.00		Interest o	n canital	Other	costs			Payments			Cach	flows	Illustrative	scenarios
			Date			interest o	ii capitai	other	0313	Penav	ment of the cre	· · ·			Cash	nows	Payments if	Payments if
Period	Dra wdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1		200000.00	200000.00	201000.00	199567.14	6.00%	1000.00			432.86	1000.00	1432.86	0.00	1432.86	-1432.86	-1425.43		
2		199567.14	199567.14	200564.97	199132.11	6.00%	997.84			435.03	997.84	1432.86	0.00	1432.86	-1432.86	-1418.05		
3		199132.11	199132.11	200127.77	198694.91	6.00%	995.66			437.20	995.66	1432.86	0.00	1432.86	-1432.86	-1410.70		
4		198694.91	198694.91	199688.38	198255.52	6.00%	993.47			439.39	993.47	1432.86	0.00	1432.86	-1432.86	-1403.38		
5		198255.52	198255.52	199246.80	197813.94	6.00%	991.28			441.58	991.28	1432.86	0.00	1432.86	-1432.86	-1396.11		
6		197813.94	197813.94	198803.01	197370.15	6.00%	989.07			443.79	989.07	1432.86	0.00	1432.86	-1432.86	-1388.87		
7		197370.15	197370.15	198357.00	196924.13	6.00%	986.85			446.01	986.85	1432.86	0.00	1432.86	-1432.86	-1381.67		
8		196924.13	196924.13	197908.75	196475.89	6.00%	984.62			448.24	984.62	1432.86	0.00	1432.86	-1432.86	-1374.51		
9		196475.89	196475.89	197458.27	196025.41	6.00%	982.38			450.48	982.38	1432.86	0.00	1432.86	-1432.86	-1367.39		
10		196025.41	196025.41	197005.54	195572.67	6.00%	980.13			452.74	980.13	1432.86	0.00	1432.86	-1432.86	-1360.30		
11		195572.67	195572.67	196550.54	195117.68	6.00%	977.86			455.00	977.86	1432.86	0.00	1432.86	-1432.86	-1353.25		
12		195117.68	195117.68	196093.26	194660.40	6.00%	975.59			457.27	975.59	1432.86	0.00	1432.86	-1432.86	-1346.24		
Sums																		
Year 1	200000.00						11854.75	4000.00	0.00	5339.60	11854.75	17194.35	4000.00	21194.32	178805.68	179374.09		
Year 2	0.00						11525.41	0.00	0.00	5668.93	11525.41	17194.35	0.00	17194.32	-17194.32	-15620.80		
Year 3	0.00						11175.77	0.00	0.00	6018.58	11175.77	17194.35	0.00	17194.32	-17194.32	-14676.46		
Year 4	0.00						10804.55	0.00	0.00	6389.79	10804.55	17194.35	0.00	17194.32	-17194.32	-13789.20		
Year 5	0.00						10410.44	0.00	0.00	6783.90	10410.44	17194.35	0.00	17194.32	-17194.32	-12955.59		
Year 6	0.00						9992.03	0.00	0.00	7202.32	9992.03	17194.35	0.00	17194.32	-17194.32			
Year 7	0.00						9547.81	0.00	0.00	7646.54	9547.81	17194.35	0.00	17194.32	-17194.32	-11436.50		
Year 8	0.00						9076.18	0.00	0.00	8118.16	9076.18	17194.35	0.00	17194.32	-17194.32	-10745.11		
Year 9	0.00						8575.47	0.00	0.00	8618.87	8575.47	17194.35	0.00	17194.32	-17194.32	-10095.52		
Year 10	0.00						8043.88	0.00	0.00	9150.47	8043.88	17194.35	0.00	17194.32	-17194.32	-9485.21		
Year 11	0.00						7479.50	0.00	0.00	9714.85	7479.50	17194.35	0.00	17194.32	-17194.32	-8911.79		
Year 12	0.00						6880.31	0.00	0.00	10314.04	6880.31	17194.35	0.00	17194.32	-17194.32	-8373.03		
Year 13	0.00						6244.16	0.00	0.00	10950.18	6244.16	17194.35	0.00	17194.32	-17194.32	-7866.85		
Year 14	0.00						5568.78	0.00	0.00	11625.57	5568.78	17194.35	0.00	17194.32	-17194.32	-7391.26		
Year 15	0.00						4851.74	0.00	0.00	12342.61	4851.74	17194.35	0.00	17194.32	-17194.32	-6944.43		
Year 16	0.00						4090.47	0.00	0.00	13103.87	4090.47	17194.35	0.00	17194.32	-17194.32	-6524.61		
Year 17	0.00						3282.26	0.00	0.00	13912.09	3282.26	17194.35	0.00	17194.32	-17194.32	-6130.17		
Year 18	0.00						2424.19	0.00	0.00	14770.16	2424.19	17194.35	0.00	17194.32	-17194.32	-5759.57		
Year 19	0.00						1513.20	0.00	0.00	15681.15	1513.20	17194.35	0.00	17194.32	-17194.32	-5411.38		
Year 20	0.00						546.02	0.00	0.00	16648.33	546.02	17194.35	0.00	17194.32	-17194.32	-5084.24		
Total	200000.00						143886.91	4000.00	0.00	200000.00	143886.91	343886.91	4000.00	347886.40	-147886.40	0.00		

Case 1

Click on the button *Reset* and then enter the information highlighted in red.

Note that after ticking the box *The length of the first period of repayment is different,* an auxiliary period calculator appears.

Description of the credit product	
MAIN FEATURES OF THE CREDIT PRODUCT	
A) Total amount of the credit	
Amount	Tick the box for an illustrative scenario if the credit is in a foreign currency
B) Conditions governing drawdowns	
Select Immediately and in full	
() Conditions governing repayments (DYNAMIC)	
Produces of repayments monthly	NOT 5: This will determine the long th of regular periods shown in the table as: MONTHS
Amount Equal Instalments (to be calculated)	
Special Payments (*)	
Advance payment? Nof the credit linit	
Final Paymont" Not the credt int	
The long that the trut period of represent to 0 frame!	It is given as complete periods and days (naysar with 265 days), m Brors Integer positive numbers are required
Auxilia rypendid calculator:	at From to Calculate - complete periods and days in a year with days

In the auxiliary calculator enter the initial and final dates of the first period of repayment and click on the button *Calculate* to obtain the number of regular periods and days corresponding to this period and the number of days of the year.

The length of the first period of repays	nentis diferent		a (mayeer with 555 days))▼ <mark>Error: Int</mark> complete periods and 3 days in	ager positive numbers are required a year with 365 days

Then enter the information obtained in the previous row.

The length of the first period of repayment is different	It is given a	1	omplete periods and		🗧 daya (in a year with 385 daya) 🔳		
Auxiliary periodical out a ter: Pror	13/10/2003	10 I	Calcula	te =	1 complete periods and 3	days in a year with	365 days

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Main results

wanne	suits																	
Final baland Amount of Duration of	the first repa		0.00 1433.57 240		Recalcu	late												
	ue of the cas centage Rate		0.00 6.4%	DYNAMIC	Recalcu	llate												
Total cost o Total amou Total amou	nt of credit		148056.80 200000.00 348056.80)														
			Bala	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	e scenarios
			Outstanding	Outstanding						Repay	ment of the c	edit					Payments if highest	Payments if highest
Period	Drawdowns	Initial		(capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value		exchange rate (domestic

											ment of the ch						i a jinenes n	i u jine neo n
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
	0 200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
	1	200000.00	200000.00	201098.63	199665.06	6.00%	1098.63			334.94	1098.63	1433.57	0.00	1433.57	-1433.57	-1425.41		
	2	199665.06	199665.06	200663.39	199229.83	6.00%	998.33			435.24	998.33	1433.57	0.00	1433.57	-1433.57	-1418.02		
	3	199229.83	199229.83	200225.97	198792.41	6.00%	996.15			437.42	996.15	1433.57	0.00	1433.57	-1433.57	-1410.67		
	4	198792.41	198792.41	199786.37	198352.81	6.00%	993.96			439.60	993.96	1433.57	0.00	1433.57	-1433.57	-1403.36		
	5	198352.81	198352.81	199344.57	197911.00	6.00%	991.76			441.80	991.76	1433.57	0.00	1433.57	-1433.57	-1396.09		
	6	197911.00	197911.00	198900.56	197466.99	6.00%	989.56			444.01	989.56	1433.57	0.00	1433.57	-1433.57	-1388.85		
	7	197466.99	197466.99	198454.33	197020.76	6.00%	987.33			446.23	987.33	1433.57	0.00	1433.57	-1433.57	-1381.65		
	8	197020.76	197020.76	198005.87	196572.30	6.00%	985.10			448.46	985.10	1433.57	0.00	1433.57	-1433.57	-1374.49		
	9	196572.30	196572.30	197555.16	196121.60	6.00%	982.86			450.70	982.86	1433.57	0.00	1433.57	-1433.57	-1367.37		
1	.0	196121.60	196121.60	197102.21	195668.64	6.00%	980.61			452.96	980.61	1433.57	0.00	1433.57	-1433.57	-1360.28		
1	.1	195668.64	195668.64	196646.99	195213.42	6.00%	978.34			455.22	978.34	1433.57	0.00	1433.57	-1433.57	-1353.23		
1	2	195213.42	195213.42	196189.49	194755.92	6.00%	976.07			457.50	976.07	1433.57	0.00	1433.57	-1433.57	-1346.22		
Sums																		
Year 1	200000.00						11958.70	4000.00	0.00	5244.08	11958.70	17202.78	4000.00	21202.84	178797.16	179374.36		
Year 2	0.00						11531.07	0.00	0.00	5671.71	11531.07	17202.78	0.00	17202.84	-17202.84	-15620.59		
Year 3	0.00						11181.25	0.00	0.00	6021.53	11181.25	17202.78	0.00	17202.84	-17202.84	-14676.29		
Year 4	0.00						10809.85	0.00	0.00	6392.93	10809.85	17202.78	0.00	17202.84	-17202.84	-13789.07		
Year 5	0.00						10415.55	0.00	0.00	6787.23	10415.55	17202.78	0.00	17202.84	-17202.84	-12955.49		
Year 6	0.00						9996.93	0.00	0.00	7205.85	9996.93	17202.78	0.00	17202.84	-17202.84	-12172.30		
Year 7	0.00						9552.49	0.00	0.00	7650.29	9552.49	17202.78	0.00	17202.84	-17202.84	-11436.46		
Year 8	0.00						9080.64	0.00	0.00	8122.15	9080.64	17202.78	0.00	17202.84	-17202.84	-10745.10		
Year 9	0.00						8579.68	0.00	0.00	8623.10	8579.68	17202.78	0.00	17202.84	-17202.84			
Year 10	0.00						8047.83	0.00	0.00		8047.83	17202.78	0.00	17202.84				
Year 11	0.00						7483.17	0.00	0.00		7483.17	17202.78	0.00	17202.84				
Year 12	0.00						6883.68	0.00	0.00	10319.10	6883.68	17202.78	0.00	17202.84	-17202.84	-8373.09		
Year 13	0.00						6247.23	0.00	0.00	10955.56	6247.23	17202.78	0.00	17202.84	-17202.84	-7866.92		
Year 14	0.00						5571.51	0.00	0.00		5571.51	17202.78	0.00	17202.84				
Year 15	0.00						4854.12	0.00	0.00	12348.66	4854.12	17202.78	0.00	17202.84				
Year 16	0.00						4092.48	0.00	0.00		4092.48	17202.78	0.00	17202.84				
Year 17	0.00						3283.87	0.00	0.00		3283.87	17202.78	0.00	17202.84				
Year 18	0.00						2425.38	0.00	0.00	14777.41	2425.38	17202.78	0.00	17202.84				
Year 19	0.00						1513.94	0.00	0.00	15688.84	1513.94	17202.78	0.00	17202.84	-17202.84	-5411.50		
Year 20	0.00						546.29	0.00	0.00		546.29	17202.78	0.00	17202.84	-17202.84			
Total	200000.00						144055.65	4000.00	0.00	200000.00	144055.65	344055.65	4000.00	348056.80	-148056.80	0.00		

Case 2

Click on the button *Reset* and then enter the information highlighted in red.

Note that after ticking the box *The length of the first period of repayment is different,* an auxiliary period calculator appears.

Description of the credit product	
MAIN FEATURES OF THE CREDIT PRODUCT	
A) Total amount of the credit Tick the box for an illustrative scenario if the credit is in a foreign currency Amount	
B) Conditions governing drawdowns	
Soless Immediately and inful	
C) Conditions governing repayments (DYNAMIC)	
Proquency of repayments monthly 💌 NOTE: This will determine the length of regular periods shown in the table as 1	MONTHS.
Amount Equal Instalments (to be calculated)	
Special Psyments(*)	
Advance payment* Nof the credit lint 💌	
_ final Payment" Not the credit init	
Effe long in a title indigeneid a insperior in Stream It is given as complete periods and days (na year	wth 265 days) 💌 Brinon: Integer positive numbers are required
Austria rypendio cardura tot. From to Calculate -	complete periods and days in a year with days

In the auxiliary calculator enter the initial and final dates of the first period of repayment and click on the button *Calculate* to obtain the number of regular periods and days corresponding to this period and the number of days of the year.

The length of the first period of repaym	entis diferent	It is given as	co mo l	te periods and	4	aya (in a year with	365 days) 🔳 🗉	rror: Integer posi	tive numbe	rs are required
	Auxiliary periodical cullator: Pro	= 13/0/30LS	12 2.5 /10 /	Calculate	1	complete per	lods and 3	days in a year w	ith 366 d	ays
			_							
		_		_						

Then enter the information obtained in the previous row.

The is right of the first part of of repayment is different	It is given a	1	omplete period	ds an c	:	daya (in a year with 366 daya) 🔳			
Auxiliary periodical cullator: Pro-	= 13/KL/2005	to .	15/10/380.5 C	alculate		1 complete periods and 3	days in a year with	366 day:	s

Iviain

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Main results

mount of	ce in the last the first repa the credit		0.00 1433.56 240	MONTHS	Recalcul	ate												
	ue of the cas centage Rate		0.00 6.4%	DYNAMIC	Recalcul	ate												
otal cost o	of the credit		148054.40															
otal amou	nt of credit		200000.00															
otal amou	nt payable		348054.40															
						1							1					
			Bala	ince		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrativ	e scenarios
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cr	edit Total	Costs not financed	Total	Value at each period	Present value	Payments if highest borrowing rate (credit currency)	Payment highes exchange (domes currenc
(200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1		200000.00	200000.00	201098.36	199664.80	6.00%	1098.36			335.20	1098.36	1433.56	0.00	1433.56	-1433.56	-1425.40		
1		199664.80	199664.80	200663.12	199229.56	6.00%	998.32			435.24	998.32	1433.56	0.00	1433.56	-1433.56	-1418.01		
3	5	199229.56	199229.56	200225.71	198792.14	6.00%	996.15			437.42	996.15	1433.56	0.00	1433.56	-1433.56	-1410.66		
4		198792.14	198792.14			6.00%	993.96			439.60	993.96	1433.56	0.00	1433.56	-1433.56	-1403.35		
5		198352.54	198352.54			6.00%	991.76			441.80	991.76	1433.56	0.00	1433.56	-1433.56	-1396.08		
6		197910.74	197910.74			6.00%	989.55			444.01	989.55	1433.56	0.00	1433.56	-1433.56	-1388.84		
		197466.73	197466.73			6.00%	987.33			446.23	987.33	1433.56	0.00	1433.56	-1433.56	-1381.65		
8		197020.50				6.00%	985.10			448.46	985.10	1433.56	0.00	1433.56	-1433.56	-1374.49		
9		196572.04	196572.04	197554.90		6.00%	982.86			450.70	982.86	1433.56	0.00	1433.56	-1433.56	-1367.36		
10		196121.34 195668.38	196121.34 195668.38			6.00% 6.00%	980.61 978.34			452.96 455.22	980.61 978.34	1433.56 1433.56	0.00	1433.56 1433.56	-1433.56 -1433.56	-1360.27 -1353.22		
		132008.38	192008.38	190040.72	193213.10	0.00%	3/8.34			455.22	978.34	1433.30	0.00	1433.30	-1433.30	-1353.22		
12		195213.16	195213.16	196189.22	194755.66	6.00%	976.07			457.50	976.07	1433.56	0.00	1433.56	-1433.56	-1346.21		

3		199229.56	199229.56	200225.71	198792.14	6.00%	996.15			437.42	996.15	1433.56	0.00	1433.56	-1433.56	-1410.66	
4		198792.14	198792.14	199786.10	198352.54	6.00%	993.96			439.60	993.96	1433.56	0.00	1433.56	-1433.56	-1403.35	
5		198352.54	198352.54	199344.30	197910.74	6.00%	991.76			441.80	991.76	1433.56	0.00	1433.56	-1433.56	-1396.08	
6		197910.74	197910.74	198900.29	197466.73	6.00%	989.55			444.01	989.55	1433.56	0.00	1433.56	-1433.56	-1388.84	
7		197466.73	197466.73	198454.06	197020.50	6.00%	987.33			446.23	987.33	1433.56	0.00	1433.56	-1433.56	-1381.65	
8		197020.50	197020.50	198005.60	196572.04	6.00%	985.10			448.46	985.10	1433.56	0.00	1433.56	-1433.56	-1374.49	
9		196572.04	196572.04	197554.90	196121.34	6.00%	982.86			450.70	982.86	1433.56	0.00	1433.56	-1433.56	-1367.36	
10		196121.34	196121.34	197101.94	195668.38	6.00%	980.61			452.96	980.61	1433.56	0.00	1433.56	-1433.56	-1360.27	
11		195668.38	195668.38	196646.72	195213.16	6.00%	978.34			455.22	978.34	1433.56	0.00	1433.56	-1433.56	-1353.22	
12		195213.16	195213.16	196189.22	194755.66	6.00%	976.07			457.50	976.07	1433.56	0.00	1433.56	-1433.56	-1346.21	
Sums																	
Year 1	200000.00						11958.42	4000.00	0.00	5244.34	11958.42	17202.76	4000.00	21202.72	178797.28	179374.44	
Year 2	0.00						11531.05	0.00	0.00	5671.71	11531.05	17202.76	0.00	17202.72	-17202.72	-15620.52	
Year 3	0.00						11181.23	0.00	0.00	6021.52	11181.23	17202.76	0.00	17202.72	-17202.72	-14676.23	
Year 4	0.00						10809.84	0.00	0.00	6392.92	10809.84	17202.76	0.00	17202.72	-17202.72	-13789.03	
Year 5	0.00						10415.54	0.00	0.00	6787.22	10415.54	17202.76	0.00	17202.72	-17202.72	-12955.46	
Year 6	0.00						9996.92	0.00	0.00	7205.84	9996.92	17202.76	0.00	17202.72	-17202.72	-12172.28	
Year 7	0.00						9552.48	0.00	0.00	7650.28	9552.48	17202.76	0.00	17202.72	-17202.72	-11436.45	
Year 8	0.00						9080.62	0.00	0.00	8122.13	9080.62	17202.76	0.00	17202.72	-17202.72	-10745.10	
Year 9	0.00						8579.67	0.00	0.00	8623.09	8579.67	17202.76	0.00	17202.72	-17202.72	-10095.54	
Year 10	0.00						8047.82	0.00	0.00	9154.94	8047.82	17202.76	0.00	17202.72	-17202.72	-9485.25	
Year 11	0.00						7483.16	0.00	0.00	9719.60	7483.16	17202.76	0.00	17202.72	-17202.72	-8911.85	
Year 12	0.00						6883.68	0.00	0.00	10319.08	6883.68	17202.76	0.00	17202.72	-17202.72	-8373.11	
Year 13	0.00						6247.22	0.00	0.00	10955.54	6247.22	17202.76	0.00	17202.72	-17202.72	-7866.95	
Year 14	0.00						5571.50	0.00	0.00	11631.26	5571.50	17202.76	0.00	17202.72	-17202.72	-7391.38	
Year 15	0.00						4854.11	0.00	0.00	12348.65	4854.11	17202.76	0.00	17202.72	-17202.72	-6944.56	
Year 16	0.00						4092.47	0.00	0.00	13110.28	4092.47	17202.76	0.00	17202.72	-17202.72	-6524.75	
Year 17	0.00						3283.86	0.00	0.00	13918.90	3283.86	17202.76	0.00	17202.72	-17202.72	-6130.32	
Year 18	0.00						2425.37	0.00	0.00	14777.39	2425.37	17202.76	0.00	17202.72	-17202.72	-5759.73	
Year 19	0.00						1513.94	0.00	0.00	15688.82	1513.94	17202.76	0.00	17202.72	-17202.72	-5411.54	
Year 20	0.00						546.29	0.00	0.00	16656.47	546.29	17202.76	0.00	17202.72	-17202.72	-5084.41	
Total	200000.00						144055.19	4000.00	0.00	200000.00	144055.19	344055.19	4000.00	348054.40	-148054.40	0.00	

Case 3

Click on the button *Reset* and then enter the information highlighted in red.

Note that after ticking the box *The length of the first period of repayment is different,* an auxiliary period calculator appears.

Description of the credit product		
MAIN FEATURES OF THE CREDIT PRODUCT		
A) Total amount of the credit	e box for an illustrative scenario if the credit is in a foreign currency	
B) Conditions governing draw downs		
Solod Immediately and Inful		
C) Conditions governing repayments (DYNAMIC)		
Fraquancy of rapsymonial yearly	te this will determine the length of regular periods shown in the table as: <u>YEARS</u>	
A mount Roal Instalments (to be calculated)	•	
	N N N N N N N N N N N N N N N N N N N	
Ette langtit ettite ind periodel repayment adiferent Cirgivian Auxiliany period darianterion. From	to a complete periods and days (hayear wth 265 days) = transition get positive numbers are required days in a year with	daya

In the auxiliary calculator enter the initial and final dates of the first period of repayment and click on the button *Calculate* to obtain the number of regular periods and days corresponding to this period and the number of days of the year.

The length of the first period of repays	nentis different Auxiliary poriodical ou ator: Pro	itisaluonas • xx/mu/xmx to	complete periods and xx/my/wxx Calculate	deya (ma yoor with 555 daya) 💌 Err O complete periods and 34 (or: Integer positive numbers are required days in a year with 365 days

Then enter the information obtained in the previous row.

The length of the first period of repsymentic different	itis given a	•	omplete perio	ods and	34. day	ya (in a year with 365 days) 💌		
Auxiliary periodical cullator: From	10/10/2003	10 1	13/40/3612	Calculate	- 0	complete periods and	34 days in a year with	365 days

Complete the information with the number of repayment periods.

D) Duration of the cr		2 perioda		
Duration	Fixed 💌 of	an peneda		
COSTS OF THE	CREDIT			
A) Borrowing rate				
Level Sa	relevel for the entire credit term 💌 Dofine die	a Nominal (annual)	T DYNAMIC	Tick the best for an illustrative scenario if the credit allows variations in the borrowing rate
	Percentage			
	vereekage			
Dither cart is dud.	ed in the Total Cost of the Credit			
aj ormer cost include	d in the Total Cost of the Credit Given as	Amountor % Fin	anced	Date of charge
E Cost 1	% of the credit limit	▼ Z № ⁴		T
Cost 2	% of the credit limit	· No*	 At conclusion 	•
L Cost 5	% of the drawdowns in each period	▼ № ⁴	•	
Cost 4	% of the balance outstanding (capital + interact) in each period	• 16*	· 🗐	
Cost 5	% of the balance outstanding (only capital) in each period	- Tel 184	· 🖃	
Cost 6	% of the credit not used at the beginning of each period	- No*	-	
Cost 7	% of the final balance in each period	-		
Examples		08	a (*)	Obs(*)
L Shared ag	uity credit			

Click on the buttons Generate and then Calculate to obtain the main results the and amortisation table.

Main results

12

13

14

15

16

17

18

19

20

Total

200000.00

 112512.61
 112512.61
 119263.37
 102721.51
 6.00%
 6750.76

6.00%

6.00%

6.00%

6.00%

6.00%

0.00

6163.29

5540.58

4880.50

4180.82

3439.16

2652.99

1819.66

936.33

130837.11 4000.00

102721.51 102721.51 108884.80 92342.95

92342.95 92342.95 97883.52 81341.67

81341.67 81341.67 86222.17 69680.31

30327.72 30327.72 32147.38 15605.52

15605.52 15605.52 16541.86

69680.31 69680.31 73861.13 57319.28 6.00%

57319.28 57319.28 60758.43 44216.58 6.00%

44216.58 44216.58 46869.57 30327.72 6.00%

	e in the last the first repa the credit		0.00 16541.86 20	YEARS	Recalcul	late											
	ue of the casl centage Rate		0.00 6.3%	DYNAMIC	Recalcul	late											
Total cost of Total amour Total amour	nt of credit		134837.20 200000.00 334837.20														
			Bala	ince		Interest o	n canital	Other	costs			Payments			Cash	flows	Illustra
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cr	edit Total	Costs not financed	Total	Value at each period	Present value	Payments highest borrowin rate (cred currency
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00	
1		200000.00	200000.00	201117.81	184575.95	6.00%	1117.81			15424.05	1117.81	16541.86	0.00	16541.86	-16541.86	-16448.25	
2		184575.95	184575.95	195650.51	179108.65	6.00%	11074.56			5467.30	11074.56	16541.86	0.00	16541.86	-16541.86		
3		179108.65				6.00%	10746.52			5795.34	10746.52	16541.86	0.00	16541.86	-16541.86		
4		173313.32				6.00%	10398.80			6143.06	10398.80	16541.86	0.00	16541.86	-16541.86		
5		167170.26			160658.62	6.00%	10030.22			6511.64	10030.22	16541.86	0.00	16541.86	-16541.86		
6		160658.62			153756.28	6.00%	9639.52			6902.34	9639.52	16541.86	0.00	16541.86	-16541.86		
7		153756.28 146439.80			146439.80 138684.34	6.00%	9225.38 8786.39			7316.48	9225.38 8786.39	16541.86 16541.86	0.00	16541.86 16541.86	-16541.86		
8		146439.80			138684.34	6.00%	8786.39			8220.80	8786.39	16541.86	0.00	16541.86	-16541.86		
10		138684.34			130463.54	6.00%	7827.81			8220.80	7827.81	16541.86	0.00	16541.86	-16541.86		
10		121749.50			112512.61	6.00%	7304.97			9236.89	7304.97	16541.86	0.00	16541.86	-16541.86		
		15150				5.0070	. 50 1157			2200.00			0.00			25 15.75	

9791.10 6750.76 16541.86 0.00 16541.86 -16541.86

12361.04 4180.82 16541.86 0.00 16541.86 -16541.86

13102.70 3439.16 16541.86 0.00 16541.86 -16541.86

13888.86 2652.99 16541.86 0.00 16541.86 -16541.86

0.00 200000.00 130837.11 330837.11 4000.00 334837.20 -134837.20

0.00 16541.86 -16541.86

0.00 16541.86 -16541.86

0.00 16541.86 -16541.86

0.00 16541.86 -16541.86

0.00 16541.86 -16541.86

6163.29 16541.86

5540.58 16541.86

1819.66 16541.86

936.33 16541.86

11661.36 4880.50 16541.86

10378.56

11001.28

14722.19

15605.52

trative scenarios Payments if highest

/ing exchange rat edit (domestic currency)

-8415.10

-7917.71

-7449.71

-7009.38

-6595.07

-6205.25

-5838.48

-5493.38

-5168.68

0.00

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit

Description of the creat product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Tick the box for an illustrative scenario if the credit is in a foreign currency Amount
8) Conditions governing draw downs
Solod Immedately and Inful 💌
C) Conditions governing repayments (DYNAMIC)
Frequency of repsymental monthy 🔹 NOTE: This will determine the length of regular periods shown in the table as: MONTHS
Amount Equal Intelments (to be alculated)
Special Payments (*)
Advance payment" Noftha cadd int
Inial Payment" Fad amout
L'unairaiment I
D) Duration of the credit agreement
Duration Phed 💌 of 🗯 porioda
COSTS OF THE CREDIT
A) Borrowing rate
Percentage Latt
8) Other cost in du ded in the Total Cost of the Credit
o joiner cost monoco ne tre rotar Cost on the Creat Given as Amounton's
🗠 Cost 2 Flord amount 💌 👞 🔤 Not 💌 Each time a repayment takes place 🔍
Cost 5 No of the drawdowne in each parted 💌 No* 💌
L Cost 4 Northe belance outstanding (apptal + Internet) in each parkod 💌 Nort 💌
📙 Cost 5 No of the balance outstanding (only capital) in each parkod 💌 No * 💌
📙 Cost 6 Northe creating at the beginning of each period 💌 North 💌
Cost 7 No of the final balance in each particid 💌
Examples Obs(*) Obs(*)
L Shand squity credit

Main r

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Main results

Year 12

Year 13

Year 14

Year 15

Year 16

Year 17

Year 18

Year 19

Year 20

Total

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

200000.00

Main re	sults																	
	e in the last the first repa the credit		0.00 1432.86 240	MONTHS	Recalcu	llate												
	ue of the cas centage Rate		0.00 6.6%	DYNAMIC	Recalcu	llate												
Total cost of Total amour Total amour	nt of credit		151887.20 200000.00 351887.20			ľ												
			Bala			Interest o	n canital	Other	costs			Payments			Cach	flows	Illustratio	e scenarios
			Bala	lince		Intelest o	ii capitai	otilei	CUSIS	Renav	ment of the cr				Casii	nows	Payments if	Payments i
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange ra (domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1		200000.00	200000.00			6.00%	1000.00	16.67		432.86	1000.00	1432.86	16.67	1449.53				
2		199567.14				6.00%	997.84	16.67		435.03	997.84	1432.86	16.67	1449.53				
3		199132.11					995.66	16.67		437.20	995.66	1432.86	16.67	1449.53				
4		198694.91					993.47	16.67		439.39	993.47	1432.86	16.67	1449.53				
5		198255.52					991.28	16.67		441.58	991.28	1432.86	16.67	1449.53				
6		197813.94					989.07	16.67		443.79	989.07	1432.86	16.67	1449.53				
7		197370.15			196924.13		986.85	16.67		446.01	986.85	1432.86	16.67	1449.53				
8		196924.13			196475.89		984.62	16.67		448.24	984.62	1432.86	16.67	1449.53				
9		196475.89					982.38	16.67		450.48	982.38	1432.86	16.67	1449.53				
10		196025.41			195572.67		980.13	16.67		452.74	980.13	1432.86	16.67	1449.53				
11		195572.67 195117.68					977.86 975.59	16.67 16.67		455.00 457.27	977.86 975.59	1432.86 1432.86	16.67 16.67	1449.53 1449.53				
Sums		195117.00	195117.00	190095.20	194000.40	0.00%	975.59	10.07		437.27	975.59	1452.00	10.07	1449.55	-1449.55	-1559.95		
Year 1	200000.00						11854.75	4200.00	0.00	5339.60	11854.75	17194.35	4200.00	21394.36	178605.64	179193.72		
Year 2	0.00						11525.41	200.00	0.00		11525.41	17194.35	200.00	17394.36				
Year 3	0.00						11175.77	200.00	0.00		11175.77	17194.35	200.00	17394.36				
Year 4	0.00						10804.55	200.00	0.00		10804.55	17194.35	200.00	17394.36				
Year 5	0.00						10410.44	200.00	0.00		10410.44	17194.35	200.00	17394.36				
Year 6	0.00						9992.03	200.00	0.00	7202.32	9992.03	17194.35	200.00	17394.36	-17394.36	-12215.71		
Year 7	0.00						9547.81	200.00	0.00	7646.54	9547.81	17194.35	200.00	17394.36	-17394.36	-11460.62		
Year 8	0.00						9076.18	200.00	0.00	8118.16	9076.18	17194.35	200.00	17394.36	-17394.36	-10752.21		
Year 9	0.00						8575.47	200.00	0.00	8618.87	8575.47	17194.35	200.00	17394.36	-17394.36	-10087.58		
Year 10	0.00						8043.88	200.00	0.00	9150.47	8043.88	17194.35	200.00	17394.36	-17394.36	-9464.04		
Year 11	0.00						7479.50	200.00	0.00	9714.85	7479.50	17194.35	200.00	17394.36	-17394.36	-8879.04		

6244.16 200.00

5568.78 200.00

2424.19 200.00

1513.20 200.00

143886.91 8000.00

200.00

200.00

200.00

4851.74

4090.47

3282.26

 6880.31
 200.00
 0.00
 10314.04
 6880.31
 17194.35
 200.00
 17394.36
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 -8330.20

4090.47 17194.35

3282.26 17194.35

0.00 11625.57 5568.78 17194.35

0.00 13103.87

0.00 13912.09

0.00 12342.61 4851.74 17194.35

0.00 14770.16 2424.19 17194.35

0.00 15681.15 1513.20 17194.35

546.02 200.00 0.00 16648.33 546.02 17194.35 200.00 17394.36 -17394.36

0.00 10950.18 6244.16 17194.35 200.00 17394.36 -17394.36

0.00 200000.00 143886.91 343886.91 8000.00 351887.20 -151887.20

200.00 17394.36 -17394.36

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200.00 17394.36 -17394.36

-7815.29

-7332.20

-6878.97

-6453.77

-6054.84

-5680.57

-5329.44

-5000.01

0.00

Click on the button *Reset* and then enter the information highlighted in red.

n

Description of the creak product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Tick the bex for an illustrative scenario if the credit is in a foreign currency
Amount 2
B) Con ditions go verning draw dowins
Soloof Inmediately and Inful
C) Conditions governing repayments (DYNAMIC)
Productory of repayments monthy NOTE: This will determine the length of regular periods shown in the table as: <u>MONTHS</u>
Amount Equal Indalments (to be calculated)
Social Permonta (*)
Advance processing of the section of
hinal Payment" Fladarout v
Even here a
The length attick to the periods represented a different
D) Duration of the credit agreement
Duration Fixed 💌 of 🗯 poriods
COSTS OF THE CREDIT
A) Borrowing rate
Level Same level for the entre and tharm 💌 Defined as Northal (annual) 💌 DYNAMIC 💷 Tick the box for an illustrative scenario if the predict allows variations in the borrowing rate
Personia ge Autori
8) Other cost included in the Total Cost of the Credit
Given as Anounter's financed Date of charge
🕑 Cost 2 Northe cwell int 🔍 Responses No. V Each time a repayment takes place
Cost 3 % offer divideound in each particity V No V
Cosi 4 Ni of the balance outstanding (aptral + htared) in each partical 💌 No* 💌
Cost 5 % of the balance substanding (substanding (substanding from particular and
Cost 6 Northe swetchet used at the baginning of each parked 💌 Nor 💌
Cost 7 % of the final basic parties V
Texamples Obs(*) Obs(*)
L Shared equity credit

Click on the buttons Generate and then Calculate to obtain the main results and the amortisation table.

Main results

Final balance in the last period	0.00	
Amount of the first repayment	1432.86	Recalculate
Duration of the credit	240 MONTHS	
Present value of the cash flows	0.00	
Annual Percentage Rate of Charge	7.9% DYNAMIC	Recalculate
Total cost of the credit	187887.20	
Total amount of credit	200000.00	
Total amount payable	387887.20	

			C 1			Intern 1	a as also l	01				Davanaatu				61 m	Illuster 1	
			Bala	ance		Interest o	n capital	Other	costs			Payments			Cash	flows		e scenarios
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cn Interest	edit Total	Costs not financed	Total	Value at each period	Present value	Payments if highest borrowing rate (credit currency)	Payments if highest exchange rate (domestic currency)
C	20000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1	L	200000.00	200000.00	201000.00	199567.14	6.00%	1000.00	166.67		432.86	1000.00	1432.86	166.67	1599.53	-1599.53	-1589.37		
2	2	199567.14	199567.14	200564.97	199132.11	6.00%	997.84	166.67		435.03	997.84	1432.86	166.67	1599.53	-1599.53	-1579.27		
3	3	199132.11	199132.11	200127.77	198694.91	6.00%	995.66	166.67		437.20	995.66	1432.86	166.67	1599.53	-1599.53	-1569.24		
4	1	198694.91	198694.91	199688.38	198255.52	6.00%	993.47	166.67		439.39	993.47	1432.86	166.67	1599.53	-1599.53	-1559.27		
5	5	198255.52	198255.52	199246.80	197813.94	6.00%	991.28	166.67		441.58	991.28	1432.86	166.67	1599.53	-1599.53	-1549.37		
6	5	197813.94	197813.94	198803.01	197370.15	6.00%	989.07	166.67		443.79	989.07	1432.86	166.67	1599.53	-1599.53	-1539.53		
7	7	197370.15	197370.15	198357.00	196924.13	6.00%	986.85	166.67		446.01	986.85	1432.86	166.67	1599.53	-1599.53	-1529.75		
8	3	196924.13	196924.13	197908.75	196475.89	6.00%	984.62	166.67		448.24	984.62	1432.86	166.67	1599.53	-1599.53	-1520.03		
9	9	196475.89	196475.89	197458.27	196025.41	6.00%	982.38	166.67		450.48	982.38	1432.86	166.67	1599.53	-1599.53	-1510.38		
10		196025.41	196025.41	197005.54	195572.67	6.00%	980.13	166.67		452.74	980.13	1432.86	166.67	1599.53	-1599.53	-1500.78		
11		195572.67	195572.67	196550.54	195117.68	6.00%	977.86	166.67		455.00	977.86	1432.86	166.67	1599.53	-1599.53	-1491.25		
12	2	195117.68	195117.68	196093.26	194660.40	6.00%	975.59	166.67		457.27	975.59	1432.86	166.67	1599.53	-1599.53	-1481.78		
Sums																		
Year 1	20000.00						11854.75	6000.00	0.00	5339.60	11854.75	17194.35	6000.00	23194.36	176805.64	177579.96		
Year 2	0.00						11525.41	2000.00	0.00	5668.93	11525.41	17194.35	2000.00	19194.36	-19194.36	-17064.02		
Year 3	0.00						11175.77	2000.00	0.00	6018.58	11175.77	17194.35	2000.00	19194.36	-19194.36	-15807.83		
Year 4	0.00						10804.55	2000.00	0.00	6389.79	10804.55	17194.35	2000.00	19194.36	-19194.36	-14644.12		
Year 5	0.00						10410.44	2000.00	0.00	6783.90	10410.44	17194.35	2000.00	19194.36	-19194.36	-13566.07		
Year 6	0.00						9992.03	2000.00	0.00	7202.32	9992.03	17194.35	2000.00	19194.36	-19194.36	-12567.39		
Year 7	0.00						9547.81	2000.00	0.00	7646.54	9547.81	17194.35	2000.00	19194.36	-19194.36	-11642.23		
Year 8	0.00						9076.18	2000.00	0.00	8118.16	9076.18	17194.35	2000.00	19194.36	-19194.36	-10785.17		
Year 9	0.00						8575.47	2000.00	0.00	8618.87	8575.47	17194.35	2000.00	19194.36	-19194.36	-9991.21		
Year 10	0.00						8043.88	2000.00	0.00	9150.47	8043.88	17194.35	2000.00	19194.36	-19194.36	-9255.69		
Year 11	0.00						7479.50	2000.00	0.00	9714.85	7479.50	17194.35	2000.00	19194.36	-19194.36	-8574.32		
Year 12	0.00						6880.31	2000.00	0.00	10314.04	6880.31	17194.35	2000.00	19194.36	-19194.36	-7943.11		
Year 13	0.00						6244.16	2000.00	0.00	10950.18	6244.16	17194.35	2000.00	19194.36		-7358.37		
Year 14	0.00						5568.78	2000.00	0.00	11625.57	5568.78	17194.35	2000.00	19194.36	-19194.36	-6816.67		
Year 15	0.00						4851.74	2000.00	0.00	12342.61	4851.74	17194.35	2000.00	19194.36	-19194.36	-6314.86		
Year 16	0.00						4090.47	2000.00	0.00	13103.87	4090.47	17194.35	2000.00	19194.36		-5849.98		
Year 17	0.00						3282.26	2000.00	0.00	13912.09	3282.26	17194.35	2000.00	19194.36		-5419.33		
Year 18	0.00						2424.19	2000.00	0.00	14770.16	2424.19	17194.35	2000.00	19194.36	-19194.36	-5020.38		
Year 19	0.00						1513.20	2000.00	0.00	15681.15	1513.20	17194.35	2000.00	19194.36		-4650.80		
Year 20	0.00						546.02	2000.00	0.00	16648.33	546.02	17194.35	2000.00	19194.36	-19194.36	-4308.42		
Total	200000.00						143886.91	44000.00	0.00	200000.00	143886.91	343886.91	44000.00	387887.20	-187887.20	0.00		

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit

MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Tick the box for an illustrative scenario if the credit is in a foreign currency
8) Con ditions governing drawd owns
Solicot Immediately and Inful
C) Conditions governing repayments (DYNAMIC)
Proquency of repayments monthly IN NOT 8: This will determine the length of regular periods shown in the table as: MONTHS
Amount Equal Intelments (Io be calculated)
Special Payments (*)
Advance payment* Nof the crudt lint final Payment* Nof the crudt lint
The length of the 1nd period of representation of the end
D) Duration of the credit agreement
Duration Fixed of 2000 poriods
COSTS OF THE CREDIT
A) Borrowing rate
Albourowing role
Level Same level for the entre orest term 💌 Defined as Northal (annus) 💌 DYNA MIC 💷 Tick the box for an illustrative sectors in if the credit allows veriations in the borrowing rate
Percentage autor
8) Other cost included in the Total Cost of the Credit
Given as Amountor % Financed Date of charge
L Cost 2 % of the credit int v 4 Yes* v At concluton v
Cost 5 % of the drawdowns in each particid v lib* • Cost 4 % of the balance outdandho (postal + interest in each particid v lib* •
L Cost 4 % of the balance outdanding (optial + interact) is each parted v IIe* v Cost 5 % of the balance outdanding (orly optial) is each parted v IIe* v
Costs % of the cost of the case of the sector of the secto
Cost7 No of the final balance in each partod
Examples Obs(*) Obs(*)
L Shand equity credit

Click on the buttons Generate

and then *Calculate* to obtain the main results and the amortisation table.

Main results

Final balance in the last period	0.00		
Amount of the first repayment	1490.18	Recalculate	
Duration of the credit	240 MONTHS		
Present value of the cash flows	0.00	1	
Annual Percentage Rate of Charge	7.0% DYNAMIC	Recalculate	
Total cost of the credit	161643.20		
Total amount of credit	200000.00		
Total amount payable	361643.20		

			Bala	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrativ	e scenarios
										Repay	ment of the cr	edit					Payments if	Payments if
Period	Dra wdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
0	200000.00				208000.00			4000.00	8000.00				4000.00	4000.00	196000.00	196000.00		
1		208000.00	208000.00	209040.00	207549.82	6.00%	1040.00			450.18	1040.00	1490.18	0.00	1490.18	-1490.18	-1481.85		
2		207549.82	207549.82	208587.57	207097.40	6.00%	1037.75			452.43	1037.75	1490.18	0.00	1490.18	-1490.18	-1473.56		
3		207097.40	207097.40	208132.88	206642.71	6.00%	1035.49			454.69	1035.49	1490.18	0.00	1490.18	-1490.18	-1465.32		
4		206642.71	206642.71	207675.92	206185.74	6.00%	1033.21			456.96	1033.21	1490.18	0.00	1490.18	-1490.18	-1457.12		
5		206185.74	206185.74	207216.67	205726.50	6.00%	1030.93			459.25	1030.93	1490.18	0.00	1490.18	-1490.18	-1448.97		
6		205726.50	205726.50	206755.13	205264.95	6.00%	1028.63			461.54	1028.63	1490.18	0.00	1490.18	-1490.18	-1440.87		
7		205264.95	205264.95	206291.28	204801.10	6.00%	1026.32			463.85	1026.32	1490.18	0.00	1490.18	-1490.18	-1432.81		
8		204801.10	204801.10	205825.10	204334.93	6.00%	1024.01			466.17	1024.01	1490.18	0.00	1490.18	-1490.18	-1424.80		
9		204334.93	204334.93	205356.60	203866.43	6.00%	1021.67			468.50	1021.67	1490.18	0.00	1490.18	-1490.18	-1416.83		
10		203866.43	203866.43	204885.76	203395.58	6.00%	1019.33			470.84	1019.33	1490.18	0.00	1490.18	-1490.18	-1408.91		
11		203395.58	203395.58	204412.56	202922.38	6.00%	1016.98			473.20	1016.98	1490.18	0.00	1490.18	-1490.18	-1401.03		
12		202922.38	202922.38	203937.00	202446.82	6.00%	1014.61			475.56	1014.61	1490.18	0.00	1490.18	-1490.18	-1393.19		
Sums																		
Year 1	200000.00						12328.94	4000.00	8000.00	5553.18	12328.94	17882.12	4000.00	21882.16	178117.84			
Year 2	0.00						11986.43	0.00	0.00	5895.69	11986.43	17882.12	0.00	17882.16	-17882.16			
Year 3	0.00						11622.80	0.00	0.00	6259.32	11622.80	17882.12	0.00	17882.16	-17882.16			
Year 4	0.00						11236.74	0.00	0.00	6645.38	11236.74	17882.12	0.00	17882.16				
Year 5	0.00						10826.86	0.00	0.00	7055.26	10826.86	17882.12	0.00	17882.16	-17882.16			
Year 6	0.00						10391.71	0.00	0.00	7490.41	10391.71	17882.12	0.00	17882.16	-17882.16			
Year 7	0.00						9929.72	0.00	0.00	7952.40	9929.72	17882.12	0.00	17882.16	-17882.16			
Year 8	0.00						9439.23	0.00	0.00	8442.89	9439.23	17882.12	0.00	17882.16	-17882.16			
Year 9	0.00						8918.49	0.00	0.00	8963.63	8918.49	17882.12	0.00	17882.16	-17882.16			
Year 10	0.00						8365.63	0.00	0.00	9516.48	8365.63	17882.12	0.00	17882.16	-17882.16			
Year 11	0.00						7778.68	0.00	0.00	10103.44	7778.68	17882.12	0.00	17882.16	-17882.16			
Year 12	0.00						7155.52		0.00	10726.60	7155.52	17882.12	0.00	17882.16	-17882.16			
Year 13	0.00						6493.93	0.00	0.00	11388.19	6493.93	17882.12	0.00	17882.16	-17882.16			
Year 14	0.00						5791.53	0.00	0.00	12090.59	5791.53	17882.12	0.00	17882.16	-17882.16			
Year 15	0.00						5045.81	0.00	0.00	12836.31	5045.81	17882.12	0.00	17882.16	-17882.16			
Year 16	0.00						4254.09	0.00	0.00	13628.03	4254.09	17882.12	0.00	17882.16	-17882.16			
Year 17	0.00						3413.55	0.00	0.00	14468.57	3413.55	17882.12	0.00	17882.16	-17882.16			
Year 18	0.00						2521.16		0.00	15360.96	2521.16	17882.12	0.00	17882.16	-17882.16			
Year 19	0.00						1573.72		0.00	16308.39	1573.72	17882.12	0.00	17882.16	-17882.16			
Year 20	0.00						567.86	0.00	0.00	17314.26	567.86	17882.12	0.00	17882.16	-17882.16			
Total	20000.00						149642.38	4000.00	8000.00	208000.00	149642.38	357642.38	4000.00	361643.20	-161643.20	0.00		

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) To tal amount of the credit
Tick the box for an illustrative scenario if the credit is in a foreign currency
Amount 2
8) Conditions governing drawdowns
Soloti Immediate) and Inful 💌
C) Conditions governing repayments (DYNAMIC)
Productive of repayments monthly
Amount Equal Intelments (to be calculated)
A mount vive mamente (to be calculated)
Special Payments(*)
Advance payment" Nof the credit int Tinal Payment" Flad amount
The length of the Text period of represent in different
D) Duration of the credit agreement
Duration Fixed 💌 of 🍱 poriods
COSTS OF THE CREDIT
A) Borrowing rate
A portowing race
Level Sameland for the anthe pacitizers 💌 Defined as (Normal) 💌 DYNAMIC 🗆 Tick the bex for an illustrative second is if the prodict allows variations in the borrowing rate
Percentage Amil
B) Other cost in cluded in the Total Cost of the Credit
Given as Amounter's Financed Date of charge
🕑 Cost 2 Fixed amount 💌 🗩 Not 💌 Atthe last repayment date
Cost 5 Northe drawdowna in each period
L Cost 4 % of the balance outdancing (aptal = Internet) in each partod 💌 No. 💌
L Cost 5 % of the balance outdancing (only capital) in each particid 💌 No* 💌
Cost 6 No of the credit not used at the beginning of each period v No* v Cost 7 No of the final balance in each period v
Examples Obs(*) Obs(*)
Shand equity credit

Click on the buttons Generate and then Calculate to obtain the main results and the amortisation table.

Main results

iviain re	esuits														
Amount of	ice in the last the first repa f the credit		0.00 1432.86 240		Recalcu	late									
	lue of the cas rcentage Rate		0.00 6.4%	DYNAMIC	Recalcu	late									
Fotal amou	of the credit int of credit int payable		147986.40 200000.00 347986.40												
			Bala	ance		Interest o	on capital	Other	costs			Payments			Ca
										Repay	ment of the cr	redit			
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each perio
C	0 200000.00				200000.00			4000.00					4000.00	4000.00	196000.0
1	1	200000.00	200000.00	201000.00	199567.14	6.00%	1000.00	0.00		432.86	1000.00	1432.86	0.00	1432.86	-1432.8
2	2	199567.14	199567.14	200564.97	199132.11	6.00%	997.84	0.00		435.03	997.84	1432.86	0.00	1432.86	-1432.8
3	3	199132.11	199132.11	200127.77	198694.91	6.00%	995.66	0.00		437.20	995.66	1432.86	0.00	1432.86	-1432.8
4		198694.91	198694.91	199688.38	198255.52	6.00%	993.47	0.00		439.39	993.47	1432.86	0.00	1432.86	-1432.8
5		198255.52	198255.52	199246.80	197813.94	6.00%	991.28	0.00		441.58	991.28	1432.86	0.00	1432.86	-1432.8
	s	107912 04	107912 04	109902 01	107270 15	6.00%	090 07	0.00		442 70	090 07	1/22.96	0.00	1/22.96	-1/22

			Bala	ince		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	e scenarios
										Repay	ment of the cr	edit					Payments if	Payments if
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1		200000.00	200000.00	201000.00	199567.14	6.00%	1000.00	0.00		432.86	1000.00	1432.86	0.00	1432.86	-1432.86	-1425.43		
2		199567.14	199567.14	200564.97	199132.11	6.00%	997.84	0.00		435.03	997.84	1432.86	0.00	1432.86	-1432.86	-1418.04		
3		199132.11	199132.11	200127.77	198694.91	6.00%	995.66	0.00		437.20	995.66	1432.86	0.00	1432.86	-1432.86	-1410.69		
4		198694.91	198694.91	199688.38	198255.52	6.00%	993.47	0.00		439.39	993.47	1432.86	0.00	1432.86	-1432.86	-1403.38		
5		198255.52	198255.52	199246.80	197813.94	6.00%	991.28	0.00		441.58	991.28	1432.86	0.00	1432.86	-1432.86	-1396.10		
6		197813.94	197813.94	198803.01	197370.15	6.00%	989.07	0.00		443.79	989.07	1432.86	0.00	1432.86	-1432.86	-1388.86		
7		197370.15	197370.15	198357.00	196924.13	6.00%	986.85	0.00		446.01	986.85	1432.86	0.00	1432.86	-1432.86	-1381.66		
8		196924.13	196924.13			6.00%	984.62	0.00		448.24	984.62	1432.86	0.00	1432.86	-1432.86	-1374.50		
9		196475.89	196475.89	197458.27	196025.41	6.00%	982.38	0.00		450.48	982.38	1432.86	0.00	1432.86	-1432.86	-1367.37		
10		196025.41	196025.41	197005.54	195572.67	6.00%	980.13	0.00		452.74	980.13	1432.86	0.00	1432.86	-1432.86	-1360.28		
11		195572.67	195572.67	196550.54	195117.68	6.00%	977.86	0.00		455.00	977.86	1432.86	0.00	1432.86	-1432.86	-1353.23		
12		195117.68	195117.68	196093.26	194660.40	6.00%	975.59	0.00		457.27	975.59	1432.86	0.00	1432.86	-1432.86	-1346.21		
Sums																		
Year 1	200000.00						11854.75	4000.00	0.00	5339.60	11854.75	17194.35	4000.00	21194.32	178805.68	179374.25		
Year 2	0.00						11525.41	0.00	0.00	5668.93	11525.41	17194.35	0.00	17194.32	-17194.32	-15620.36		
Year 3	0.00						11175.77	0.00	0.00	6018.58	11175.77		0.00	17194.32	-17194.32	-14675.78		
Year 4	0.00						10804.55	0.00	0.00	6389.79	10804.55	17194.35	0.00	17194.32	-17194.32	-13788.31		
Year 5	0.00						10410.44	0.00	0.00	6783.90	10410.44	17194.35	0.00	17194.32	-17194.32	-12954.51		
Year 6	0.00						9992.03	0.00	0.00	7202.32	9992.03	17194.35	0.00	17194.32	-17194.32	-12171.14		
Year 7	0.00						9547.81	0.00	0.00	7646.54	9547.81	17194.35	0.00	17194.32	-17194.32	-11435.13		
Year 8	0.00						9076.18	0.00	0.00	8118.16	9076.18	17194.35	0.00	17194.32	-17194.32	-10743.63		
Year 9	0.00						8575.47	0.00	0.00	8618.87	8575.47	17194.35	0.00	17194.32	-17194.32	-10093.95		
Year 10	0.00						8043.88	0.00	0.00	9150.47	8043.88	17194.35	0.00	17194.32	-17194.32	-9483.55		
Year 11	0.00						7479.50	0.00	0.00	9714.85	7479.50	17194.35	0.00	17194.32	-17194.32	-8910.07		
Year 12	0.00						6880.31	0.00	0.00	10314.04	6880.31	17194.35	0.00	17194.32	-17194.32	-8371.26		
Year 13	0.00						6244.16	0.00	0.00	10950.18	6244.16	17194.35	0.00	17194.32	-17194.32	-7865.04		
Year 14	0.00						5568.78	0.00	0.00	11625.57	5568.78	17194.35	0.00	17194.32	-17194.32	-7389.43		
Year 15	0.00						4851.74	0.00	0.00	12342.61	4851.74	17194.35	0.00	17194.32	-17194.32	-6942.58		
Year 16	0.00						4090.47	0.00	0.00	13103.87	4090.47	17194.35	0.00	17194.32	-17194.32	-6522.75		
Year 17	0.00						3282.26	0.00	0.00	13912.09	3282.26	17194.35	0.00	17194.32	-17194.32	-6128.31		
Year 18	0.00						2424.19	0.00	0.00	14770.16	2424.19	17194.35	0.00	17194.32	-17194.32	-5757.73		
Year 19	0.00						1513.20	0.00	0.00	15681.15	1513.20	17194.35	0.00	17194.32	-17194.32	-5409.55		
Year 20	0.00						546.02	100.00	0.00	16648.33	546.02		100.00	17294.32	-17294.32	-5111.15		
Total	200000.00						143886.91	4100.00	0.00	200000.00	143886.91	343886.91	4100.00	347986.40	-147986.40	0.00		

This example can be solved in two different ways, which start similarly.

As a first step, click on the button *Reset* and then enter the information highlighted in red for the 30-year credit agreement whose instalments will become the equal monthly payments of the 15-year credit agreement.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Tick the box for an illustrative scenario if the credit is in a foreign currency
B) Conditions governing drawdowns
Soles Immediately and Inful
C) Conditions governing repayments (DYN AMIC)
Frequency of repayments mentaly 💌 NOTE: This will determine the long the freqular periods shown in the table as: MONTHS
A mount Equil intelments (to be calculated)
Special Payments (*)
Advance payment" Viof the crudt int
Final Page mont Final and the second se
_ The length of the first period of represent to different
D) Duration of the credit agreement
Duration Fixed 💌 of 🛲 periods
COSTS OF THE CREDIT
A) Borrowing rate
Lovel Same level for the antite credit allows variations in the borrowing rate
Percentage audi
B)Other cost included in the Total Cost of the Credit
Given as Amountor Nitinanced Date of charge
Cost 1 % of the credit init T R R R R R R R R R R R R R R R R R R
Cost 4 W of the balance outstanding (aptal+ Interest) in each period v IIc* v Cost 5 W of the balance outstanding (only aptal) in each period v IIc* v
L Cost 5 % of the advance domain of a grant of the set
Cost 7 % of the first location is adopting to the period
Examples Obs(*) Obs(*)
L Shand equity credit

Click on the buttons *Generate* and then *Calculate* to obtain the instalments.

Main results

Amount of t Duration of	the first repa the credit	yment	1199.10 360	MONTHS	Recalcu	late												
	ue of the casl centage Rate		0.00 6.4%	DYNAMIC	Recalcu	late												
otal cost of otal amour otal amour			235676.00 200000.00 435676.00															
			Bala	ance		Interest or	n capital	Other	costs			Payments			Cash f	lows	Illustrative	e scenarios
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cr Interest	edit Total	Costs not financed	Total	Value at each period	Present value	Payments if highest borrowing rate (credit currency)	Payments i highest exchange rat (domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1		200000.00	200000.00	201000.00	199800.90	6.00%	1000.00			199.10	1000.00	1199.10	0.00	1199.10	-1199.10	-1192.95		
2		199800.90			199600.80	6.00%	999.00			200.10	999.00	1199.10	0.00	1199.10	-1199.10	-1186.83		
3		199600.80	199600.80	200598.81	199399.71	6.00%	998.00			201.10	998.00	1199.10	0.00	1199.10	-1199.10	-1180.74		
4		199399.71				6.00%	997.00			202.10	997.00	1199.10	0.00	1199.10	-1199.10	-1174.68		
5		199197.60			198994.49	6.00%	995.99			203.11	995.99	1199.10	0.00	1199.10	-1199.10	-1168.65		
6		198994.49				6.00%	994.97			204.13	994.97	1199.10	0.00	1199.10	-1199.10	-1162.65		
7		198790.36				6.00%	993.95			205.15	993.95	1199.10	0.00	1199.10	-1199.10	-1156.69		
8		198585.21				6.00%	992.93			206.17	992.93	1199.10	0.00	1199.10	-1199.10	-1150.75		
9		198379.04				6.00%	991.90			207.21	991.90	1199.10	0.00	1199.10		-1144.85		
10		198171.83				6.00%	990.86			208.24	990.86	1199.10	0.00	1199.10	-1199.10	-1138.97		
11		197963.59				6.00%	989.82			209.28	989.82	1199.10	0.00	1199.10	-1199.10	-1133.13		
12		197754.31				6.00%	988.77			210.33	988.77	1199.10	0.00	1199.10	-1199.10	-1127.31		
13		197543.98			197332.60	6.00%	987.72			211.38	987.72	1199.10	0.00	1199.10	-1199.10	-1121.53		
14 15		197332.60				6.00% 6.00%	986.66			212.44	986.66	1199.10	0.00	1199.10	-1199.10	-1115.77		
		197120.16 196906.66				6.00%	985.60 984.53			213.50 214.57	985.60 984.53	1199.10 1199.10	0.00	1199.10 1199.10	-1199.10	-1110.05		
16 17		196906.66				6.00%	984.53			214.57 215.64	984.53 983.46	1199.10	0.00	1199.10	-1199.10	-1104.35		
17		196692.09			196476.45	6.00%	983.40			215.64 216.72	983.46	1199.10	0.00	1199.10	-1199.10	-1098.68		
10		196259.73				6.00%	981.30			210.72	981.30	1199.10	0.00	1199.10	-1199.10	-1095.05		
20		196239.73				6.00%	980.21			217.80	981.30	1199.10	0.00	1199.10	-1199.10	-1087.44		
20		195823.04				6.00%	979.12			218.89	979.12	1199.10	0.00	1199.10	-1199.10	-1031.80		
22		195603.05				6.00%	978.02			221.09	978.02	1199.10	0.00	1199.10	-1199.10	-1070.78		
23		195381.96			195159.77	6.00%	976.91			222.19	976.91	1199.10	0.00	1199.10	-1199.10	-1065.29		
24		195159.77				6.00%	975.80			223.30	975.80	1199.10	0.00	1199.10	-1199.10	-1059.82		
25		194936.47				6.00%	974.68			224.42	974.68	1199.10	0.00	1199.10	-1199.10	-1054.38		
26		194712.05	194712.05	195685.61	194486.51	6.00%	973.56			225.54	973.56	1199.10	0.00	1199.10	-1199.10	-1048.97		
27		194486.51	194486.51	195458.94	194259.84	6.00%	972.43			226.67	972.43	1199.10	0.00	1199.10	-1199.10	-1043.59		
28		194259.84	194259.84	195231.14	194032.04	6.00%	971.30			227.80	971.30	1199.10	0.00	1199.10	-1199.10	-1038.23		
29		194032.04	194032.04	195002.20		6.00%	970.16			228.94	970.16	1199.10	0.00	1199.10	-1199.10	-1032.91		
30		193803.10	193803.10	194772.12	193573.01	6.00%	969.02			230.09	969.02	1199.10	0.00	1199.10	-1199.10	-1027.61		
31		193573.01	193573.01	194540.88	193341.78	6.00%	967.87			231.24	967.87	1199.10	0.00	1199.10	-1199.10	-1022.33		
32		193341.78	193341.78	194308.49	193109.39	6.00%	966.71			232.39	966.71	1199.10	0.00	1199.10	-1199.10	-1017.09		
33		193109.39	193109.39	194074.93	192875.83	6.00%	965.55			233.55	965.55	1199.10	0.00	1199.10	-1199.10	-1011.87		
34		192875.83	192875.83	102940 21	192641.11	6.00%	964.38			234.72	964.38	1199.10	0.00	1199.10	-1199.10	-1006.68		

Approach 1

Use the monthly instalment obtained of \notin 1199.10 and the final balance of period 180 amounting to \notin 142097.69 to define a new credit with equal monthly instalments, duration of 15 years, and a final payment given as the sum of the two amounts (\notin 143296.79) by entering the information highlighted in red.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) To tai amount of the credit
Tick the box for an illustrative scenario if the credit is in a foreign currency
B) Conditions governing drawd owns
Scied: Inmediately and Inful 💌
C) Conditions governing repayments (DYNAMIC)
Frequency of repayments monthly NOTE: This will determine the long th of regular periods shown in the table as: MONTHS
A mount (Equal intellects)
Special Payments (*)
Advance on uncent* Did the could be ✓ final Payment* Flad arount ▼ of 345000.70
The long D of the Indipendent of represents different
D) Duration of the credit agreement
Duration Fired • of III periods
COSTS OF THE CREDIT
A) Borrowing rate
Love) Same level for the entre orest term 💌 Define dies - Northal (annua) 💌 privile Annie 🗌 Tick the bex for an illustrative scenario if the credit allows variations in the borrowing rate
Percentage aut
B)Other cost included in the Total Cost of the Credit Given as Amountor & Financed Date of charac
Cost 2 % of the credit int V No* V At conclusion V
Cost 5 K of the drawdowns in each particid 💌 No* 📼
Cost 4 Noffeebalance outdanding (optial + interact) is each parted v Noffee balance outdanding (only optial)
Cost 5 K of the balance cutdanding (only capital) is each parted v No* v Cost 6 K of the credit not used at the baghining of each parted v No* v
Examples Obs(*) Obs(*)
Shared aquity credit

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

D,	.4	3	C	0	E	F	0	HC-	4	4	- K -	Ŀ	- M.	N	0		0		5 :
83	Main re	sults										-				_			
85																			
		ce in the las		0.00			-												
		he first resi	wment:	1199.10		Receicu	tete												
	Duration of	the credit		580	MONTHS	-	-												
8P																			
		ue of the car		0.00	the second se	-	-												
1.11	Annual Par	Cerifiago Rate	of Charge	6.45	DANAWA	Recuicu	lata												
82						-													
		t the credit		161935.69															
94.3	Total amou	nt of credit		100000.00															
	Total amou	nt payable		141935.09															
96																			
00		-	-	Rei	wice 1		Witernat o	C CODO IN	Öher	cisate			Paurant			Chil	100	Illustrativ	e scenario
101				1		-	_				Reve	mant of the o					1	Payments if	Paymen
	Throad	Datedover	heid	Origination	Outstanding	That	Borrowing	interest.	Northerest	Financied	and the second s		-	Contin	Title	Value of parts	Plantes	highest borrowing	highe exchange
			-	Tords Lapsail	(capital pike) (relevent)	2.6100	rate (%)	chaiger	real mercea	P Marceo	Capital	busient.	7446	Frian/ait	1000	and a	ALC: NO	rate (credit	(dome
67								0.00				and and a	-	-				currency)	curren
108	·0	200000-00			_	200000.00			4000.00	-				4000.00	4000.00	196000.00	196000.00	-	
128	1		200006.00	200000.00	201000.00	199800.90	0.00%	1003.02			198.10	1000100	1199.10	0.00	119910	-1199.10	-1192.91		
86	178	-	148548.99	143548.99	144266.73	143067.63	6.00%	717.74			481.96	717.74	1199.10	0.00	1199.10	-1199-10	-477.14	1	
#7	179		143067.63	143067.63	143781-97	143583.87	6.00%	715,54			485.76	715.34	1199.10	0.00	1199.10	-1190.10	474.67		
58	180		142563 #7	147565.87	145295.78	0.80	6.00%	717.92			147583.87	717 97	143396.79	0.00	14329679	-145295.79	-55432-47		
89																			
90																			
	Sum								1000.00	- 10	a series and	21000 12	1.0000000			1.1.0.0.2			
	Year1	200000.00						11938 19		0.00		11958 19				181610.80			
	Year 2 Year 5	0.00						11781.71 11620.88	6,00	0.00	2607.51	11781.71	14389.21	0.00		-14389.20			
	Year 4	0.00						1145014	0.00	0.00	2939.08	1145014		0.00		-14589 20			
	Year 5	0.00						11258.86	0.00	0.00	3120.35	11268.86		0.00					
	Vear 1	0.00						11076 41	0.00	0.00			14389 71	11 00		-14589 30			
	Year 7	6.00						10672.08	0.00	0.00	3517.18	10872.08		0.00					
	Year 8	0.00						10655.15	0.00	0.00	3734.06		14389.21	0.00					
	Year 9	0.00						10424 84	0.00	00.0	3964.37	10424 84		3.00			-8465.40		
101	Vest 10	0.00						1016033	0.00	0.00	4208.89		14589.21	0.00			-7955.49		
02	Vear 11	0.00						9920,73	0,00	0.00	4468.48	9920.75	14389.11	0.00	14389.20	-14389.20	-7476.30		
63	War 12	0.00						9645.13	6.00	8.00	4744.09	0645.23	14389.21	11.00	14389.20	14589.20	7025.97		
104	Vear 12	0.00						8552,52	0,00	0.00	\$036.69	9952.57	14589.21	11.00	14389.30	-14389.20	-6602.78		
105	Year 14	0.00						3041.87	0.00	0.00	\$847.34	9041.87		0.00	14389.20	-14389.20	-6205.05		
	Véar 15	0.00						8712.06	0.00	8.00	147774.85		156486.90			156485.89			
277	Tistal	200000.00						157925 88	-3000 00	0.00	100000.00	157935.88	357935.NE	4000.00	361935.66	-181955-69	0.00		

Approach 2

This approach requires changing manually the results to reduce the duration of the credit to 15-years (180 periods of one month).

To this end, first enter as *Duration of the credit* in the area of *Main results* such term of 180 months.

Then delete the rows with the annual subtotals corresponding to years 16 to 30 (rows 487 to 501). Be aware of not deleting the row with the overall total (row 502), as this row is valid.

	A		. C-	0	E	F	U.	- 917			5.	+	M.	- <u>b</u>	0	9	0	1	1
а:	Main r	esults																	
5																			
6]	Final bala	nce in the las	st period	0.00	2														
7.	Amount of	the first repr	nyment	1199.10		Receirs	date												
8.	Ouristippi d	of the credit		180	MONTHS	-													
19.																			
4t) (s	Present ve	ius of the ca	et flows	0.00															
н.	Annual Per	contage liate	e of Charge	5.4%	DIRAMIC	Becales	late												
92						-													
a i	Total cost	of the credit		185676.00															
14	Tutal arop	unt of predit		200000.00															
		unt navable		435676.00															
10	Sec. L. S.	10111102		10000030															
00												-			_		-	_	-
05	-	1	-	Divi	rice		Antennal or	nicapital	Dife	steps			Payments			Lan	Anna -		e scenarios
226)				a mail	Diretending					1	Pape	manual the ca	ede:					Payments if highest	Payments
	freed.	Threadowni	band.	Outstanding Ionly sage all	to aprilal plus	FINA	Borowing Late DO	interies.	WAR-should	Financed	Capesi	i hanna	-	Conterne	Total	Value at a set.	Presentation	borrowing	exchange
				FLAX CHEAN	(means		1000 100	monthail.		112	anielation	passas.	() was			1.00		rate (credit	(domes
17	_	1 1000000 00				100000 00	-	-	4000.00	-	-			4000.00	Jond bb	A Brindin Alb	195000.00	currency)	currenc
08		200000.00		200000.00	20000000	100000.00	6.00%	1000 000	4000.00		199.10	1000.00	119910	0.00	4000.00	196000.00	-1102.95		
10				199800 90			6 DON	699.00			200 10	999.00	1199 10	0.00	1199.10	-1299 10	-1186 63		
	-			Lalabrin an	tradicaa ad	Tisannin un	D-D-D-D-	Addition			400.10		TEAA TO	0.00	1144.10				
	Year 1	0.00						10655-15	0.00	0.00	\$734.06	10655.15	14380.22	0.00	14339.20	-14389.20	-0034.46		
	Year 9	0.00						10424.84	0,00	0.00	3954 37	10474 84		0.00	14589.30		-8-193.58		
	Year 10	0.00						10180.33	0.00	0.00	4208.89	10380.33		0.00	the second second second	-14389.20	-7985.08		
	Yaar 11	0.00						9920.73	0.00	0.00	4468,4B		14389.21	0.00	14589.20		7507.03		
	Veer 12	0.00						9645.13	00.6	0.00	4744 09	9045.13		0.00	14148 20		-7057.59		
	Yeat 15	0.00						9352.52	0.00	0.00	5036.69		14389.21	0.00	14389.20		-6635.0E		
	Year 14	0.00						9041.87	0.00	0.00	\$347,84		14389.21	0.00	14389.20	-14380.20	-6117.83		
10.00	Year 15	3.00		-	_	_	_	8712.06	0.00	0.00	5677 16		14389 71	0.00		-	-5864.58		
	Fear 16	0.00						8361.50	000	0.00	6027.81			0.00	14389.10	-14389,20	-5513.29		
	Yaar 17 Year 18	0.00						7990.15	0.00	0.00	6399.06		14389.21	0.00	14589 20	-14380.20	5183.22		
										0.00				0.00	14589 10				
_	Tear 19	5.00						7176.45	0.00	0.00	7213.77		14389.21	0.00	14389.20	-14389.20	-4581.17		
	Vear 20 Vear 21	0.00						6259.27	0.00	0.00	8129.94		14389.21	0.00	14589.20	-14389.20	-4049.05		
	Vear 22	0.00						3737.84	0.00	0.00	6611.38		14389.21	0.00	14189.20	-14389.20	-1806 54		
	Venr 22	0.00						\$225.47	0.00	0.00	9163.74		14388.21	0.00	14389.20	-14389.20	-3578.75		
_	Veni 24	100						-4660.17	8 00	0.00	0100.74		14389.21	0.00	14349 20	-14389.70	-3364.49		
	Year 25	0.00						4060 21	0.00	0.00	10129 10		14869 21	0.00	14389.20		-3163 00		
	Vear 26	0.00						3423.14	0.00	0.00	10955.87		14389.21	0.00	14389.20	-14389.20	-1973.78		
-	Vant 27	0.00						1746.78	0.00	0.00	11542.43		14389.21	0.00		14389.20	1795.66		
	Yaar 28	0.00						2028.70	0.00	0.00	12360 51		14389 21	0.00			-2628 29		
	Vear 29	0.00						1266.83	0.00	0.00	13122.88		14389 21	0.00	14389.20		-1470.94		
								an a		1.20	a second second		- Total and			a share way	a stand		
-	Veni 30	0.00						456.04	0.00	0.00	19982.27	456.94	14389.21	0.00	14389.20	-14389.20	-1328.01		

Next, delete the rows of the amortisation table beyond the last month of the 15th year, i.e. month 180 (rows 289 to 468).

	A.		L	4	2	and the		9	- Mar	مري الم	and the second			M	N	9		.0		
05					Bak	ence .		knews o	readmail	Ohe	coute			Pauterna			/ Gell	hine .	Illustrativ	ve scenarios
106			1		-	and the second		1				Piedria	presidente p	edit .	-		1		Payments if	Payments if
107	Freed	2 David	CB/1	(ratal	Outputiding (only expected)		Final	Bonneing rate(%)	konett churges :	Northanced	Financed	Dapital amorticalizari	treve-tr	(teast.	Gomesone		Volumentaria	reason of	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
108	_	0 10000	50.00				200000.00			4000 00					4000.00	4000.00	196000.00	196006.00	currency	currency
109		1		200000.00	200000.00	201000.00	and a second second second	£.00%	1000.00			199.10	1000.00	1199.10	0.00	1199-10	-1199.10			
110		3		199800.90	199800.90	200799.90	199600.80	6.00%	999.00			200.10	999.00	1199.10	0.00	1199.10	1109.10	-1186.83		
111		3		199600 80	199600.80	200598.81	199399 71	8.00%	00 349			201.10	998.00	1199.10	0.00	1199 10	-1199.10	1180.74		
117		4		199399.71	199399 71	200396.70	199197.60	8.00%	997.00			202.50	997.00	1199.10	0.00	1199.10	-1199.10	-1174.68		
119		5		195197.60	199197.60	200193.59	198904 49	6.00%	095.99			209.11	995.00	1199.10	0.00	1199.10	-1199.10	-1168.65		
158	-	152	-	11667.75	11667.73	11725.09	10526.98	£00%	-58.34			1140.76	58.34	1199.10	0.00	1299 10	-1199 10	-197.07		
i û o i		52		10526.98	10526.98	10579 62	9380.52	6.00%	52.63			1146.47	52.63	1199.10	0.00	1199.10	-1199.10	-196.06		
101		552		\$580.57	8960.52	\$437.42	8228.53	6.00%	46.90			1152.20	46.00	1199.10	0.00	1199.10	-1199.10	-195.05		
167.		154		8728.32	8778.37	8269.46	7070.96	6.00%	41.14			1157.96	41.14	1199.10	0.00	1199.10	-1199.10	-194.05		
161	1	855		7070.55	7070.36	7105.71	.9906.61	6.00%	95.95			1163.75	85.35	1199.10	0.00	1199.10	-1199.10	-193.06		
104		356		5906.61	5906.61	5935.14	4757.04	£.00%	29.55			1169.57	29.58	3199.10	0.00	1199.10	-1199.10	-192.07		
0.5		157		4737.04	\$737,04	4760.75	\$501.63	8.00%	23.49			1175-42	23.89	1199 10	000	1199.10	-1199-10	-191.09		
iñli i		358		3561.63	3561.63	3579.44	1380.35	E.00%	17.81			1181.29	17.81	1199.10	0.00	1199.10	-1199.10	-190 10		
HET.		350		2580.33	2380.33	3392.34	1193.14	6.00%	11.00			1187.20	11.90	1194.10	0.00	1109.10	-1199.10	-109.13		
151	-	150	_	1195.14	1193.14	119918	0.00	6.00%	5,97			1395.24	5.97	1199.10	0.00	1199.10	-1199.10	-100.15	-	_
469	-																			
470																				
	Same																			
	Year 1	20000							11938.19			2456.02	11933.19		4000.00		181610.80			
	Year 2		0.00						11781.71				11781.71		0.00		a construction of the second	13084.91		
	Year 3		0.00						11620.88	0.00		2768.35	11670.88		0.00	14389 70		-12801.54		
	Year it		0.00						11450 14	0,00			11450.14		0.00			-11965.06		
	YKBI S		0.00						11268.86			\$120.95	11268.86		0.00			-10872.68		
	Yeert		0.00						11076.01	0.00			11076.41		0.00			-10321/75		
	Yest 7		0.00						10872.08	0.00		3517.13	10872.06		0.00					
	Vear 8		0.00						10655.15				10655.15		0.00					
	Prast 9		0.00						10424 84	0.00			10474.84		0.00					
	Year 10		0.00						10180,38	0.00		4208.89	10180.55		0.00					
	Vear 11		0.00						9930.73			4468.48	9920.75		0.00					
	Venr 12		0.00						9645 18				W645.15		0.00					
	Year 15		0.00						9352.92	0.00		5036.69	9352.52		0.00			-6635.06		
	Year 14		0.00						9041.87	0.00		5347.34	9041.87		0.00					
	Vear 15		0.00						8712.06	0.00		5677.18	8712.06		0.00					
467	Tetal	10000	00.00						231676.58	4000.00	0.00	2000000.00	233876.38	433876.55	4000.00	435676.00	-285676.00	0.00		

To provide full repayment of the credit in period 180, for this period substitute the last payment in the column with the *Total* of *Repayment of the credit* by the reference to the cell where the amount of €143296.79 of Balance Outstanding (capital plus interest) appears. That is, enter the formula =E288 in the former cell. As a result, the Final Balance becomes 0, meaning that the credit repaid in full.

Note that due to these changes, the area of *Main results* reports the error that *the APR is not valid because the present value of the cash flows is not zero.*

15	-		1	105															
16 Fi 87 Au 88 Di 89 Pr 81 Ar 83 Te 84 Te	nount of th station of esent valu- noual Perc stal sost of stal amount	ce in the las the first repa the credit wo of the con- entage Bate f the credit rt of credit	h flows	-676 88 (4.4%) 161935 69 200000 00	MONTHS Cantham Th DIMANGC	Receicu APH in mit Receicu	with trees	n lbn grunn	t saine of t	he coeli Acres	a in cast more.								
12 34 96 00	nai amour	nt peyable		361935-69															
m 🗌		-	-	Bala	ance -	-	Tresso of Co	In the second	Elfore .	0000	i const		Pasterra		-	Cart	larr	Illustrative	e scenarios
06	Permit	Delectorna	Value:	Ducitanding tonly capital)	Dontanding Josephalphan menanti	Prod	Bosowing tate(%)	оровляна разновая	Nitherspord	Financiad	Repar Capital amortuaizer	hreed	i pinte	Contract Hoursel	-	Vision of Association	-	Payments if highest borrowing rate (credit	Payment highes exchange (domes
07	0	100000 00	1			200000.00			4000.00			-		4000 00	4000 00	195000.00	196000.00	currency)	curren
09	- 1		200000.00	200000.00	201000.00		6.00%	1000.00	- design and		199.10	1000.00	1199.10	0.00	1199.10	-1199.10			
102	2		199800.90	199800.90	200799.90	199600.80	6.00%	999.00			200.10	999.00	1199.10	0.00	1199.10	-1199-10	-1186.83		
86.	178		143548.99	143548.99	14426573	143067.63	£.00%	717.74			481.36	717.74	1199.10	0.00	1199.10	-1159 10	-479.90		
\$7	179			143067.63		142583 87	6.00%	715.34			489.76	715.34	1199.10	0.00	1199.10	1299 10	-477.44		
88.	-180		142583.87	142583.87	143296.79	0.00	6.00%	712.91			142583.87	712.92	-1288	0.00	14329679	-140396.79	-56702.95		
89 90																			
91 5:	ino																		
92.14	ar 1	2000000.00						11938.19	4000.00	0.00	2456.02	11983 19	14385.21	4000.00	18389.20	181610.80	182081.83		
93,11	ar 2	0.00						11781.71	0.00	0.00	2607.51	1178171	14580.21	00.0	14580.20	14589,20	13084.91		
94 Ve		0.00						11020 84	0.00	0.00	2768.33			0.00					
95.76		0.00						11450.14	0.00	0.00	2999.08	11450.14		0.00	14389.20	14389.20			
96 14 97 14		00.0						11268.86	0.00	0.00	\$120.85 3312.81	11268.86	14589.21	0.00			-10872.68		
98.Y		0.00						10872.08	0.00	0.00	3517.13	10672.08	14389.21	0.00		-14589.20			
99 Ye		0.00						10655 15	0.00	0.00	1734.06	10655 15	14580.21	0.00	14380.20		-9054 46		
00.74		0.00						10424.84	0.00	0.00	3964.37		14385.11	0.00		-14389.20			
01 Ye	ar 10	0.00						10180.33	0.00	0.00	4208.89	10180.35	14389.11	0.00	14389.20	14389.20	7985.08		
02 1	ar 11	0.00						992075	0.00	0.00	4468.48	0920.75	12589.21	0.02	24589 20	14589-20	-7507.03		
	sar 12	0.00						9845.13	0.00	0.00	4744.09		14389.11	0.00	14389.20	-14389 20			
	ar 13	0.00						9352 52	0.00	0.00	\$056.69		14389.21	0.00					
	ar 14 ar 15	0.00						9041.87	0.00	0.00	5347.54		14580.21		14389.20				
								8712.06	0.00	0.00	167774.85		156486.90			-156486.89			

To obtain the correct APR, click on the button *Recalculate* next to the cell showing the *Annual Percentage Rate of Charge*. A new APR of 6.4% is obtained and the error message disappears.

		ce in the las		0.00		Receicu	ate 1												
	Duration of		diameter .	1000000000	MONTHS	Necaicu	#1#												
8P					0.000														
90	Present Vel	ue of the car	di ficiri	000			-												
91.4	Annual Par	Centago Rate	of Charge	6.45	DYNAMIE	Recuicu	ata 🖉												
92						-	V												
93 7	Total cost o	t the credit		161935.69															
34.3	Total amov	nt of creilin		100000.00															
95	Total amou	nt payable		141935.09															
96																			
100			-	(Bak	wide .	-	Witnessed on	-	Other	- roater	-		Pauranta	_		Cade	1.1	Illustrative	scenarios
101			-	-		-		(indexe)			Reve	mentiotheri			_	-	-	Payments if	Payment
	Throad	Draw downs	in and	Duntanding	Outstanding		Borowing	internet.		-			-	Contin		Velocitat	Plante	highest	highes
			hinai	Lords Lapsail	(Capital pike) (Interest)	Think.	Tate (%)	chaiger	Nothierest	Financed	Capital	beauterst.	7944	Interlat	Tena	and the	11.0	borrowing rate (credit	exchange
107					anever)			0.50			-monthisteries				-			currency)	(domest currenc
108	-0	200000.00				200000.00	-		4000.00	-	_			4000.00	4000.00	196000.00	196000.00		
1129	1			200000.00	201000.00	199800.90	5.00%	1000.00			199.107	1000100	1199.10	0.00	1199 10	-1199 10	-1192.91		
186	178	-	142548.99	141548 99	144266.73	143067.63	6.00%	717.74			481.96	717.74	1199.10	00.0	1199.10	-1199 10	-477.14	-	
187	179				143781-97		6.00%	715.54			485.76	715.34	1199.15	0.00	1199.10		474.67		
158	180		142563 #7	147565 87	145295.79	0.00	6.00%	712.92			147585.87	712 92	14339679	0.00	143296 79	-143295.79	-55432-47		
189																			
290																			
191																			
	Vear1	200000.00						11938 19	4000.00	0.00		11958 19				181610.80			
	rear 2	0.00						11781.71	0,00	0.00		1178171		0.00	14389.20				
	Year 5 Year 4	0.00						11620.88	0.00	0.00	2758.35		14389.21	0.00	14569 20	-14389.20	-12289-40		
	Year 5	0.00						11258.86	0.00	0.00			14389.11	0.00	14389.20		10853.43		
	Vear ±	0.00						11076 41	0.00	0.00		11076.41		100		-14589 10			
	fear 7	6.00						10672.08	0.00	0.00	3517.18			0.00	14389.20				
	ear 8	0.00						10655.15	0.00	0.00	3734.06		14389.21	0.00	14389.20				
300	Tear 5	0.00						10424.84	00.0	0.00	3964.37	10424 84	14389.21	0.00	14589 20	-14389 20	-8465.40		
100	Nest 19	0.99						1016035	0.00	0.00	4208.89	10102.33	14389.21	0.00	14389.20	-14389 20	-7955.49		
102	Vear 11	0.00						9920,73	0,00	0.00	4468.48	9920.73	14389.11	0.00	14389.20	-14389.20	-7476,30		
1.12.14	War 12	0.00						9645.13	0.00	1.00	4744.09		14389.21	11.00	14389.20	-14589.20			
	Vear 12	0.00						8552.52	0,00	0.00		9952.57		0.00	14289.30				
	Year 14	0.00						3041.87	0.00	0.00	\$347.34		14389.21	0.00		-14389.20	-6205.05		
506	vear 15	0.00						8712.06	6.00	0.00			156486.90			156485.89	-61791.53		
	Tictal	200000.00						157925.88	-6000 (00)		1000000.00					-181955-89			

Click on the button *Reset* and then enter the information highlighted in red.

n

Description of the creat product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Tick the bex for an illustrative scenario if the credit is in a foreign currency
B) Conditions governing drawdowns
Soloti Immediately and Inful 💌
C) Conditions governing repayments (DYNAMIC)
Proquency of repayments monthly NOTE: This will determine the length of regular periods shown in the table as: MONTES
Amount Interest regularly and repayment of capital atthe and
Social Permonts (*)
_Rdvance payment" No of the credit int
_ final Paymont* Final amount 💌
The long \$5 all the 1 million and a first and 1 million and
D) Duration of the credit agreement
Duration Firad 🔹 of 🗯 poriods
COSTS OF THE CREDIT
A)Borrowing rate
Level Samakwal for the orbit term 💽 Defined as Northal (annual) 文 DYNAMIC
Percentage 7.mm Control of the set of the
B)Other cost included in the Total Cost of the Credit
Given as Amounter's financed Date of charge
Cost 1 % of the orabilinit V Xo* Xo* At conclusion V At conclusion V
Cost 5 % of the drawdowne in each partod 💌 No" 💌
Cost 4 Vofthe balance cutatanding (aptail + hitered) in each partod 💌 No* 💌
Cast S Northe balance cutatanding (cn) capital () heach partod 💌 Nor 💌
Cost 6 Nofthe creditor used at the beginning of each particid V No" V Cost 7 Nofthe final balance in each particid V
Examples Obs(*) Obs(*)
L Shand equity credit

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Main re	sults																	
													Illustrative s	cenario of cl	hange in the	borrowing rat	е	
	the first repay the first repay the credit		0.00 240	MONTHS	Recalcu	late							opportunity, th	ne instalment		evel entered ab shown in the la		
																	8.9%	
	ue of the cash centage Rate		0.00 7.4%	DYNAMIC	Recalcu	late												
Total cost o	f the credit		284000.80															
Total amou	nt of credit		200000.00															
Total amou	nt payable		484000.80															
			Bali	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
										Repay	Repayment of the credit						Payments if	Payments if
Period	Dra wdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Capital Interest Total		Costs not Total financed		Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00	4000.00	
1		200000.00	200000.00	201166.67	200000.00	7.00%	1166.67			0.00	1166.67	1166.67	0.00	1166.67	-1166.67	-1159.72	1166.67	
2		200000.00			200000.00	7.00%	1166.67			0.00	1166.67	1166.67	0.00	1166.67	-1166.67	-1152.82	1166.67	
3		200000.00	200000.00		200000.00	7.00%	1166.67			0.00	1166.67	1166.67	0.00	1166.67	-1166.67	-1145.95	1166.67	
4		200000.00	200000.00		200000.00	7.00%	1166.67			0.00	1166.67	1166.67	0.00	1166.67	-1166.67	-1139.13	1166.67	
5		200000.00	200000.00		200000.00	7.00%	1166.67 1166.67			0.00	1166.67 1166.67	1166.67 1166.67	0.00	1166.67 1166.67	-1166.67	-1132.34	1166.67 1166.67	
7		200000.00	200000.00		200000.00	7.00%	1166.67			0.00	1166.67	1166.67	0.00	1166.67	-1166.67	-1125.00	1398.33	
8		200000.00			200000.00	7.00%	1166.67			0.00	1166.67	1166.67	0.00	1166.67	-1166.67	-1118.30	1398.33	
9		200000.00	200000.00		200000.00	7.00%	1166.67			0.00	1166.67	1166.67	0.00	1166.67	-1166.67	-1105.61	1398.33	
10		200000.00	200000.00		200000.00	7.00%	1166.67			0.00	1166.67	1166.67	0.00	1166.67	-1166.67	-1099.03	1398.33	
11		200000.00	200000.00	201166.67	200000.00	7.00%	1166.67			0.00	1166.67	1166.67	0.00	1166.67	-1166.67	-1092.48	1398.33	
12		200000.00	200000.00	201166.67	200000.00	7.00%	1166.67			0.00	1166.67	1166.67	0.00	1166.67	-1166.67	-1085.98	1398.33	
Sums																		
Year 1	200000.00						14000.00	4000.00	0.00	0.00	14000.00	14000.00	4000.00	18000.04	181999.96	182530.21	19390.00	
Year 2	0.00						14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04	-14000.04	-12538.15	16779.96	
/ear 3	0.00						14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04	-14000.04	-11670.94	16779.96	
Year 4 Year 5	0.00						14000.00	0.00	0.00	0.00	14000.00 14000.00		0.00	14000.04 14000.04	-14000.04	-10863.71 -10112.32	16779.96 16779.96	
Year 5 Year 6	0.00						14000.00 14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04	-14000.04	-10112.32	16779.96	
Year 7	0.00						14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04	-14000.04	-8761.85	16779.96	
Year 8	0.00						14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04	-14000.04	-8155.83	16779.96	
Year 9	0.00						14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04	-14000.04	-7591.73	16779.96	
/ear 10	0.00						14000.00	0.00	0.00	0.00	14000.00	14000.00	0.00	14000.04	-14000.04	-7066.64	16779.96	
Year 11	0.00						14000.00	0.00	0.00	0.00	14000.00	14000.00	0.00	14000.04	-14000.04	-6577.88	16779.96	
Year 12	0.00						14000.00	0.00	0.00	0.00	14000.00	14000.00	0.00	14000.04	-14000.04	-6122.92	16779.96	
Year 13	0.00						14000.00	0.00	0.00	0.00	14000.00	14000.00	0.00	14000.04	-14000.04	-5699.42	16779.96	
Year 14	0.00						14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04	-14000.04	-5305.22	16779.96	
Year 15	0.00						14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04	-14000.04	-4938.28	16779.96	
Year 16	0.00						14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04	-14000.04	-4596.72	16779.96	
(ear 17	0.00						14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04	-14000.04	-4278.79	16779.96	
Year 18 Year 19	0.00						14000.00 14000.00	0.00	0.00	0.00	14000.00		0.00	14000.04 14000.04	-14000.04	-3982.84	16779.96 16779.96	
Year 19 Year 20	0.00						14000.00	0.00	0.00	200000.00	14000.00		0.00	214000.04	-14000.04	-3/0/.3/ -51146.71	216779.96	
. cui 20	0.00						280000.00	4000.00	0.00	200000.00	280000.00		4000.00	484000.80		-51140.71	538209.24	

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Thick the box for an illustrative scenario if the credit is in a foreign currency
B) Conditions governing draw downs
Soloof Immediately and Inful 💌
C) Conditions governing repayments (DY NAMI C)
Frequency of repsymental monthly NOTE: This will determine the length of regular periods shown in the table as: MONTHS
Amount Increasing instalments v by a fill of S overy 12 periods
Special Payments (*)
Advance psymont* K of the oracle line 💌
Enal Paymont* Pladarout x
_ The langth at the hed period of represent with terms
D) Duration of the credit agreement
Durstion Fixed of poriods
COSTS OF THE CREDIT
A)Borrowing rate
Level Same keel for the method and term 📼 Defined as Normal (annual) 💽 DYNAMIC 🗆 Tick the bex for an illustrative segments if the credit allows variations in the borrowing rate
Porconiago austi
B) Other cost included in the Total Cost of the Credit
Given as Amounter's Ananced Date of charge
Cost1 No of the cruck limb No* At conclusion Cost2 No of the cruck limb No* At conclusion Cost3 No of the drawdowne is each parted No* No*
Cost 2 % of the and timt V No* H At conclusion V
Cost 4 No of the balance cutatening (capital + Interest) in each particid 💌 No* 💌
Cost 3 No of the balance cutationing (only capital) in each particid 💌 No* 💌
Cost 8 No of the cost not used at the baginning of each particid 💌 No * 💌
Cost 7 % of the final balance in each parted
Examples Obs(*) Obs(*)
L Shand aquity codit

Click on the buttons Generate

and then Calculate to obtain the results and main the amortisation table.

Main results

Year 14

Year 15

Year 16

Year 17

Year 18

Year 19

Year 20

Total

0.00

0.00

0.00

0.00

0.00

0.00

0.00

200000.00

Main re	esults																	
	ce in the last the first repa the credit		0.00 1130.33 240	MONTHS	Recalcu	late												
	ue of the cas centage Rate		0.00 6.4%	DYNAMIC	Recalcu	late												
	of the credit nt of credit nt payable		168469.64 200000.00 368469.64															
			Bala	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cr	edit Total	Costs not financed	Total	Value at each period	Present value	borrowing rate (credit currency)	exchange rat (domestic currency)
C	20000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00	currency	currency
1		200000.00	200000.00	201000.00		6.00%	1000.00			130.33	1000.00	1130.33	0.00	1130.33	-1130.33			
2		199869.67	199869.67		199738.68	6.00%	999.35			130.98	999.35	1130.33	0.00	1130.33	-1130.33			
3		199738.68				6.00%	998.69			131.64	998.69	1130.33	0.00	1130.33	-1130.33			
4	L .	199607.04	199607.04		199474.75	6.00%	998.04			132.30	998.04	1130.33	0.00	1130.33	-1130.33			
5	;	199474.75	199474.75	200472.12		6.00%	997.37			132.96	997.37	1130.33	0.00	1130.33	-1130.33			
6	5	199341.79	199341.79	200338.50	199208.16	6.00%	996.71			133.62	996.71	1130.33	0.00	1130.33	-1130.33	-1095.77		
7	,	199208.16	199208.16	200204.20	199073.87	6.00%	996.04			134.29	996.04	1130.33	0.00	1130.33	-1130.33	-1090.12		
8	3	199073.87	199073.87	200069.24	198938.91	6.00%	995.37			134.96	995.37	1130.33	0.00	1130.33	-1130.33	-1084.49		
9)	198938.91	198938.91	199933.60	198803.27	6.00%	994.69			135.64	994.69	1130.33	0.00	1130.33	-1130.33	-1078.90		
10)	198803.27	198803.27	199797.29	198666.95	6.00%	994.02			136.32	994.02	1130.33	0.00	1130.33	-1130.33	-1073.33		
11		198666.95	198666.95	199660.29	198529.96	6.00%	993.33			137.00	993.33	1130.33	0.00	1130.33	-1130.33	-1067.79		
12		198529.96	198529.96	199522.61	198392.27	6.00%	992.65			137.68	992.65	1130.33	0.00	1130.33	-1130.33	-1062.28		
13	5	198392.27	198392.27	199384.23	198219.99	6.00%	991.96			172.28	991.96	1164.24	0.00	1164.24	-1164.24	-1088.50		
14	l .	198219.99	198219.99	199211.09	198046.85	6.00%	991.10			173.14	991.10	1164.24	0.00	1164.24	-1164.24	-1082.88		
Sums																		
/ear 1	200000.00						11956.27				11956.27	13563.99	4000.00	17563.96				
/ear 2	0.00						11845.73				11845.73	13970.91	0.00	13970.88	-13970.88			
/ear 3	0.00						11702.93				11702.93	14390.04	0.00	14390.04	-14390.04			
/ear 4	0.00						11525.12				11525.12		0.00	14821.80	-14821.80			
/ear 5	0.00						11309.36				11309.36		0.00	15266.40				
fear 6	0.00						11052.49				11052.49	15724.38	0.00	15724.44	-15724.44			
/ear 7	0.00						10751.15				10751.15	16196.12	0.00	16196.16				
/ear 8	0.00						10401.73				10401.73	16682.00	0.00	16682.04	-16682.04			
/ear 9	0.00						10000.38				10000.38	17182.46	0.00	17182.44				
Year 10	0.00						9542.99				9542.99	17697.93	0.00	17697.96				
/ear 11	0.00						9025.16				9025.16		0.00	18228.84	-18228.84			
Year 12	0.00						8442.21				8442.21	18775.74	0.00	18775.68				
Year 13	0.00						7789.11	0.00	0.00	11549.90	7789.11	19339.01	0.00	19338.96	-19338.96	-8877.32		

7060.51

6250.70

5353.59

4362.67

3271.00

2071.17

755.29

164469.54 4000.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00 12858.67

0.00 14266.05

0.00 19148.21

0.00 21020.62

0.00 23029.25

0.00 15778.66 5353.59 21132.26

0.00 17403.55 4362.67 21766.23

7060.51 19919.18

6250.70 20516.75

3271.00 22419.21

2071.17 23091.79

755.29 23784.54

0.00 200000.00 164469.54 364469.54 4000.00 368469.64 -168469.64

0.00 19919.16 -19919.16

0.00 20516.76 -20516.76

0.00 22419.24 -22419.24

0.00 23091.84 -23091.84

0.00 23784.60 -23784.60

0.00 21132.24 -21132.24

0.00 21766.20 -21766.20

-8593.14

-8318.06

-8051.76

-7794.00

-7544.51

-7302.99

-7069.20

0.00

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Tick the box for an illustrative scenario if the credit is in a foreign currency Amount
8) Conditions governing draw downs
Solect Immediately and Inful
C) Conditions governing repayments (DY NAMI C)
Frequency of repayments monthy NOTE: This will determine the length of regular periods shown in the table are MONTHS
Amount Increasing instalments 💌 by a 16 of -5 overy 12 poriods
Soccial Payments (*)
Advance payment" Nofthe switchet T
Linal Paymont" Paradamount 🐨
The length of the Yell periods in repayment is different
D) Duration of the credit agreement
Duration Fixed of periods
COSTS OF THE CREDIT
A) Borrowing rate
Level Same level for the ordet term 💌 Defined as Normal (ennue) 💌 DYNAMIC 🗋 Tick the bex for an illustrative scenario if the credit allows variations in the borrowing rate
Percentage Lati
8) Other cost included in the Total Cost of the Credit
Given as Amounter's Financed Date of charge
Cost1 % of the methating V V V V V V V V V V V V V V V V
Cost 1 % of the analt limb ▼
📙 Cost 4 🐘 of the balance outstanding (aptal + Internet) in each period 💌 No* 💌
📙 Cost S 🐘 of the balance outstanding (only capital) in each partod 💌 No" 💌
Cost 8 Ve of the credit not used at the beginning of each particid 💌 No* 💌
Cost 7 % of the final balance in each particid 💌
Examples Obs(*) Obs(*)
L Shared aquity credit

Main results

Click on the buttons Generate and then Calculate to obtain the main results and the amortisation table.

Final balance in the last period	0.00	
Amount of the first repayment	1778.58	Recalculate
Duration of the credit	240 MONTHS	
Present value of the cash flows	0.00	
Annual Percentage Rate of Charge	6.5% DYNAMIC	Recalculate
Total cost of the credit	128559.08	
Total amount of credit	200000.00	
Total amount payable	328559.08	

			Bala	nce		Interest o	n capital	Other	costs	Payments					Cash flows		Illustrative scenarios	
										Repay	ment of the cr	edit					•	-
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing Interest rate (%) charges		Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1		200000.00	200000.00	201000.00	199221.42	6.00%	1000.00			778.58	1000.00	1778.58	0.00	1778.58	-1778.58	-1769.31		
2		199221.42	199221.42	200217.53	198438.95	6.00%	996.11			782.47	996.11	1778.58	0.00	1778.58	-1778.58	-1760.10		
3		198438.95	198438.95	199431.14	197652.56	6.00%	992.19			786.39	992.19	1778.58	0.00	1778.58	-1778.58	-1750.93		
4		197652.56	197652.56	198640.82	196862.24	6.00%	988.26			790.32	988.26	1778.58	0.00	1778.58	-1778.58	-1741.81		
5		196862.24	196862.24	197846.55	196067.97	6.00%	984.31			794.27	984.31	1778.58	0.00	1778.58	-1778.58	-1732.73		
6		196067.97	196067.97	197048.31	195269.73	6.00%	980.34			798.24	980.34	1778.58	0.00	1778.58	-1778.58	-1723.71		
7		195269.73	195269.73	196246.08	194467.50	6.00%	976.35			802.23	976.35	1778.58	0.00	1778.58	-1778.58	-1714.73		
8		194467.50	194467.50	195439.84	193661.26	6.00%	972.34			806.24	972.34	1778.58	0.00	1778.58	-1778.58	-1705.79		
9		193661.26	193661.26	194629.56	192850.98	6.00%	968.31			810.27	968.31	1778.58	0.00	1778.58	-1778.58	-1696.91		
10		192850.98	192850.98	193815.24	192036.66	6.00%	964.25			814.33	964.25	1778.58	0.00	1778.58	-1778.58	-1688.07		
11		192036.66	192036.66	192996.84	191218.26	6.00%	960.18			818.40	960.18	1778.58	0.00	1778.58	-1778.58	-1679.27		
12		191218.26	191218.26	192174.35	190395.77	6.00%	956.09			822.49	956.09	1778.58	0.00	1778.58	-1778.58	-1670.52		
13		190395.77	190395.77	191347.75	189622.53	6.00%	951.98			773.24	951.98	1725.22	0.00	1725.22	-1725.22	-1611.96		
14		189622.53	189622.53	190570.64	188845.42	6.00%	948.11			777.11	948.11	1725.22	0.00	1725.22	-1725.22	-1603.57		
Sums																		
Year 1	200000.00						11738.74	4000.00	0.00	9604.23	11738.74	21342.97	4000.00	25342.96	174657.04	175366.13		
Year 2	0.00						11164.27	0.00	0.00	9538.40	11164.27	20702.68	0.00	20702.64	-20702.64	-18798.85		
Year 3	0.00						10593.33	0.00	0.00	9488.26	10593.33	20081.60	0.00	20081.64	-20081.64	-17127.11		
Year 4	0.00						10024.97	0.00	0.00	9454.18	10024.97	19479.15	0.00	19479.12	-19479.12	-15603.92		
Year 5	0.00						9458.19	0.00	0.00	9436.58	9458.19	18894.77	0.00	18894.72	-18894.72	-14216.23		
Year 6	0.00						8892.02	0.00	0.00	9435.91	8892.02	18327.93	0.00	18327.96	-18327.96	-12952.02		
Year 7	0.00						8325.41	0.00	0.00	9452.69	8325.41	17778.09	0.00	17778.12	-17778.12	-11800.18		
Year 8	0.00						7757.30	0.00	0.00	9487.45	7757.30	17244.75	0.00	17244.72	-17244.72	-10750.74		
Year 9	0.00						7186.60	0.00	0.00	9540.81	7186.60	16727.41	0.00	16727.40	-16727.40	-9794.68		
Year 10	0.00						6612.18	0.00	0.00	9613.41	6612.18	16225.59	0.00	16225.56	-16225.56	-8923.61		
Year 11	0.00						6032.85	0.00	0.00	9705.96	6032.85	15738.82	0.00	15738.84	-15738.84	-8130.05		
Year 12	0.00						5447.42	0.00	0.00	9819.24	5447.42	15266.65	0.00	15266.64	-15266.64	-7407.02		
Year 13	0.00						4854.59	0.00	0.00	9954.06	4854.59	14808.65	0.00	14808.60	-14808.60	-6748.28		
Year 14	0.00						4253.07	0.00	0.00	10111.32	4253.07	14364.39	0.00	14364.36	-14364.36	-6148.16		
Year 15	0.00						3641.48	0.00	0.00	10291.99	3641.48	13933.46	0.00	13933.44	-13933.44	-5601.40		
Year 16	0.00						3018.38	0.00	0.00	10497.08	3018.38	13515.46	0.00	13515.48	-13515.48	-5103.28		
Year 17	0.00						2382.28	0.00	0.00	10727.71	2382.28	13110.00	0.00	13110.00	-13110.00	-4649.43		
Year 18	0.00						1731.62	0.00	0.00	10985.08	1731.62	12716.70	0.00	12716.64	-12716.64	-4235.93		
Year 19	0.00						1064.75	0.00	0.00	11270.45	1064.75	12335.19	0.00	12335.16	-12335.16	-3859.23		
Year 20	0.00						379.96	0.00	0.00	11585.18	379.96	11965.14	0.00	11965.08	-11965.08	-3516.02		
Total	200000.00						124559.40	4000.00	0.00	200000.00	124559.40	324559.40	4000.00	328559.08	-128559.08	0.00		

Click on the button *Reset* and then enter the information highlighted in red.

The duration of the credit in this example depends on the amount of the repayments and will be determined internally by the simulator. However, if you plan to enter or change manually the values in the table before amortisation calculating the APR, you should enter as Duration of the credit agreement a high number of periods (e.g. 360 months), so that the table will not be extended by the simulator without considering your changes.

Description of the credit product			
MAIN FEATURES OF THE CREDIT PRODUCT			
A) Total amount of the credit			
·	E Tick the box for an illustrative scenario if the credit is in	a foreign currency	
Amount			
B) Con ditions go verning draw dow ns			
Solicol Immediately and Inful			
C) Conditions governing repayments (DYNAMIC)			
Frequency of repayments monthly	NOTE: This will determine the length of regular periods she	town in the table as: <u>MONTPS</u>	
Amount Contant arount known inadvance	amount of 1500		
Soccial Revocats (*)			
Advance payment* % of the credt int	-		
Final Payment* Fixed amount			
the long the title had period at repayment is different			
D) Duration of the credit agreement			
Duration Fixed 💌 of	🗯 perioda		
COSTS OF THE CREDIT			
A)Borrowing rate			
Lovel Samelevel for the artise credit term 📼	Defined as Northal (annual)	Tick the box for an illustrative scenario if the credit allows variations in the borrowing rate	
Percentage			
B)Other cost included in the Total Cost of the Credit			
Given as		f shargs	
Cost 1 % of the multimb	The At conclusion		
Cost 2 % of the credit limit	No" At conclusion No" No"	V	
Cost 3 % of the drawdowns in each parted Cost 4 % of the balance outstanding (apital + interest) in each			
Cost + w or the balance outstanding (alpha) + heaver, in each Cost 5 % of the balance outstanding (only capital) in each perio			
Cost 5 W of the credit not used at the beginning of each period	• • • • • • •		
Cost 7 % of the final balance in each period	₩ [1]		
Examples	obs(*)	Obs(*)	
Shared aquity credit			

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

As shown in the amortisation table and the main results, the duration of the credit resulting from the repayments is 221 months.

E.	Main r	esults																	
85																			
		nce in the las	and the second second	0.00			-												
		the first repa	iyment			Recalcu	(ete												
	Distriction of	f the credit		221	MONTHS														
19	La rate	a la cara da	Carton -																
		iue of the cas		0.00	and a start little		on h												
91 4 92	HIGHI PA	carrbage Rate	di cuerte	5.22	ENNAMIE	Receica	lete												
100	Total Print	of the credit		184407.70															
10.00		unt of credit		200000.00															
-		unt payable		E34407.70															
96	inchi and	and Personal		20000110															
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05				Bak	rice		imerent o	n capital	Dher	costs	Bert	event of the or	Paymentel		_	Cell	fuer I	Illustrative	scenarios
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67				- 1999	President		beau i				amortsaliofe	"Solution						Listerscol)	-usishe
38	- 4	200000.00	()			200000.00			4000.00					4000.00	4000.00	296000.00	196000.00		
29			200000.00	200000.00	201000-00	199500.00	8.00%	1000.00			100.00	1000 00	1500.00	0.00	1500.00	-1500.00	-1492.20		
10	- 1		199500.00	199500.00	200497,50	198997.50	E 00%	997.50			502.50	997.50	1500.00	0.00	1500.00	1500.00	-1484 45		
28	124	1	1896.19	1890.19	1905.67	405.67	6.00%	9.48	-		1490.52	9.48	1500.00	0.00	1500.00	-1500.00	476.67	_	_
29	22		405.67	405.57	407.78	8.00	£.00%	2.08			405.67	2.05	407.20	0.00	407.70	-407 70	-128.88		
	Suma																		
	fear 1	200000.00						11832.22	4000.00	0.00			18000.00	4000.00		178000.00			
	Fear 1	0.00						11451 80	0.00	0.00		11451.80		0.00	18000.00		16348.42		
	tear 1	0.00						11047.93	0.00	0,00		11047 85		0.00	18000 00		-14426 54		
	Year 4	0.00						10619.14	0.00	0.00	7880.86	10619.14	18000.00	00.0	18000.00		-13552.05		
	mar 6	0.00						9680 59	0.00	0.00		Uninci Gu	18000.00	0.00	18000.00		-12750.58		
	(co/ 7	0.00						9167 46	0.00	0.00		9167 40.	18000.00	0.00	18000.00		-11958.90		
	Year B	0.00						8622.69	0.00	0.00		8622.69	18000.00	0.00	18000.00		111234 00		
14.1	tioner 31	0.00						8044.33	00.0	8,00	9955.68	8044.32	18000.00	0.00	18000.00	100000	-10555.04		
12.7	rear 10	0.00						7430.28	0.00	0.00	10569.72	7450.28	18000.00	0.00	18000.00	-18000.00	-9918.85		
	Year II	0.00						6778.86	0.00.	0.00	11721.54	6778.36	18000.00	0.00	18000.00		-8312 44		
	thar 12	0.00						5085 28	0.00	0.00		6085.25	18000.00	0.00	18000.00		-8747.98		
	Tear 13	0.00						5351.42	0.00	0.00		1351.42		0.00	18000.00		-6217.68		
	Year 14	0.00						4571.28	0,00	0.00		4571.28	18000.00	0.00	18000.00		-7719.57		
	Year 15	0.00						2853.69	0.00	0.00		3745.03	18000.00	0.00	18000 00		-7251.64		
	Year 17	0.00						1930 11	0.00	0.00		1930 11	18000.00	0.00	18000.00		-6812.07		
	Vear 18	0.00						038.06	0.00	0.00		956.96	18000.00	0.00	18000.00		-6011.26		
	Year 19	0.00						84.30	0.00	0.00		84 30	5407.70	0.00	6407.70		-2050 54		
52.0																			

The simulator also update the duration previously entered to this final number of periods.

D) Duration of the credit agreement

Duration Fixed of 221 periods

Click on the button *Reset* and then enter the information highlighted in red.

The duration of the credit in this example depends on the amount of the repayments and will be determined internally by the simulator. However, if you plan to enter or change manually the values in the table before amortisation calculating the APR, you should enter as Duration of the credit agreement a high number of periods (e.g. 360), so that the table will not be extended by the simulator without considering your changes.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Tick the box for an illustrative scenario if the credit is in a foreign currency Amount
B) Conditions governing drew downs
Solodi Immedataly and Inful 💌
C) Conditions governing repayments (DYNAMIC)
Frequency of repsymental monthly
Amount Interest plus constant amount incomin advance 💌 amount of
Special Payments (*)
Advance payment* Viertha oraclinit 💌
Linal Paymont" Rudamount 💌
The length of the first periods in sparse and a different
D) Duration of the credit agreement
Duration Fired v of mpcriods
COSTS OF THE CREDIT
A)Borrowing rate
Level Same level for the atthe anthe anthe anthe Control of the codit allows variations in the borrowing rate
Percenta ge Luti
B) Other cost included in the Total Cost of the Credit
Given as Amounter's Financed Date of charge
Cost 1 % of the oracle int V
Cost 3 Woffthe drawdowne in each parlod V No* V Cost 4 Woffthe balance outstanding (optial + interest) in each parlod V No* V
L Cost = % of the balance contracting (appear + manual) mean participation = not = Cost = % of the balance contracting (not contracting the contracting in the cost = % Not
Cost 5 % of the order to used at the beginning of each particle ₩ Ne ⁴ ₩
Cost 7 % of the final balance in each particid 🔹
Examples Obs(*) Obs(*)
L Shamd equity could

As shown in the amortisation table and the main results, the duration of the credit resulting from the repayments is 223 months.

		And Television	t period	0.00	ř .														
		Ethe First repair	Munici	0.00		Recalcu	(ate												
	Duramum.	of the Londs		223	MONTHS														
-	Instant.	alue of the cas	h their	0.00															
		ercentage Rate			DINIAMIC	Recalcu	late												
12				-															
3.7	total cos	of the credit		115611.50															
43	futal am	uni of credit		100000 00															
5	tetal am	wideyec truu		319611 50															
6									_			_				_	_		
0		-	-	44.1			howard to	a la	Other	and a		-	Patrama		_	Call		Illustrative	
25 Xe				DM	Wi SP	1	STIRLING D	U Calina	Owner	DOGTE	Bene	mania obline ce	and the second second		_	Carr		inustrative	
1	Peter	Dauterra	mill	Datandro	Guldanding	-14-14	Borowing	Warest		and the	1.199		1.51	Cheller		Value Kinishi		200220	i ane
			Inisal.	Lonia capical		Print	rate (%)	phager	Notikanceit	Financied	Capital	Increst-	Table	Interiord	Treat	ment	Pressingabler	former gi den	and/set
2				10000				and a second	-	_	Montesech	the base	-					Digramit/	1 miles
5		0 200000.00			11-1-1-1-1	200000.00	-		4000.00	-				4000.00	4000.00	196000.00	196000.00		-
9		1			201006.00		£.00%	1000.00			900.000	1000.00	1900.00	0.00	1900.00	1900 00	1890.07		
ŋ.		5	199100.00	399100.00	200095-50	198200.00	H ODAE	995.50			900.00	995.50	1895.50	0.00	1895-50	-1895.30	-1875.75		
ŝ.	22	2	1100.00	1100.00	1105.50	200.00	6.00%	5.50			900.000	5.50	905.50	0.00	305.50	-905.50	-262.60		
1	22	2	200.00	200.00	201.00	0.00	6.00%	1.00			200.00	1.00	201.00	0.00	201.00	-201.00	-62.45		
	iums	Constant and						Lines and	Idda ab					Jane Fal					
	mar 1	200000.00						11703.00	4000.00	0.00	10800.00	11703.00	12503.00	4000.00	26503.00		174244.02		
	fear 3	0.00						11055.00	0,00	0.00	10800.00	11055 00	21855.00	0.00	21855.00		-19641 18		
	sur 4	0.00						9759.00	0.00	0.00	10600.00	8759.00		0.00	20550.00				
	ear 5	0.00						9111.00	0.00	0.00	10800.00		19911.00	0.00	1991100		-14957.98		
0	ear fi	0.00						B493.00	0.00.	0.00	10800.00	8463.00	19263.00	0.00	19363.00	-19263.00	-11598.07		
2)	isar 7	0.00						7815.00	0.00	0.00	10800.00	7815.00	18615.00	0.00	18615.00	18615.00	-12339.57		
	Rear II	0.00						7167.00	0.00	0.00	10400.00	7167.00		0.00	17967.00		-11185 98		
	ear 9	0.00						6519.00	0.00	0.00	10600.00	6519.00	17319.00	8.00	17519.00		-10123.42		
	ser 10	0.00						5871.00	0.00	8.00	10800.00	5671.00	16671.00	0.00	16671.00		-9150.62		
	ear 12	0.00						\$223.00 4575.00	0.00	0.00	10800.00	4575.00		0.00	16025.00		+8258.80		
	nar 13	0.00						3927.00	0.00	0.00	10800.00		14727.00	0.00	14727.00		16693 56		
	mar 14	0.00						9279 00	0,00	0.00	10400.00	5279.00		0.00	14079.00		-6008.97		
e'n	ear 15	0.00						2651.00	0.00	0.00	10808.00	3651.00		0.00	13431.00	-13451.00	-5382.98		
0	uar 16	0.00						1983.00	0.00	0.00	10600.00	1985.00		0.00	12783.00	12785.00	-4810.08		
	eer 17	0 00						1595.00	0.00	0.00	10900.00		12135.00	0,00	12135.00		-4268.72		
4		0.00						687.00	0.001	0.00	10800.00	687.00	11487.00	0.00	81487.00	-11487.00	-3812.25		
51 52	ear 18	0.00						101.50	0.00	0.00	5600.00	101.50	5701-50	00.0	5701 50	5701.50	+1805 21		

The simulator also update the duration previously entered to this final number of periods.

D) Duration of the credit agreement

Duration Fixed
of 223 periods

Description of the credit product	
MAIN FEATURES OF THE CREDIT PRODUCT	
A) Total amount of the credit	
Tick the box for an illustrative scenario if the credit is in a foreign currency	
Amount 2	
8) Con ditions go verning drew dow ns	
Solod Immediately and Inful	
C) Conditions governing repayments (DY NAMIC)	
Frequency of repayments monthy NOTE: This will determine the length of regular periods shown in the table as: MONTHS	
Amount Interest plus equal repayments of capital regularly	
Social Payments(*)	
Advance payment* No of the credit init 💌 Initial Payment* Plued ancust 💌	
Contract process (2)	
The long the title line) periodial represent is defensed	
D) Duration of the credit agreement	
Duration Fixed 💌 of 📼 poriods	
COSTS OF THE CREDIT	
A) Borrowing rate	
Love) Same level for the ordet term 💌 Defined as Northal (annual) 💌 DYNAMIC 🗌 Tick the bex for an illustrative scenario if the predit allows variations in the borrowing rate	
Percentage aut	
8) Other cost included in the Total Cost of the Credit	
Given as Amounter% Financed Date of charge	
Cost 1 Nother and time T Nother and time Cost 2 Nother and time Nother and time Nother and time Cost 3 Nother and time Nother and time	
Cost 2 % of the aveit limit No* No* At concluden	
Cost 4 S of the balance outstanding (apta) + interval) in each partod 💌 Nor 💌	
Cost 5 K of the balance outstanding (only capital) in each parted 💌 No. 💌	
Cost 6 Verfrier welt not used state beginning of each period 💌 No* 💌	
Cost 7 Vi of the Final balance in each period 💌	
Examples Obs(*) Obs(*)	
L Shared equity credit	

Click on the buttons *Generate*

and then *Calculate* to obtain the main results and the amortisation table.

Main results

Iviaiii i c	esuits																	
Amount of	ce in the last the first repa f the credit	•	0.00 240	MONTHS	Recalcu	late												
Present val	ue of the cas	h flows	0.00															
Annual Per	centage Rate	of Charge	6.5%	DYNAMIC	Recalcu	late												
Fotal cost o	of the credit		124500.00															
Fotal amou	int of credit		200000.00															
Total amou	int payable		324500.00															
			Bala	ance		Interest o	on capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
										Repay	yment of the cr	edit						
Period	Drawdowns	Initial		Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	mgnest borrowing rate (credit currency)	exchange rate (domestic currency)
C	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1	L	200000.00	200000.00	201000.00	199166.67	6.00%	1000.00			833.33	1000.00	1833.33	0.00	1833.33	-1833.33	-1823.77		
2	2	199166.67	199166.67	200162.50	198333.33	6.00%	995.83			833.33	995.83	1829.17	0.00	1829.17	-1829.17	-1810.14		
3	3	198333.33	198333.33	199325.00	197500.00	6.00%	991.67			833.33	991.67	1825.00	0.00	1825.00	-1825.00	-1796.59		
			197500.00	198487.50	196666.67	6.00%	987.50			833.33	987.50	1820.83	0.00	1820.83	-1820.83	-1783.14		

										Repay	ment of the cr	edit						
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	nignest borrowing rate (credit currency)	nignest exchange rate (domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1		200000.00	200000.00	201000.00	199166.67	6.00%	1000.00			833.33	1000.00	1833.33	0.00	1833.33	-1833.33	-1823.77		
2		199166.67	199166.67	200162.50	198333.33	6.00%	995.83			833.33	995.83	1829.17	0.00	1829.17	-1829.17	-1810.14		
3		198333.33	198333.33	199325.00	197500.00	6.00%	991.67			833.33	991.67	1825.00	0.00	1825.00	-1825.00	-1796.59		
4		197500.00	197500.00	198487.50	196666.67	6.00%	987.50			833.33	987.50	1820.83	0.00	1820.83	-1820.83	-1783.14		
5		196666.67	196666.67	197650.00	195833.33	6.00%	983.33			833.33	983.33	1816.67	0.00	1816.67	-1816.67	-1769.79		
6		195833.33	195833.33	196812.50	195000.00	6.00%	979.17			833.33	979.17	1812.50	0.00	1812.50	-1812.50	-1756.52		
7		195000.00				6.00%	975.00			833.33	975.00	1808.33	0.00	1808.33	-1808.33	-1743.33		
8		194166.67	194166.67	195137.50	193333.33	6.00%	970.83			833.33	970.83	1804.17	0.00	1804.17	-1804.17	-1730.25		
9		193333.33	193333.33	194300.00	192500.00	6.00%	966.67			833.33	966.67	1800.00	0.00	1800.00	-1800.00	-1717.25		
10		192500.00				6.00%	962.50			833.33	962.50	1795.83	0.00	1795.83	-1795.83	-1704.34		
11		191666.67	191666.67			6.00%	958.33			833.33	958.33	1791.67	0.00	1791.67	-1791.67	-1691.52		
12		190833.33	190833.33	191787.50	190000.00	6.00%	954.17			833.33	954.17	1787.50	0.00	1787.50	-1787.50	-1678.78		
Sums																		
Year 1	200000.00						11725.00		0.00	10000.00	11725.00	21725.00	4000.00	25725.00	174275.00	174994.58		
Year 2	0.00						11125.00		0.00		11125.00	21125.00	0.00	21125.00	-21125.00	-19183.08		
Year 3	0.00						10525.00		0.00		10525.00	20525.00	0.00	20525.00	-20525.00	-17504.71		
Year 4	0.00						9925.00		0.00		9925.00	19925.00	0.00	19925.00	-19925.00	-15959.54		
Year 5	0.00						9325.00		0.00		9325.00	19325.00	0.00	19325.00	-19325.00	-14537.57		
Year 6	0.00						8725.00	0.00	0.00	10000.00	8725.00	18725.00	0.00	18725.00	-18725.00	-13229.54		
Year 7	0.00						8125.00		0.00		8125.00	18125.00	0.00	18125.00	-18125.00			
Year 8	0.00						7525.00		0.00		7525.00	17525.00	0.00	17525.00	-17525.00	-10921.50		
Year 9	0.00						6925.00		0.00		6925.00	16925.00	0.00	16925.00	-16925.00			
Year 10	0.00						6325.00		0.00		6325.00	16325.00	0.00	16325.00	-16325.00	-8973.87		
Year 11	0.00						5725.00		0.00		5725.00	15725.00	0.00	15725.00	-15725.00			
Year 12	0.00						5125.00		0.00		5125.00	15125.00	0.00	15125.00	-15125.00	-7333.73		
Year 13	0.00						4525.00		0.00		4525.00	14525.00	0.00	14525.00	-14525.00			
Year 14	0.00						3925.00		0.00		3925.00	13925.00	0.00	13925.00	-13925.00	-5955.64		
Year 15	0.00						3325.00		0.00		3325.00	13325.00	0.00	13325.00	-13325.00			
Year 16	0.00						2725.00		0.00		2725.00	12725.00	0.00	12725.00	-12725.00			
Year 17	0.00						2125.00		0.00		2125.00	12125.00	0.00	12125.00	-12125.00			
Year 18	0.00						1525.00		0.00		1525.00	11525.00	0.00	11525.00	-11525.00			
Year 19	0.00						925.00		0.00		925.00	10925.00	0.00	10925.00	-10925.00	-3414.47		
Year 20	0.00						325.00		0.00		325.00	10325.00	0.00	10325.00	-10325.00			
Total	200000.00						120500.00	4000.00	0.00	20000.00	120500.00	320500.00	4000.00	324500.00	-124500.00	0.00		

Click on the button *Reset* and then enter the information highlighted in red.

The duration of the credit in this example depends on the amount of the repayments and will be determined internally by the simulator. However, if you plan to enter or change manually the values in the table before amortisation calculating the APR, you should enter as Duration of the credit agreement a high number of periods (e.g. 360), so that the table will not be extended by the simulator without considering your changes.

Description of the credit product			
MAIN FEATURES OF THE CREDIT PRODUCT			
A) Total amount of the credit			
Amount 200	Tick the box for an illustrative scenario if the credit is	t in a foreign currency	
B)Conditions governing draw downs			
Soloti Inmediately and Inful			
C) Conditions governing repayments (DYNAMIC)			
	NOTE: This will determine the length of regular period	s shown in the table as: MONTHS	
A mount Interest plus a % of outstanding balance (only capital)	▼ % of z with	as a minimum amount	
Special Payments (*)			
Advance payment* No of the oracle link Final Payment* Pixed amount			
The length of the trait period of represent to different			
D) Duration of the credit agreement			
Duration Final 💌 of	🗯 perioda		
COSTS OF THE CREDIT			
A)Borrowing rate			
Lovel Samelavel for the attite credit term 💌 Dof	ined as Northal (annual) 💽 DYNA MIC	Tick the box for an illustrative scenario if the cr	editallows variations in the borrowing rate
Percentage			
B)Other cost included in the Total Cost of the Credit			
Given as		c of charge	
Cost 1 % of the cadd limb Cost 2 % of the cadd limb	Ko* Ko* At conclusion No* No* No*		
Cost 2 % of the drawdowns in each partod	No* • No*	I*	
Cost 4 % of the balance outstanding (aptal + interest) in each peri			
Cost 5 % of the balance outstanding (only capital) in each period	■ No* ■		
Cost 6 % of the credit not used at the beginning of each pariod	• No* •		
Cost 7 % of the final balance in each period			
Examples	Obs (*)	Obs (*)	
L Shared equity credit			

As shown in the amortisation table and the main results, the duration of the credit resulting from the repayments is 233 months.

5	ALC: N		B	- C-	0	T		. O.	R	1	1	4	-	м	-11-	0	P	jū,	- 1	-
85 87 81 90 91 93 94	Final b Amoun Duratio Presen Annual Total o Total o	alani t of th en of t web Pers ost o mour	suits ce in the las he first repo the credit arrage flats the credit the credit	nyment ih flaws	0.00 5.55 53387.69 200000.00	MONTHS	Aecalcu Recalcu													
10	POTEL O	mou!	rt payable		258397.69														-	
05			-		that	ainia .		interact in	Integrated	Other	costa		_	Payments			Call	Rose II	Illustrative s	cenarios
D6				-	1							Repair	mant of the co		10 13		-			
67	-	-	Bre-doene	-	Chestanding Ioniy napitali		r.	Borowing pare/351	American charger	Not Interstead	Thanced	Capital	Interest.	THE	Taxan met Taxanan	-Tanal	Case or south	Elegentender	Ingland Longs Ma	and states
B	-	0	100000.00				200000.00			4000.00					4006.00	4000.00	196000.00	196000.00		
18		1		200000.00	200000.00	101008.00		6.00%	1000.00			4000.00	1000.00	5000.00	0.00	5000.00	5000.00	4972 58		
10		2		196000.00	196000.00	196980.00	197080.00	6.00%	980.00			1920.00	980.00	4900.00	0.00	4900.00	-4900.00	-4845 42		
-0		191		159.09	159.09	159.88	59.00	6.00%	0.80			100.00	08.0	100 80	0.00	100.80	-100 80	-28.16	-	-
81		133		199.09			0.00	8 00%	0.30			100.00	0.30	59.58	0.00	NE 40	-59.38	-16 50		
_	Same			28.04	24714	28.14	0.00	0.0016	0.30			19.04	0.30	34.08	0.00	24.14	-36.34	-10.90		
	Year 1		100000.00						10764.16	4000.00	0.00	43056.68	10764.16	53820.82	4000.00	57820 83	142179 18	143990.25		
	Vent 3		0.00						8446 83	0.00	0.00	33787.38	8446 83	42754 10	0.00	42234 10	-47234 10			
	Year 3		0.00						6628.36	0.00	0.00	26513.44	6628.36	33141.83	0.00	33141.80	-13141.80	28068.21		
	Venr 4		0.00						5201 39	0.00	0.00	20805.54	5201 30	16006.95	0.00	36006.92	26006 92	20619.57		
	Pear S		0.00						4081.61	0.00	0.00	16326.46	4083-61	30408.07	000	20408.06	-20408.06	-15147.62		
	Vear 6		0.00						1202 91	0.00	0.00	13811.64	1202.91	16014.55	0.00	16014.56	-16014.56	-11127.81		
	Vent 7		0.00						2513.38	0.00	0.00			12566.89	0.00	12566.87	12566.87	8174.74		
	Year B		0.00						1972.29	0.00	0.00	7800.15	1972 39	9861.45	0.00	9861.48	4861.48	-6005-38		
	Year 9		0.00						1547.69	0.00	00.0	0190.75	1547.69	7758 44	0.00	7738.45	+7708.45	-4411.89		
4	Vent 10)	0.00						1214.50	0.00	0.00	4857.99	1214.50	6072.49	0.00	6072.48	6071.48	8240.95		
15	Year 11		0.00						855.04	0.00	0.00	3812.14	953.04	4765.18	0.00	4765.19	-4965.18	-3580.87		
56	Vent 11	È	0.00						767 86	0.00	0.00	1991.45	747.86	\$739.37	0.00	1739.32	-3759.32	-1749.04		
7	Vent 1		0.00						586.86	0.00	0.00	7347.44	585 86	2934 30	0.00	2934.32	2934.31	-1284.89		
a l	Yaar 14	-	0.00						460.52	0.00	0.00	1842.08	460.52	2502.60	0.00	2902.59	2302.48	943.90		
19	Veer 15		0.00						361.38	0.00	0.00	1445 51	501.38	1805 89	0.00	1106-66	-1806.86	093.41		
ED 1	Veat 14	E	0.00						282.62	0.00	0.00	1109.86	282.62	1492.48	0.00	1492.52	1492.52	535.7A		
11	Year 13		0.00						210.55	0.00	0.00	1100.00	210.55	1410.55	0.00	1410.60	1410.60	-475.53		
17	Yeer 1		0.00						136 55	0.00	0.00	1200.00	158.95	1558.55	0.00	1338.60	-1338.60	-421.04		
63	Year 15		0.00						66.59	0.00	0.00	1200.00	66.55	1255.55	0,00	1266.60	-1266.60	-972.97		
64	Yapr 21	1	0.00						5.48	0.00	0.00	459.00	6.48	465.57	0.00	465.58	465 58	-130.91		

The simulator also update the duration previously entered to this final number of periods.

D) Duration of the credit agreement

Duration Fixed

of 233 periods

Click on the button *Reset* and then enter the information highlighted in red.

The duration of the credit in this example depends on the amount of the repayments and will be determined internally by the simulator. However, if you plan to enter or change manually the values in the table before amortisation calculating the APR, you should enter as Duration of the credit agreement a high number of periods (e.g. 360), so that the table will not be extended by the simulator without considering your changes.

Description of the credit product			
MAIN FEATURES OF THE CREDIT PRODUCT			
A) Total amount of the credit			
Amount	Tick the box for an illustrative scenario if the credit i	s in a foreign currency	
B) Conditions governing draw downs			
Solod Immediately and Inful			
C) Conditions governing repayments (DYNAMIC)			
Frequency of repayments menthly	NOTE: This will determine the length of regular period	b shown in the table as: MONTHS	
A mount % of outstanding balance (capital + interest)	▼ % of I with	as a minimum amount	
Special Payments (*)			
Advance payment* Nofthe credt int			
Final Paymont* Fluid amount	•		
The long th at the first period at represent a different			
D) Duration of the credit agreement			
Duration Fixed • of	🗯 perioda		
COSTS OF THE CREDIT			
A) Borrowing rate			
	nod as Northal (annual) 🔽 DYNAMIC	Tick the box for an illustrative scenario if the c	
			real allows variations in the comowing rate
Percentage			
8) Other cost included in the Total Cost of the Credit			
B) Other cost included in the lotal Cost of the Credit Given as	Amountor's Financed Dat	to of chargo	
Cost 1 % of the pack int			
Cost 2 % of the predicinit	Xor Kor Kor		
Cost 3 % of the drawdowns in each particid			
Cost 4 % of the balance outstanding (capital + interest) in each perio			
Cost 5 % of the balance outstanding (only capital) in each period	No* •		
Cost 6 % of the credit not used at the beginning of each period Cost 7 % of the final balance in each period	▼ No* ▼		
Examples	obs(*)	obs(*)	
Shared equity credit			

As shown in the amortisation table and the main results, the duration of the credit resulting from the repayments is 16 months.

-	A COLORED	B	0	.D .	1		- 13		U	1	R.		M	- 14	a		.0.	4	-
- T.	Main re	esults						_		_	_		_			-			
15	1000	the states		100															
		ter in the las		0.00	÷ .	-	1												
		the first repa	wment.			Recalcu	late												
	Ouration of	fane cradit		228	MONTHS														
80	- terret	la marine	a state	34															
		ue of the cas		0.50															
	Annuni ser	ceritage Rate	orcharge	6.7%	DUMMIC	Recalcu	late -												
5	Parents.	Land States		10010-00															
		if the credit		87561.85															
	Total amos			200000-00															
	Total amou	us balapje		207503.85															
96 .00									_		_								
05	-	-	-	Bal	Via		Waterport of	ALC BORN	Otw	0095		-	Paraterita	_	-	(Terr	line :	Illustrative s	cenarios
06					and the set			-			Бара	ender of the or							CC II GII G S
81	Fetod	Deedowne	-trainel	Cremending	Diratandnji	1000	Dorowing	franker.		and the second	- 10h	1000		Chatgena		Value annald		Contractory (-
			7610	(only capital)	(nankalphur Prozest)	Pinal	1000 (20)	charges.	Nothnanoist	Financed	Capital	-Interes	10-pc	Statute!	THE	and a	Property lines.	hourse augurant	andtarig atkirkeren
à۶.		· · · · · ·									artere and	20	-						Balance
08	0	200000.00		in the second second		200000.00	_		4000.00		-			4000.00	4000,00	196000.00	196000.00		-
<u>(19</u>)	1		200000.00	280000 00	201000.00	196980.00	8.00%	1000.00			3020,00	1008.00	4028.00	0.00	4020.00	-4020.00	-3998.35		
10	4		196080.00	196980.00	197964-90	194005-60	6.00%	984.90			2974.40	984.90	9959.30	0.00	\$959.50	-3959.30	-3916.76		
35	227		570.54			273.40	6.00%	2.85	-		197.15	2.85	300.00	0.00	300.00	-300.00	-88.03		
36	228		275,AD	275.40	274 76	0.00	8.00%	1.37			275.40	1.57	274.76	0.00	274.76	-274.76	-88.19		
	Siame																		
	Vear 1	100000.00						11051.90		0.00		11051.90		4000.00		151571.37	153054.62		
	Year 2	0.00						9207.52	0.00	0.00		9207.52		0.00	37014.25				
-	Venr 5.	0.00						3324.26	0.00	0.00			21405.54	0.00					
	Vear 6 Vear 7	0.00						4435.73	0.00	0.00		+435.73 3695.48	17891.64	0.00	17831.65		-11465.87		
	Year il	0.00						3078.76	0.00	0.00			12876 63	0.00	12176.61		-7600 10		
	Vear 9	0.00						2564.97	0.00	0.00		1964.97	10811.17	0.00	10311 18		-5934.42		
	Year 10	0.00						2186.02	0.00	0.00		1136.92	8590.41	0.00	6590.40		4633.78		
	Vent 11	0.00						1780.30	0.00	0.00		1780.30	7358.81	0.00	7154.81		-7618.21		
	Vear 12	0.00						1488.10	0.00	0.00		1483.20	9962.45	0.00	5962.45		-1825.21		
52	Year 13	2.00						1235,68	0.00	0.00	5751.74	1235.68	4567.42	0.00	4957.41	-4967,41	-1206.01		
53	Year 14	0.00						1029 46	0.00	0.00	1108.95	1029.45	4138.44	0.00	4138.41	-4138.41	-1772.57		
54	Vear 15	0.00						855.44	0.00	0.00	2766.39	855.44	3621.83	0.00	3621.82	-3621.82	-1411 74		
55	Year 16	0.00						685.98	a.00	0.00	2914.02	665.98	3600.00	0.00	3600.00	-3600.00	-1824.96		
50.	Yent 17	00.0						306.25	0.00	0.00	5093.75	308.25	3600.00	0.00	3800.00	-3800.00	-1232.43		
	Vear 18	0.00						313.44	0.00	0.00	5284.56	815,44	3600.00	0.00	3603.00		-1155.09		
58	Year 19	8.00						112.85	â D0	0.00		112.85	3574.76	0.00	3574.76		1075.23		
	Total	200000.00						63561.86	4000 00	0.00	200000.00	the second second	293581.80	a second date	267161-85	-67561 #1	0.00		

The simulator also update the duration previously entered to this final number of periods.

D) Duration of the credit agreement

Duration Fixed

of 228 periods

Description of the credit product	
MAIN FEATURES OF THE CREDIT PRODUCT	
A) Total amount of the credit	
Tick the box for an illustrative scenario if the credit is in a foreign currency	
Amount 2	
8) Con ditions go verning drew dow ns	
Solod Immediately and Inful	
C) Conditions governing repayments (DY NAMIC)	
Frequency of repayments monthy NOTE: This will determine the length of regular periods shown in the table as: MONTHS	
Amount Interest plus equal repayments of capital regularly	
Social Payments(*)	
Advance payment* No of the credit init 💌 Initial Payment* Plued ancust 💌	
Contract process (2)	
The long the title line) periodial represent is defensed	
D) Duration of the credit agreement	
Duration Fixed 💌 of 📼 poriods	
COSTS OF THE CREDIT	
A) Borrowing rate	
Love) Same level for the ordet term 💌 Defined as Northal (annual) 💌 DYNAMIC 🗌 Tick the bex for an illustrative scenario if the predit allows variations in the borrowing rate	
Percentage aut	
8) Other cost included in the Total Cost of the Credit	
Given as Amounter% Financed Date of charge	
Cost 1 Nother and time T Nother and time Cost 2 Nother and time Nother and time Nother and time Cost 3 Nother and time Nother and time	
Cost 2 % of the aveit limit No* No* At concluden	
Cost 4 S of the balance outstanding (apta) + interval) in each partod 💌 Nor 💌	
Cost 5 K of the balance outstanding (only capital) in each parted 💌 No. 💌	
Cost 6 Verfrier welt not used state beginning of each period 💌 No* 💌	
Cost 7 Vi of the Final balance in each period 💌	
Examples Obs(*) Obs(*)	
L Shared equity credit	

Click on the buttons *Generate*

and then *Calculate* to obtain the main results and the amortisation table.

Main results

Amount of	ice in the last the first repa f the credit	•	0.00 240	MONTHS	Recalcul	ate												
	lue of the cas		0.00			1												
Annual Per	rcentage Rate	of Charge	6.5%	DYNAMIC	Recalcul	ate												
rotal cost o	of the credit		124500.00															
Fotal amou	unt of credit		200000.00															
Fotal amou	int navable		324500.00															
	inc payable		524500.00															
	in payable		524500.00															
	in payable																	
			Bala			Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
Period	Drawdowns	Initial	Bala	ince	Final	Interest o Borrowing rate (%)	n capital Interest charges	Other Not financed		Repay Capital amortisation	ment of the cro		Costs not financed	Total	Cash Value at each period	flows Present value	Illustrative mgnest borrowing rate (credit currency)	e scenarios nignest exchange rate (domestic currency)
Period			Bala Outstanding (only	once Outstanding (capital plus	Final 200000.00	Borrowing	Interest		Financed	Capital	ment of the cro	edit			Value at each period	Present value	nignest borrowing rate (credit	nignest exchange rate (domestic
Period	Drawdowns		Bala Outstanding (only capital)	once Outstanding (capital plus interest)		Borrowing	Interest	Not financed 4000.00	Financed	Capital	ment of the cro	edit	financed		Value at each period 196000.00	Present value	nignest borrowing rate (credit	nignest exchange rate (domestic
Period	Drawdowns	Initial	Bala Outstanding (only capital) 200000.00	Outstanding (capital plus interest) 201000.00	200000.00 199166.67	Borrowing rate (%)	Interest charges	Not financed 4000.00	Financed	Capital amortisation	ment of the cro	Total	financed 4000.00	4000.00	Value at each period 196000.00 -1833.33	Present value 196000.00 -1823.77	nignest borrowing rate (credit	nignest exchange rate (domestic
Period	Drawdowns	Initial 200000.00	Bala Outstanding (only capital) 200000.00 199166.67 198333.33	Outstanding (capital plus interest) 201000.00 200162.50 199325.00	200000.00 199166.67 198333.33 197500.00	Borrowing rate (%) 6.00%	Interest charges 1000.00	Not financed 4000.00	Financed	Capital amortisation 833.33	Interest	Total 1833.33	financed 4000.00 0.00	4000.00 1833.33	Value at each period 196000.00 -1833.33 -1829.17 -1825.00	Present value 196000.00 -1823.77 -1810.14 -1796.59	nignest borrowing rate (credit	nignest exchange rate (domestic

		Initial	(only capital)	(capital plus interest)	Final	rate (%)	charges	Not financed	Financed	Capital amortisation	Interest	Total	financed	Total	each period	Present value	borrowing rate (credit currency)	exchange rate (domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1		200000.00	200000.00	201000.00	199166.67	6.00%	1000.00			833.33	1000.00	1833.33	0.00	1833.33	-1833.33	-1823.77		
2		199166.67	199166.67	200162.50	198333.33	6.00%	995.83			833.33	995.83	1829.17	0.00	1829.17	-1829.17	-1810.14		
3		198333.33	198333.33	199325.00	197500.00	6.00%	991.67			833.33	991.67	1825.00	0.00	1825.00	-1825.00	-1796.59		
4		197500.00	197500.00	198487.50	196666.67	6.00%	987.50			833.33	987.50	1820.83	0.00	1820.83	-1820.83	-1783.14		
5		196666.67	196666.67	197650.00	195833.33	6.00%	983.33			833.33	983.33	1816.67	0.00	1816.67	-1816.67	-1769.79		
6		195833.33	195833.33	196812.50	195000.00	6.00%	979.17			833.33	979.17	1812.50	0.00	1812.50	-1812.50	-1756.52		
7		195000.00	195000.00	195975.00	194166.67	6.00%	975.00			833.33	975.00	1808.33	0.00	1808.33	-1808.33	-1743.33		
8		194166.67	194166.67	195137.50	193333.33	6.00%	970.83			833.33	970.83	1804.17	0.00	1804.17	-1804.17	-1730.25		
9		193333.33	193333.33	194300.00	192500.00	6.00%	966.67			833.33	966.67	1800.00	0.00	1800.00	-1800.00	-1717.25		
10		192500.00	192500.00	193462.50	191666.67	6.00%	962.50			833.33	962.50	1795.83	0.00	1795.83	-1795.83	-1704.34		
11		191666.67	191666.67	192625.00	190833.33	6.00%	958.33			833.33	958.33	1791.67	0.00	1791.67	-1791.67	-1691.52		
12		190833.33	190833.33	191787.50	190000.00	6.00%	954.17			833.33	954.17	1787.50	0.00	1787.50	-1787.50	-1678.78		
Sums																		
Year 1	200000.00						11725.00	4000.00	0.00	10000.00	11725.00	21725.00	4000.00	25725.00	174275.00	174994.58		
Year 2	0.00						11125.00	0.00	0.00	10000.00	11125.00	21125.00	0.00	21125.00	-21125.00	-19183.08		
Year 3	0.00						10525.00	0.00	0.00	10000.00	10525.00	20525.00	0.00	20525.00	-20525.00	-17504.71		
Year 4	0.00						9925.00	0.00	0.00	10000.00	9925.00	19925.00	0.00	19925.00	-19925.00	-15959.54		
Year 5	0.00						9325.00	0.00	0.00	10000.00	9325.00	19325.00	0.00	19325.00	-19325.00	-14537.57		
Year 6	0.00						8725.00	0.00	0.00	10000.00	8725.00	18725.00	0.00	18725.00	-18725.00	-13229.54		
Year 7	0.00						8125.00	0.00	0.00	10000.00	8125.00	18125.00	0.00	18125.00	-18125.00	-12026.84		
Year 8	0.00						7525.00	0.00	0.00	10000.00	7525.00	17525.00	0.00	17525.00	-17525.00	-10921.50		
Year 9	0.00						6925.00	0.00	0.00	10000.00	6925.00	16925.00	0.00	16925.00	-16925.00	-9906.13		
Year 10	0.00						6325.00	0.00	0.00	10000.00	6325.00	16325.00	0.00	16325.00	-16325.00	-8973.87		
Year 11	0.00						5725.00	0.00	0.00		5725.00	15725.00	0.00	15725.00	-15725.00	-8118.36		
Year 12	0.00						5125.00	0.00	0.00		5125.00	15125.00	0.00	15125.00	-15125.00	-7333.73		
Year 13	0.00						4525.00	0.00	0.00		4525.00	14525.00	0.00	14525.00	-14525.00	-6614.51		
Year 14	0.00						3925.00	0.00	0.00	10000.00	3925.00	13925.00	0.00	13925.00	-13925.00	-5955.64		
Year 15	0.00						3325.00	0.00	0.00	10000.00	3325.00	13325.00	0.00	13325.00	-13325.00	-5352.46		
Year 16	0.00						2725.00	0.00	0.00	10000.00	2725.00	12725.00	0.00	12725.00	-12725.00	-4800.62		
Year 17	0.00						2125.00	0.00	0.00	10000.00	2125.00	12125.00	0.00	12125.00	-12125.00	-4296.10		
Year 18	0.00						1525.00	0.00	0.00	10000.00	1525.00	11525.00	0.00	11525.00	-11525.00	-3835.20		
Year 19	0.00						925.00	0.00	0.00	10000.00	925.00	10925.00	0.00	10925.00	-10925.00	-3414.47		
Year 20	0.00						325.00	0.00	0.00	10000.00	325.00	10325.00	0.00	10325.00	-10325.00	-3030.73		
Total	200000.00						120500.00	4000.00	0.00	200000.00	120500.00	320500.00	4000.00	324500.00	-124500.00	0.00		

This example can be solved in two different ways, which start similarly.

As a first step, click on the button *Reset* and then enter the information highlighted in red

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Tick the box for an illustrative scenario if the credit is in a foreign currency
B) Conditions governing draw downs
Solicet Immediately and Inful 💌
C) Conditions governing repayments (DYNAMIC)
Frequency of repayments monthly NOTE: This will determine the length of regular periods shown in the table as: MONTHS
Amount Interest plus a W of outdanding balance (only capital) V Si of Z with management
Special Payments(*)
Advance payment* is of the credit link or
Enal Paymont" Padanout 💌
The length of the 1nd periods represents all forest
D) Duration of the credit agreement
Duration Finad 📼 of 🚥 periods
COSTS OF THE CREDIT
A) Borrowing rate
Love) Same level for the watth term 💌 Defined as Northal (annual) 🔍 DYNA MIC 🔲 Tick the box for an illustrative scenario if the predict allows variations in the borrowing rate
Percentage Lati
B) O ther cost included in the Total Cost of the Credit
Given as Anounter's Financed Date of charge
Cost 1 Wofthe orablinit V No* V At ancluion V Cost 2 Wofthe orablinit V No* V At ancluion V
Cost 3 W of the damadowne is each partod v No* v
L Cost 4 W of the balance cutatanding (aptal + intervel) in each particid 💌 No* 💌
L Cost 5 No of the balance cutatanding (only capital) in each period 💌 No* 💌
Cost 6 No of the credit not used at the beginning of each partod 💌 No* 💌
Cost 7 % of the final balance in each parked
Examples Obs(*) Obs(*)
Shand aquity credit

As shown, the simulator has extended the number of periods of repayment to 233 because the scheme of repayments entered before does not provide full repayment of the credit in 180 months (15 years) (see example 14).

	Darage -	-	Bults	0	B	L	-	0	H.	-	-	-	-	N	14	0	-	0	0	- 5
<u> </u>	Mair	1 re	sults	_	_		_	_				_			_		_	_		_
15																				
			ce in the las		0.00															
			he first repa	yment			Recalify	liate												
	Duratic	in st	the credit		233	MONTHS	-													
9																				
印	Present	sali	ue of the cas	h flovini	0.00	1	-													
	Annual	Perc	centage Bate	of Charge.	6.8%	DRIVE	Recairy	date												
12																				
53	Total ci	ost o	f the credit.		50387.69															
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26					S. contract	Dutiteniding	-	1		1.00	1	Pepa	mini of the ca	14.14	-					
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9		0	200000.00				200000.00			4000.00					4000.00	4000.00				
29		1			288000 00			5.00%	1000.00			4000.00	1000.00	\$000.00	0.00	5000.00		4972.59		
10		- 7		196000.00	196000.00	196980.00	392080.00	5.00%	1980.00			3920.00	980.00	4900.00	0.00	4900.00	-4900.00	4848.42		
40		131		159.09	159.09	159,88	59.09	6.00%	0.80			100.00	0.80	100.80	0.00	100.88	-100.88	-28.16		
41		255		59.09	59.09	59.38	0.00	5.00%	0.30			59.09	0.50	59.54	0.00	59.58	-59.58	-16.50		
44	Summ																			
45	Vear 1		200000.00						10764.18	4000.00	0.00	43055.66	10764.16	\$3820.83	4000.00	57820.82	141179-18	143990.25		
45	Year 2		0.00						8446.82	8.00	0.00	33787.28	8446.83	+2234.10	0.00	#2254.10	-42234.14	38207.60		
	Veer 3		0.00						6628.38	0.00	0.00	20515.44	662#38		0.00	33141.80				
	Vear 4		0.00						5201,39	0.06	0.00	20805.54		16006.93	0.00	26006.92		-20619.57		
	VEAL 5		0.00						4081/61	8.00	0.00	16326.46		20408.07	0.00	20408.05				
	Year D		0.00						\$707.91	0.00	0.00	33811.84	3202.91	16014.35	0.00	10014.56				
	Year 7		0.00						3513.38	0.00	0.00	10053.51	1513.38		0.00	12565.87		-8174.74		
	Year S		0.00						1972.39	0.00	0.00	7889 16	1972.29	9861.45	0.00	9951.46		6005.38		
	Year 9	1.0	00.0						1547.69	0.00	0.00	8190.75	1547.59	7738-44	0.00	7738.45		4411.60		
	Year 10		0.00						1214.50	0.00	0.00	4857.99	1114-50	0072.49	0.00	6072.48		-5240.95		
	Year 11		0.00						953.04	8.00	0.00	3812.14	953.04	4765.18	0.00	4765.19		-2380.87		
	Year 13 Year 13		0.00						747.88 586.88	0.00	0.00	2001.45	747.85 380.86		0.00	1759.32		-1749.04 -1284 89		
	Year 14		0.00						460.52	0.00	0.00	1842.08	460.52	1903.50	0.00	2902 59		943.90		
	Year 15		0.00						361.38	0.00	0.00	1445.51	361.38	1806.89	0.00	1808.86		603.41		
	Year 16		0.00						382.62	000	0.00	1209.86	382.82	1492.48	8.00	1492 52		-553 74-		
	Year 17		0.00						210.55	0.00	0.00	1200.00	210.55	1410.55	0.00	1410 60		-478.95		
	Year 18		0.00						138.55	0.00	0.00	1200.00	138 55	1898.55	0.00	1858.60		-421.04		
	Year 10		0.00						68.55	8.00	0.00	1200.00	46.55	1206.35	0.00	1265.60		-573.97.		
			0.00						6.48	0.00	0.00	459.09	6.48	465.57	0.00	465.58		-130 91		
641	Reat 20																			

Approach 1

Use the outstanding balance of capital plus interest of period 180 amounting to €5403.36 to define a new credit with a final payment of such amount and duration of 15 years by entering the information highlighted in red.

Description of the credit product	
MAIN FEATURES OF THE CREDIT PRODUCT	
A) Total amount of the credit	
_ Tick the	box for an illustrative scenario if the credit is in a foreign currency
Amount 2000	
B) Con dition s go vern in g draw dow ns	
Solod Immediately and Inful	
C) Conditions governing repsyments (DY NAMIC)	
Frequency of repayments monthly	t: This will determine the length of regular periods shown in the table as: <u>MONTHS</u>
Amount Interest plus a % of outstanding balance (only capital)	K of z with z a minimum emount
Special Payments (*)	
	v of sexa
The long the 10th that period of represent is different	
D) Duration of the credit agreement	
Duration Fired	- porioda
COSTS OF THE CREDIT	
A) Borrowing rate	
Ajaonowing rate	
Lovel Same level for the entire credit term 📼 Define di es	Normal (Innua) 💽 DYNA MIC 📃 Tick the box for an illustrative scenario if the credit allows variations in the borrowing rate
Porconiago Luti	
B) O ther cost in cluded in the Total Cost of the Credit Given as	Amountor's financed Daloof charge
Cost 2 % of the credit init	
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Examples	Obs(*) Obs(*)
Shand equity credit	

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v e			te first répé	Auraice		Summer	Recalcu	late												
	Duranti	un of	the credit		280	MONTHS														
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			the tredit		52682.78															
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	total a	mour	nt payable		292682.74															
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10		2		196000.00	196000.00	196980.00	192080.00	1.00%	980.00			3920.00	00.089	4900.00	0.00	4900.00	-4900.00	-4845.39		
87		179	-	5486.20	5486.20	\$513.63	5376.48	E.00%	17.45	-		109.72	27.43	187,15	0.00	137.15	-137.15	-51.24		
12.0		190		5376.48	5376.48	5401.36	0.00	£.00%	26.88			5376.48	26.88	5403.56	0.00	5488.36	·5403.36	-2007.60		
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_	Ferer 1		100000.00						1070418	4000.00	0.00		10764.18				14217918			
	Year I		0.00						8446 82	0.00	0.03			42234.10		42234.50				
	rear S		0.00						6638.96	0.00	0.00		6628.36		0.00	33141.80				
	rear 4		0.00						4081.61	0.00	0.00		4081 61		0.00	26006.93				
	Vear E		0.00						5202 91	0.00	0.00		9202.91		0.00	16014.56				
	Tear 2		0.00						2513.08	0.00	0.00		1515.38		0.00	12506 87				
	Vear B		0.00						1972.29	0.00	0.00		1972.29	9861.45	0.00	986146				
	Year B		0.00						1547.69	0.00	0.00		1547.60		0.00	7758.45				
	Tear 10		0.00						1214.50	0.00	0.00		1214 50	6072.49	0.00	6077.48				
02.1	tear 11	1	0.00						953.04	0.00	0.00	3812.14	953.04	4765.18	0.00	4765.19	-4765.19	-1579.91		
100	Year 1		0.00						747.86	0.00	0.00		767.86	3739.82	0.00	3730,32				
04.1	fear 33	π.	0.00						588.88	0.00	0.00	2347.44	586.86	2934 80	0.00	2934 31	-2954.31	-1284 28		
05	Year 14	4	0 DØ						460.52	0.00	0.00	1842.08	460.51	2302.60	0.00	2301.99	-2302.59			
06.1	Year 15	5	00.0						361.58	0.00	0.00	6714.45	961.38	7075.88	0.00	7075.81	7075 81	2650.71		
and a	Total		1000000						48582.76	4000.00	0.00	2000000.00	48682.76	248887.75	4000.00	25268274	-52882 74	0.00		

Approach 2

This approach requires changing manually the results to reduce the duration of the credit to 15-years (180 periods of one month).

To this end, first enter as *Duration of the credit* in the area of *Main results* such term of 180 months.

Then delete the rows with the annual subtotals corresponding to years 16 to 20 (rows 360 to 364). Be aware of not deleting the row with the overall total (row 365), as this row is valid.

		tce in the las	and the second second	0.00	-														
		the first read	ivment			Recalcu	late .												
18	Duration o	f the credit	1	- 580	MONTHS	-	_												
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31	and the second se	Jan and		the second		-													
		of the credit		\$3387.69															
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4	0	100000.00				200000000	_	_	-9000.00					4000.00	4000.00	196000.00	196000.00		_
8	1		200000.00	200000.00	201000.00		6.00%	1000.00			10000.00	1000.00	5000.00	00.0	5000.00	-5000.00	-4971.59		
10	3		196000.00	196000.00	196980.00	192090-00	5.00%	980.00			9920.00	990.00	4900.00	0.00	4900.00	-4900.00	4846.42		
10	232	-	159.09	159.09	159.88	59.09	6.00%	0.80			100.00	0.80	100.80	00.0	100.80	-100.80.	-28.16	-	-
ñ	255		58.09	59.09	59.88		5.00%	0.30			59.09	0.90	59 38	8.00	59.38	-59.38	16.50		
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	Vear 1	200000.00						10764.10	4000.00	0.00	40056.66	1076416	53820.82	4000.00	\$7820.82	14217918	148990.25		
16	Year 2	0.00						8445 82	0.00	-D 0G	33787.28	8446.82	42234.10	0.00	42234.10	-42234.10	98207 60		
12	Year 3	0:00						6628.36	0.00	0.00	26513.44	6628 36	35141.80	0.00	33141.80	-33141.80	28058.21		
18	Year-A	0.00						5201,39	000	0.00	20805 54	5201.89	36000 F5	8.00	38006.92	-28008.92	-20619 57		
19	Year 5	0.00						4061,61	0.00	0.00	16328.46	4081.61	20408.07	00.0	20408.06	-20408.06	-15147 62		
Ċ.	Year 5	0.00						8202.91	.0.00	0.00	12811.64	1202.91	16014.55	0.00	16014.56	-16014 56	-11117.81		
4	Year 7	0.00						2513 38	0,00	0.00	10055.51	2513.58	12566.89	0.00	12568.87	-1756s.#7	-8174.74		
52	Year B	0.00						1972.29	0.00	100	7889.16	1972.29	3861.45	0.00	9861.46	-9861.40	-8005.38		
53	Year 9	0.00						1547.69	0.00	0.00	6190.75	1947.69	7738.44	0.00	773B-45	-7738.45	4411 69		
54	Year 10	0.00						1214.50	0.00	0.00	4857.99	1214.50	6072.49	00.00	8072.48	-6072.48	-3240.93		
15.	Veer 33	6.00						953 [14	0.00	0.00	3812.14	955.04	4765.18	0.00	4765.39	-4765 19	-2560 87		
	sear 12	0.00						747.86	0.00	0.00	2991.45	747.8E	3739.32	0.00	3739.32	-3739.32	-1749.04		
	Wal 13	0.00						685.86	0.00	0.00	2347.44	586.86	2934.30	00.0	2934.31	2954.31	1284.89		
	Veet 14	0.00						460.57	0.00	0.00	1842.08	460.52	23/22 110	0.00	2302.59	-2302.59	-043.90		
	Vear 15	0.00		_		_		361 38	0.00	0.00	1445.31	30138	1806.89	0.00	1805.86	1805.86	-693.41		
52	Yéar 16	0.00						282.62	0.00	0.00	1209.86	282.63	1492.48	0.00	1492.52	-1492.52	-535.74		
	Year 17	0.00						210.95	0,00	0.00	1200.00	210.55	1410.55	0.00	\$410.60	-1410.67	-473,93		
		0.00						338.55	0.00	0.00	1200.00	128.95	1338.55	2,00	1558.60	-1558.00	-671.04		
-	Year 18																		
63	Year 19 Year 10	0.00						66.55 6.48	0,00	0.00	1200.00	6.48	1266.55	0.00	1265.80	-1266.60	972.97		

Next, delete the rows of the amortisation table beyond the last month of the 15th year, i.e. month 180 (rows 289 to 341).

	4		C	0		·F	0,		-		16-		M	14	0		0		5
105		1		84	ince	_	binge matt o	ncapital	Other	CORE	-		Payments	-		Lee	diment.	Illustrative	scenarios
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107					1.000						all the second							(Daternal)	LASAPTICAL
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1/76		\$	200000.00	300000.00	201000.00	196000.00	5.00%	1000.00			4000.00	1000.00	5000.00	0.00	5000.00	-6000.00	-4972.50		
110	- 1	2	190000.00	196000.00	196980:00	192080.00	6.00%	980.00			3920.00	980.00	4900:00	0.00	4900.00	-4900,00	-4846.42		
111	3	3	192080.00	193080.00	193040.40	188238 40	6.00%	960.40			3841.60	950.40	4802.00	0.00	4802.00	-4802.00	-4723.46		
117		4	188,138,40	188238.40	189179.59	184473 83	5 00%	941.19			3764.77	941.19	4705.96	0.00	4705.95	-4705.96	-4603-51		
223	1	s	184473 63	184475 63	182766-00	18078418	5.00%	922.97			3689.47	922.57	4811.84	0.00	4611 84	-4811.84	-4486 51		
882	- 22	1	959.09	050.00	963.88	859.00	100%	4.80	V.		100.00	4,80	104.80	00.0	104.80	204.80	-30.59	-	
111	27	55	839.09	859.09	803.38	759.09	6.00%	4.30			100.00	4,30	104.30	0.00	101.50	-104.30	-90.28		
334	221	6	759.09	759.08	762.88	659.08	6.00%	3.80			100.001	3:80	105.80	0.00	103.80	-109.80	-29.97		
225	22	r'	899.09	659.09	. 662.58	559.09	5.00%	3.50			100.00	3.50	109.30	0.00	103.90	405 30	29.68		
238	22	s)	\$35.09	559.09	141.88	439.09	0.00%	2.80			100.00	1.80.	103.60	0.00	102.80	-102 80	-29.36		
339	-23	1	139.09	299.09	160.38	159.09	5.00%	\$.30			100.00	1.30	101.80	0.00	101.00	-101.50	-28.45		
540	231	2	159.00	159.00	150.88	50.09	5.00%	0.80			100.001	0.80	100.80	0.00	100.80	100.001	28.15		
341	233	1	19.00	59.09	39.35	0.00	6.00%	0.50			59.09	0.10	58.58	0.00	59.58	-19.38	-18.50		
342		1																	
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345 1	ear 1	200006.00						10764.15	4000.00	-0.00	43855.68	10764.16	53820.82	4000.00	57820.82	142179:18	143990.25		
346-Y	64/2	0.00						8446.82	0.00	0.00	33787.28	8446.62	42234.50	0.00	42234.10	42234 10	-38207.50		
547 V	nar 5	0.00						h828.56	11 00	0.00	36513.44	5628.55	35143.80	0.00	15141.80	-33141.80	-28068.21		
348 Y	éar il	0.00						5201.39	0.00	0.00	20805.54	5201.09		0.00	20006.92	-26006.92	-20819.57		
549.Y	ear 5	0.00						4081.61	0.00	0.00	16326.46	4081.61	20408.07	0.00	20408.06	-20408.05	15147.52		
350 1	ear fi	0,00						\$302.91	0.00	0.00	1281164	5207.91	16014.55	0.00	16014.55	-16014.56	111127.81		
35L V	ear 7	0.00						2513.38	0,00	0.00	- 10059.51	2513.28	12366.89	0.00	12366.87	-12546.87	-8174,74		
352 Y	ear 8	0.00						1972.19	6.00	0.00	7889.16	1972.29	9861.45	0.00	9851.46	-9861.48	-6005.38		
\$5.8 Y	war-9	0.00	ų.					1547.88	0.00	0.00	6100.75	1547.60	7738.44	0.00	7738.45	-3738.45	-4411.69		
554.1	ear 10	0.00						1214 50	00.0	0.00	6857.99	1214 50	0072.49	0.00	F072.48	-8072,48	-5240 93		
355, 5	car 11	0.00						953.04	6,00	0.00	3812.14	953.04	4765.18	0.00	4765 19	-4765.19	-1380.87		
\$56.1	nar 12	0.00						747.85	0.00	0.00	2001.45	747.85	3739.33	0.00	5759.33	-3739 82	-1749.04		
357 9	ear 15	0.00						306.85	12,00	0.00	2347.44	160.81	2934.30	9.00	2954 51	-2934.51	-1384.85		
358 Y	ear 14	0.00						460.52	0.00	-0.00	1842.08	460.51	2302.60	0.00	1302.59	-2502.59	943.90		
580 Y	ear 15	0.00	6					361.38	0.00	0.00	\$445.51	361.38	1806.89	0.00	1806.88	-1806.B5	693.41		
360.1	otal	300000-00						48682.76	4000.00	0.00	194731.06	486.8176	243417 83	4000.00	247413 79	-47413.79	1934.60		

To provide full repayment of the credit in period 180, for this period substitute the last payment in the column with the *Total* of *Repayment of the credit* by the reference to the cell where the amount of \notin 5403.36 of *Balance Outstanding (capital plus interest)* appears. That is, enter the formula =E288 in the former cell. As a result, the *Final Balance* becomes 0, meaning that the credit repaid in full.

Note that due to these changes, the area of *Main results* reports the error that *the APR is not valid because the present value of the cash flows is not zero*.

- A.	Main re	suits																	
1.1.1.1		ce in the lat		0.00		Recalcu	Iste												
18 1	Distation of	the credit.		180	MONTHS		1.00												
89																			
10.7	Fresent yel	ue of the cas	sh flowes	the second se		e SPA is not	which they make	e the avere	es value n/ 1	tre wayle they	AND MADE AND ADDRESS.								
	Annual Pen	centage Rate	e of Charge	.6.8%	TITAMIC	Receicu	late												
R.																			
12.0		Film Lyndiff		52682.74															
		nt of credit		300000.00															
	Total arrow	nt payable		153682.74															
96 3		-	-			_			_				_						-
01				Bala	etce .		Transact of	n papital	Other	parte			Paymente			Call	Alex	Illustrative	scenari
DIG-				2	malanta	1000	1000	1			Ropa	ment of the co	edit .	<u>p</u>					
1	See.	Destroyers	traid.	Duterandrig	Duranatiog: (capital plue	Final	Barrowing	konner	Hotfriacyceut.	Emerced	Capital			Linter	Tex	Roman or statements	Property and an	beningrafe	and a
				forly capitali	recenti	1	rete (05)	charget			weather	Average.	244	Inamid		- average of		(Interaction of	inter (de
36	0	100000.00				200000.00			4000.00	-			-	4000.00	4000.00	196000.00	156000.00		
179	3		300000.00	200000.00	201000.00	196000.00	8.00%	1000.00			4000.00	1000.00	5000.00	0.00	5000.00	-5000.00	-4972 59		
10	1		196000.00	196000.00	196980.00	192080.00	6:D0%	980.00	-	_	3970.00	990.00	4900.00	0.00	4900.00	-4900.00	-4846.41	_	
86	178		5598.16			5485.20	B.00%	27.99			111.98	27.99	158.95	0.00	138.95	189 95			
87	179		5488.20			5576.47	6.00%	27.48			109.72	27.43	137.15	0.00	107.55	-121 12	-51 27		
88	180		5376.47	5376.47	5408.36	0.00	6.00%	26.88			\$376.47	26.88	=E288	0.00	5488.36	+5403.36	-2008.84		
89																			
	Sunts																		
100	/enr 1	2000000.00						10764.16	4000.00	0.00	49056.66	10764.16	-53820.82	4000.00	57820.83	142179.18	143990.25		
25	tear 1	0.00						8446.83	0.00	0.00	33787.28	8446.83	42254.30	0.00	42234 10	-42254 10	-38207.60		
94	lear 3	0.00						6618.36	0.00	0.00	20513.44	6828.36	33141.80	0.00	53141.80	-33141.80	-26068.21		
	rear 4	0.00						5201.39	0.00	0.00	20805 54	5201.39	26006.93	0.00	26006.92	-26006.92			
	faar ti	0.00						4081.61	0.00	0.00		4081.61	20408.07	0.00	20408.06	20405.06	-15147.52		
	Venr 0	0.00						3202.91	0.00	0.00		1202.91	16014-55	0.00	10014 56				
	fear 7	0.00						251338	0.08	0.00		2513.38	12566.89	0.00	12566.87	12565.87	-8174.74		
	lear 9	0.00						1547.89	0.00	0.00		1547 69	7758 44	0.00	7738 45	-0851.46			
	feat 10	0.00						1214.50	0.00	0.00		1214.50	6072.43	0.00	6072.48	+6072.48			
	Aar 11	0.00						958.04	0.00	0.00		953.04	4765.18	0.00	4765.19	4765.19	2380.87		
	/eer 12	0.00						747.88	0.00	0.00	and the second s	747.80	3739.32	0.00	3759.33	-3759.32	-1749.04		
04	(ear 13	0.00						586.86	0.00	0.00	2347,44	586.88	2954.00	0.00	2934.31	-2934.31	-1284.89		
05	rear 14	0.00						460.52	0.00	0.00	1842.08	460.52	2302.60	0.00	2302.58	-3303 59	943.90		
06	Pear 15	0.00						361.38	0.00	0.00	6714.AS	361.38	7075.65	0.00	7075.81	-7075.81	-2652.27		
	Total	200000.00						45682.76	1002-00	0.00	200000.00	48682.78	248582 76	4000.003	252682.74	-53662.74	-24.27		

To obtain the correct APR, click on the button *Recalculate* next to the cell showing the *Annual Percentage Rate of Charge*. A new APR of 6.8% is obtained and the error message disappears.

	Main re	SUILS			_														
87 / 89 89 89 89 89 89 89 89 89 89 89 89 89 8	mount of t luration of	e of the cas entage Rate f the credit nt of credit	nymenti In flows	0.00 6.83 5.3682.74 200000.00 252681.74	монтна румамис	Recelicu Recelicu		-											
00	_			Bula			Promet of	a handla	Other				Parments	_	_	Cent	Tana	III	
CE.					100		THE S O	1.00040	Contract	0000	Firmer	ment of the co		- 1	_		1101	Illustrative s	cenanos
07	Find	Dresibiere	bonar	Outranding (only capital)	Outomanding (copinal plus interest)	Tinid	Beneving rate(21)	kniewar chalger	Nationiconid	Tecanced	Capital secondarios	insores:	Tesh.	Timper tensoret	-1000	Value de La del			and de
08	0	200000-00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
08	1		200000.00	100000.00	201000-00	196000.00	6.00%	1000.00			4000.00	1000.00	5000.00	0.00	5000.00	-5000.00	-4972.51		
\$0	7		195000.00	194000.00	186880.00	192080.00	6.00%	480.00			5920,00	980.00	4900.00	0.00	4900.00	-4900.00	-48-48-59		
86	178		5598.16	5998 16	\$626.15	5486 20	6.00%	27.99			111.95	17.99	139.95	0.00	139.95	139,95	52.58		
#2	170		5486.20	5486.20	5518.63	5576.47	8.00%	27.43			109,72	27 43	157.15	0.00	137.15	-137.15	-31.34		
84 89	180		5376.47	5378.47	5403.36	0.00	6.00%	26.68			5376.47	16.60	5403.38	0.00	5408.30	-5403.56	-1007.63		
90																			
91.1	um:																		
92.9	ear 1	100000.00						10764.16	4000.00	. 0.00	49056.66	10764.16	53820.82	4000.90	57820.82	142178.18	143991.27		
93 1	Har 2	0.00						1846.83	0.00	0.00	35787.28	8448.82	4223410	0.00		41234.10	-55705.40		
	ear 3	0.00						0028.06	0.00	0.00	20313.44	6628.36		0.00		-33141.80			
	e3/ 4	0.00						5201.39	0.00	0.00	10805.54	5201.39	26006.93	0.00		26006.92			
	ear 5 ear 6	0.00						4081.81 3202.31	0.00	0.00	16529.46	4081.61	20408.07	0.00		-16014,56	-15145.02		
	e2r7	0.00						2513.38	0.00	-0.00	10053.51		12565.88	0.00		12566.87	-8172.71		
	mar JI	0.00						1072.24	0.00	0.00	7889.16	1072.20	5661 45	0.00	1862.45	0861.46	-6003.65		
	ear 9	0.00						1547.69	0.00	0.00	0190.75	1547 69	7735.44	0.00	7738,45	-7738.45	-4410.26		
01	ear 10	0.00						1214.50	0.00	0.00	4857.99	1214.50	6072.49	0.00	5072.48	-5072.48	-3239.75		
07	war 11.	0.00						855.04	0.00	0.00	3817.14	955.04	4765.18	0.00	4765.19	4765.19	-2579.92		
00.1	ea: 11	0.00						747.86	0.00	0.00	2991.45	747.80	3709.33	0.00	1739.82	-3739 33	-1748.27		
1.00	ear 18	0.00						586.86	0.00	0.00	2347.44	586.86	2954.30	0.00	2934.31	-1934.31	-1284.28		
	HEP 14	0.00						460.51	0.00	0.00	1842.08	460.52	2502.10	0.00	2302.59	-1302.59	-945.43		
	ee/ 15	0.00						361.58	0.00	0.00	6714.45	961.38	7075.83	0.00	7075.61	-7075.81	-1650.77		

Case 1

Click on the button *Reset* and then enter the information highlighted in red.

Note that after ticking the box *The length of the first period of repayment is different,* an auxiliary period calculator appears.

The auxiliary calculator is not necessary in this example, as it is assumed that the length of the first interval is exactly 0 regular periods and 14 days in a year with 365 days (i.e. a nonleap year). Therefore, enter this information directly in the upper row.

Description of the credit product				
MAIN FEATURES OF THE CREDIT PRODUCT				
A) Total amount of the credit				
	E Tick the box for an illustrative scenario if the credit	is in a foreign currency		
Amount 200				
B) Conditions governing drew downs				
Solicet Immediately and Inful				
C) Conditions governing repayments (DY NAMIC)				
Frequency of repayments monthly	NOTE: This will determine the length of regular perio	ds shown in the table as: <u>MONTHS</u>		
Amount Equal Indainents (to be calculated)				
Special Payments (*)				
Advance payment* Nofthe medt int	.			
Enal Payment* Readancent	•			
It is length at the trul period of represent is defensed. Auxiliary period calculator	It is given a complete periods and From to Calculate	34 days (in a year with 265 days) 💌	days in a year with	daya
D) Duration of the credit agreement				
Duration Fixed 💌 o	perioda 💴			
COSTS OF THE CREDIT				
A) Borrowing rate				
Lovel Samelevel for the orbit cradit term	Defined as Norhal (annual)	🔲 Tick the box for an illustrative scenario if the	are dit allows variations in the borr	owing rate
Percentage Land				
B) O ther cost in cluded in the Total Cost of the Credit				
Given as	Amountor's Financed Da	Co of chargo		
Cost 1 Nofthe multime		•		
Cost 2 Wofthe multimb	X No ⁴ X At conclusion No ⁴	•		
Cost 5 % of the drawdowns in each pariod				
Cost 4 % of the balance outstanding (capital + interest) in ea				
Cost 5 % of the balance outstanding (only capital) in each per				
Cost 6 % of the credit not used at the beginning of each peri				
Cost 7 % of the final balance in each period	_			
Examples	Oba (*)	Obs (*)		
Shared equity credit				

Main results

Final balance in the last period	0.00				
Amount of the first repayment	1429.01		Recalcu	ate	
Duration of the credit	240 MONTH	is —			
	0.00				
Present value of the cash flows	0.00				
Annual Percentage Rate of Charge	6.4% DYNAM	IC	Recalcu	ate	
Total cost of the credit	146962.40				
Total amount of credit	200000.00				
Total amount payable	346962.40				

			Bala	ance		Interest o	n capital	Other	costs			Payments	I		Cash	flows	Illustrative	scenarios
Period	Drawdowns		Outstanding	Outstanding						Repay	ment of the cr	edit				,	highest	highest
renou	Diawuowiis	Initial	(only capital)	(capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing rate (credit currency)	exchange rate (domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1		200000.00	200000.00	200460.27	199031.26	6.00%	460.27			968.74	460.27	1429.01	0.00	1429.01	-1429.01	-1425.60		
2		199031.26	199031.26	200026.42	198597.40	6.00%	995.16			433.86	995.16	1429.01	0.00	1429.01	-1429.01	-1418.20		
3		198597.40	198597.40	199590.39	198161.37	6.00%	992.99			436.03	992.99	1429.01	0.00	1429.01	-1429.01	-1410.85		
4		198161.37	198161.37	199152.18	197723.17	6.00%	990.81			438.21	990.81	1429.01	0.00	1429.01	-1429.01	-1403.54		
5		197723.17	197723.17	198711.78	197282.77	6.00%	988.62			440.40	988.62	1429.01	0.00	1429.01	-1429.01	-1396.26		
6		197282.77	197282.77	198269.18	196840.17	6.00%	986.41			442.60	986.41	1429.01	0.00	1429.01	-1429.01	-1389.02		
7		196840.17	196840.17	197824.37	196395.35	6.00%	984.20			444.81	984.20	1429.01	0.00	1429.01	-1429.01	-1381.82		
8		196395.35	196395.35	197377.33	195948.31	6.00%	981.98			447.04	981.98	1429.01	0.00	1429.01	-1429.01	-1374.66		
9		195948.31	195948.31	196928.06	195499.04	6.00%	979.74			449.27	979.74	1429.01	0.00	1429.01	-1429.01	-1367.53		
10		195499.04	195499.04	196476.54	195047.52	6.00%	977.50			451.52	977.50	1429.01	0.00	1429.01	-1429.01	-1360.44		
11		195047.52	195047.52	196022.76	194593.75	6.00%	975.24			453.78	975.24	1429.01	0.00	1429.01	-1429.01	-1353.39		
12		194593.75	194593.75	195566.71	194137.70	6.00%	972.97			456.05	972.97	1429.01	0.00	1429.01	-1429.01	-1346.37		
Sums																		
Year 1	200000.00						11285.87	4000.00	0.00	5862.30	11285.87	17148.18	4000.00	21148.12	178851.88	179372.31		
Year 2	0.00						11494.46	0.00	0.00	5653.71	11494.46	17148.18	0.00	17148.12	-17148.12	-15622.25		
Year 3	0.00						11145.76	0.00	0.00	6002.42	11145.76	17148.18	0.00	17148.12	-17148.12	-14677.61		
Year 4	0.00						10775.54	0.00	0.00	6372.63	10775.54	17148.18	0.00	17148.12	-17148.12	-13790.09		
Year 5	0.00						10382.49	0.00	0.00	6765.68	10382.49	17148.18	0.00	17148.12	-17148.12	-12956.23		
Year 6	0.00						9965.20	0.00	0.00	7182.98	9965.20	17148.18	0.00	17148.12	-17148.12	-12172.80		
Year 7	0.00						9522.17	0.00	0.00	7626.01	9522.17	17148.18	0.00	17148.12	-17148.12	-11436.74		
Year 8	0.00						9051.81	0.00	0.00	8096.36	9051.81	17148.18	0.00	17148.12	-17148.12	-10745.19		
Year 9	0.00						8552.45	0.00	0.00	8595.73	8552.45	17148.18	0.00	17148.12	-17148.12	-10095.45		
Year 10	0.00						8022.28	0.00	0.00	9125.89	8022.28	17148.18	0.00	17148.12	-17148.12	-9485.00		
Year 11	0.00						7459.41	0.00	0.00	9688.76	7459.41	17148.18	0.00	17148.12	-17148.12	-8911.46		
Year 12	0.00						6861.83	0.00	0.00	10286.34	6861.83	17148.18	0.00	17148.12	-17148.12	-8372.61		
Year 13	0.00						6227.39	0.00	0.00	10920.78	6227.39	17148.18	0.00	17148.12	-17148.12	-7866.34		
Year 14	0.00						5553.82	0.00	0.00	11594.35	5553.82	17148.18	0.00	17148.12	-17148.12	-7390.68		
Year 15	0.00						4838.71	0.00	0.00	12309.46	4838.71	17148.18	0.00	17148.12	-17148.12	-6943.78		
Year 16	0.00						4079.49	0.00	0.00	13068.69	4079.49	17148.18	0.00	17148.12	-17148.12	-6523.90		
Year 17	0.00						3273.44	0.00	0.00	13874.73	3273.44	17148.18	0.00	17148.12	-17148.12	-6129.42		
Year 18	0.00						2417.68	0.00	0.00	14730.50	2417.68	17148.18	0.00	17148.12	-17148.12	-5758.79		
Year 19	0.00						1509.13	0.00	0.00	15639.04	1509.13	17148.18	0.00	17148.12	-17148.12	-5410.57		
Year 20	0.00						544.55	0.00	0.00	16603.62	544.55	17148.18	0.00	17148.12	-17148.12	-5083.40		
Total	200000.00						142963.50	4000.00	0.00	200000.00	142963.50	342963.50	4000.00	346962.40	-146962.40	0.00		

Case 2

Click on the button *Reset* and then enter the information highlighted in red.

Note that after ticking the box *The length of the first period of repayment is different,* an auxiliary period calculator appears.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit Amount Tick the box for an illustrative scenario if the credit is in a foreign currency Amount
B) Conditions governing draw dowins
Scient Immediately and Inful
C) Conditions governing repayments (DYNAMIC)
Proquency of repaymental monthly
Amount Equil Indements (to be alculated)
Special Payments (*)
Advance payment" Wofthe predimit w New Payment" Fluedament T
_ final Paymont* Fisadamount
🗠 the length within the periods and days (he year with 365 days) 💌 Error: Integer positive numbers are required
Austriany partico cardulator. Promitio Calculato - complete perfode and days in a year with days

In the auxiliary calculator enter the initial and final dates of the first period of repayment and click on the button *Calculate* to obtain the number of regular periods and days corresponding to this period and the number of days of the year.

Then enter the information obtained in the previous row.

The length of the first partial of repayment is different	xytey/mxx to molete agrid ds and xytey/mxx to xytey/mxx Calculate	days (mayeer with 355 days) ▼ Error: Integer positive numbers are required 1 complete periods and 20 days in a year with 366 days
The length of the first period of repayment is different	itis given a periods and symplete periods and symplete periods and symplete periods and symplete	deys (neyear with 200 deys)

Click on the buttons Generate and then Calculate to obtain the main results the and amortisation table.

Main results

	the first repar f the credit	yment	1437.54 240	MONTHS	Recalcu	late												
	lue of the cash centage Rate		0.00 6.4%	DYNAMIC	Recalcu	late												
	of the credit Int of credit		149009.60 200000.00															
otal amou	int payable		349009.60															
			Bala	ince		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	e scenarios
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cr Interest	edit Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange ra (domestic currency)
C	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1	-	200000.00	200000.00	201655.74	200218.20	6.00%	1655.74			-218.20	1655.74	1437.54	0.00	1437.54	-1437.54	-1425.23		
2		200218.20	200218.20		199781.76	6.00%	1001.09			436.45	1001.09	1437.54	0.00	1437.54	-1437.54	-1417.84		
3		199781.76		200780.66	199343.13	6.00%	998.91			438.63	998.91	1437.54	0.00	1437.54	-1437.54			
4		199343.13	199343.13		198902.31	6.00%	996.72			440.82	996.72	1437.54	0.00	1437.54	-1437.54			
5		198902.31	198902.31		198459.28	6.00%	994.51			443.03	994.51	1437.54	0.00	1437.54	-1437.54	-1395.92		
6		198459.28	198459.28			6.00%	992.30			445.24	992.30	1437.54	0.00	1437.54	-1437.54	-1388.68		
7		198014.04	198014.04		197566.57	6.00%	990.07			447.47 449.70	990.07	1437.54	0.00	1437.54	-1437.54	-1381.49		
2		197566.57	197566.57		197116.87	6.00%	987.83				987.83	1437.54	0.00	1437.54	-1437.54	-1374.33		
10		197116.87 196664.92	197116.87 196664.92		196664.92 196210.71	6.00% 6.00%	985.58 983.32			451.95 454.21	985.58 983.32	1437.54 1437.54	0.00	1437.54 1437.54	-1437.54	-1367.21 -1360.12		
11		196664.92		197648.24		6.00%	983.32			454.21 456.48	983.32	1437.54	0.00	1437.54	-1437.54	-1360.12		
11		195754.22		196732.99	195295.46	6.00%	978.77			458.77	978.77	1437.54	0.00	1437.54	-1437.54	-1346.07		
ums	-	155754.22	1557 54.22	150752.55	155255.40	0.0070	570.77			430.77	570.77	1457.54	0.00	1457.54	1457.54	1340.07		
ear 1	200000.00						12545.90	4000.00	0.00	4704.54	12545.90	17250.44	4000.00	21250.48	178749.52	179376.35		
ear 2	0.00						11563.01	0.00		5687.43	11563.01	17250.44	0.00	17250.48	-17250.48			
ear 3	0.00						11212.23	0.00	0.00	6038.21	11212.23	17250.44	0.00	17250.48	-17250.48			
ear 4	0.00						10839.80	0.00	0.00	6410.64	10839.80	17250.44	0.00	17250.48	-17250.48			
ear 5	0.00						10444.41	0.00		6806.03	10444.41	17250.44	0.00	17250.48	-17250.48			
ear 6	0.00						10024.63	0.00	0.00	7225.81	10024.63	17250.44	0.00	17250.48	-17250.48			
ear 7	0.00						9578.95	0.00	0.00	7671.49	9578.95	17250.44	0.00	17250.48	-17250.48	-11436.19		
ear 8	0.00						9105.79	0.00	0.00	8144.65	9105.79	17250.44	0.00	17250.48	-17250.48	-10745.02		
ear 9	0.00						8603.45	0.00	0.00	8646.99	8603.45	17250.44	0.00	17250.48	-17250.48	-10095.62		
ear 10	0.00						8070.12	0.00	0.00	9180.32	8070.12	17250.44	0.00	17250.48	-17250.48	-9485.47		
ear 11	0.00						7503.90	0.00	0.00	9746.54	7503.90	17250.44	0.00	17250.48	-17250.48			
ear 12	0.00						6902.75	0.00		10347.69	6902.75	17250.44	0.00	17250.48	-17250.48			
ear 13	0.00						6264.53	0.00		10985.91	6264.53	17250.44	0.00	17250.48	-17250.48			
ear 14	0.00						5586.95	0.00	0.00	11663.49	5586.95	17250.44	0.00	17250.48	-17250.48			
ear 15	0.00						4867.57	0.00		12382.87	4867.57	17250.44	0.00	17250.48	-17250.48			
'ear 16	0.00						4103.82	0.00		13146.62	4103.82	17250.44	0.00	17250.48				
'ear 17	0.00						3292.96	0.00	0.00	13957.48	3292.96	17250.44	0.00	17250.48	-17250.48			
ear 18	0.00						2432.10	0.00		14818.34	2432.10	17250.44	0.00	17250.48	-17250.48			
'ear 19	0.00						1518.13	0.00	0.00	15732.31	1518.13	17250.44	0.00	17250.48	-17250.48			
'ear 20	0.00						547.80 145008.80	0.00 4000.00	0.00	16702.64	547.80 145008.80	17250.44 345008.80	0.00	17250.48 349009.60	-17250.48			

Click on the button *Reset* and then enter the information highlighted in red.

Note that the explanations in Obs(*) under the *Date of charge* of other costs indicate that 'costs paid in advance are payable at the beginning of the interval assuming that the first payment coincides with the first repayment of the credit'. This is coherent with the treatment of the regular costs in this example by virtue of assumption (h)(iii); therefore, payment *in advance* is the option to choose for these costs.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) To tal amount of the credit
Tick the box for an illustrative scenario if the credit is in a foreign currency
B) Conditions governing drawdowns
Sicilized Immediately and Inful 💌
C) Conditions governing repayments (DYNAMIC)
Frequency of repsymental northy NOTE: This will determine the length of regular periods shown in the table as: MONTHS
A mount Ditensit plus equal repayments of capital regularly
Special Perments (*)
Advance payment* Nothe cast int 💌
Enal Paymont* Readamount
The long the stifts and periods trappers and is defensed
D) Duration of the credit agreement
Duration Fixed 💌 of 🗯 poriods
COSTS OF THE CREDIT
A) Sorrowing rate
Lovel Same avail for the withe weak term 📼 Defined as Northal (annua) 💽 DYNAMIC 🗆 Tick the box for an illustrative scenario if the predict allows variations in the borrowing rate
Personia ge Luti
B)Other cost included in the Total Cost of the Credit
Given as Amounter% Financed Date of charge
🗹 Cost 2 Fixed amount 💌 💼 No* 💌 Other frequency (rum, of periods) * 💌 346 in advance*
Cost 5 Noffe drawdowrs in each parlod 💌 No* 💌
📙 Cost 4 Noffe balance outstanding (apta) - interval) in each partod 💌 Noffe 💌
Cost S & offer balance cutationing (only capital) in each parked 💌 No.4 💌
Cost 6 Northe predictor used at the beginning of each period V Nor V Cost 7 Northe Final balance in each period V
Examples Obs(*) Obs(*)
L Shared equity credit

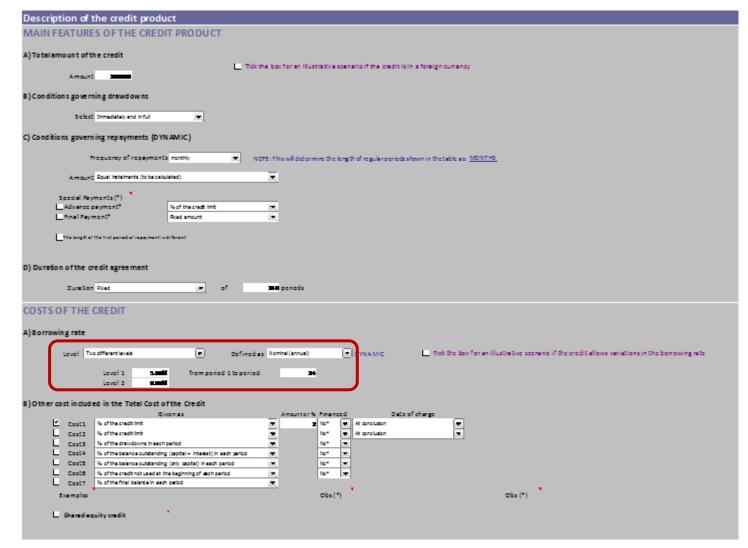
Click on the buttons *Generate* and then *Calculate* to obtain the main results and the

amortisation table.

Main results

Final balance in the last period	0.00	
Amount of the first repayment		Recalculate
Duration of the credit	240 MONTHS	
Present value of the cash flows	0.00	
Annual Percentage Rate of Charge	6.5% DYNAMIC	Recalculate
Total cost of the credit	125500.00	
Total amount of credit	200000.00	
Total amount payable	325500.00	

_			Dela			1 - + + -	n an altal	Other				Devenente			Contraction	0	111 contractions	
			Bala	ance		Interest o	n capitai	Other	costs			Payments	r		Cash	flows	Illustrative	scenarios
Period	Dra wdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cr Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange ra (domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1		200000.00	200000.00	201000.00	199166.67	6.00%	1000.00	100.00		833.33	1000.00	1833.33	100.00	1933.33	-1933.33	-1923.18		
2		199166.67	199166.67	200162.50	198333.33	6.00%	995.83			833.33	995.83	1829.17	0.00	1829.17	-1829.17	-1810.01		
3		198333.33	198333.33	199325.00	197500.00	6.00%	991.67			833.33	991.67	1825.00	0.00	1825.00	-1825.00	-1796.39		
4		197500.00	197500.00	198487.50	196666.67	6.00%	987.50			833.33	987.50	1820.83	0.00	1820.83	-1820.83	-1782.88		
5		196666.67	196666.67	197650.00	195833.33	6.00%	983.33			833.33	983.33	1816.67	0.00	1816.67	-1816.67	-1769.46		
6		195833.33	195833.33	196812.50	195000.00	6.00%	979.17			833.33	979.17	1812.50	0.00	1812.50	-1812.50	-1756.13		
7		195000.00	195000.00	195975.00	194166.67	6.00%	975.00			833.33	975.00	1808.33	0.00	1808.33	-1808.33	-1742.88		
8		194166.67	194166.67	195137.50	193333.33	6.00%	970.83			833.33	970.83	1804.17	0.00	1804.17	-1804.17	-1729.74		
9		193333.33	193333.33	194300.00	192500.00	6.00%	966.67			833.33	966.67	1800.00	0.00	1800.00	-1800.00	-1716.68		
10		192500.00	192500.00	193462.50	191666.67	6.00%	962.50			833.33	962.50	1795.83	0.00	1795.83	-1795.83	-1703.71		
11		191666.67	191666.67	192625.00	190833.33	6.00%	958.33			833.33	958.33	1791.67	0.00	1791.67	-1791.67	-1690.83		
12		190833.33	190833.33	191787.50	190000.00	6.00%	954.17			833.33	954.17	1787.50	0.00	1787.50	-1787.50	-1678.04		
Sums																		
/ear 1	200000.00						11725.00	4100.00	0.00	10000.00	11725.00	21725.00	4100.00	25825.00	174175.00	174900.08		
Year 2	0.00						11125.00	0.00	0.00	10000.00	11125.00	21125.00	0.00	21125.00	-21125.00	-19170.03		
Year 3	0.00						10525.00	100.00	0.00	10000.00	10525.00	20525.00	100.00	20625.00	-20625.00	-17572.71		
/ear 4	0.00						9925.00	0.00	0.00	10000.00	9925.00	19925.00	0.00	19925.00	-19925.00	-15934.54		
/ear 5	0.00						9325.00	100.00	0.00	10000.00	9325.00	19325.00	100.00	19425.00	-19425.00	-14585.61		
/ear 6	0.00						8725.00	0.00	0.00	10000.00	8725.00	18725.00	0.00	18725.00	-18725.00	-13197.10		
/ear 7	0.00						8125.00	100.00	0.00	10000.00	8125.00	18125.00	100.00	18225.00	-18225.00	-12060.11		
/ear 8	0.00						7525.00	0.00	0.00	10000.00	7525.00	17525.00	0.00	17525.00	-17525.00	-10885.06		
/ear 9	0.00						6925.00	100.00	0.00	10000.00	6925.00	16925.00	100.00	17025.00	-17025.00	-9928.69		
Year 10	0.00						6325.00	0.00	0.00	10000.00	6325.00	16325.00	0.00	16325.00	-16325.00	-8935.99		
/ear 11	0.00						5725.00	100.00	0.00	10000.00	5725.00	15725.00	100.00	15825.00	-15825.00	-8133.39		
/ear 12	0.00						5125.00	0.00	0.00	10000.00	5125.00	15125.00	0.00	15125.00	-15125.00	-7296.30		
/ear 13	0.00						4525.00	100.00	0.00	10000.00	4525.00	14525.00	100.00	14625.00	-14625.00	-6624.43		
/ear 14	0.00						3925.00	0.00	0.00	10000.00	3925.00	13925.00	0.00	13925.00	-13925.00	-5919.99		
/ear 15	0.00						3325.00	100.00	0.00	10000.00	3325.00	13325.00	100.00	13425.00	-13425.00	-5359.13		
/ear 16	0.00						2725.00	0.00	0.00	10000.00	2725.00		0.00	12725.00	-12725.00			
/ear 17	0.00						2125.00	100.00	0.00	10000.00	2125.00	12125.00	100.00	12225.00	-12225.00	-4300.90		
'ear 18	0.00						1525.00	0.00	0.00	10000.00	1525.00	11525.00	0.00	11525.00	-11525.00	-3805.48		
'ear 19	0.00						925.00	100.00	0.00	10000.00	925.00	10925.00	100.00	11025.00	-11025.00			
ear 20	0.00						325.00	0.00	0.00	10000.00	325.00	10325.00	0.00	10325.00	-10325.00	-3004.58		
Total	20000.00						120500.00	5000.00	0.00	200000.00			5000.00		-125500.00	0.00		



Main results																		
	ice in the last the first repa f the credit	· .	0.00 1319.91 240	MONTHS	Recalcu	llate												
	resent value of the cash flows 0.00 nnual Percentage Rate of Charge 6.2% DYNAMIC Recalculate																	
Total cost o Total amou Total amou			143134.40 200000.00 343134.40															
			Bala	ance	r	Interest o	n capital	Other	costs			Payments	I		Cash	flows	Illustrative	scenarios
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cr	edit Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
C	0 200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
1	1	200000.00	200000.00	200833.33	199513.42	5.00%	833.33			486.58	833.33	1319.91	0.00	1319.91	-1319.91	-1313.32		
2	2	199513.42	199513.42	200344.73	199024.82	5.00%	831.31			488.61	831.31	1319.91	0.00	1319.91	-1319.91	-1306.76		
3		199024.82	199024.82			5.00%	829.27			490.64	829.27	1319.91	0.00	1319.91	-1319.91	-1300.24		
4		198534.17					827.23			492.69	827.23	1319.91	0.00	1319.91		-1293.75		
5		198041.49	198041.49				825.17			494.74	825.17	1319.91	0.00	1319.91		-1287.29		
6		197546.75					823.11			496.80	823.11	1319.91	0.00	1319.91	-1319.91	-1280.86		
7		197049.95					821.04			498.87	821.04	1319.91	0.00	1319.91		-1274.46		
8		196551.08	196551.08				818.96			500.95	818.96	1319.91	0.00	1319.91		-1268.10		
9		196050.13	196050.13				816.88			503.04	816.88	1319.91	0.00	1319.91	-1319.91	-1261.77		
10		195547.10 195041.96	195547.10 195041.96				814.78			505.13 507.24	814.78 812.67	1319.91 1319.91	0.00	1319.91 1319.91		-1255.47 -1249.20		
11		195041.96					812.67 810.56			507.24	812.67	1319.91	0.00	1319.91		-1249.20		
Sums	2	194354.75	194354.75	195545.29	194025.56	5.00%	610.50			509.55	010.00	1519.91	0.00	1519.91	-1519.91	-1242.90		
Year 1	200000.00						9864.32	4000.00	0.00	5974.62	9864.32	15838.94	4000.00	19838.92	180161.08	180665.83		
Year 2	0.00						9558.64	0.00	0.00		9558.64	15838.94	0.00	15838.92		-14440.23		
Year 3	0.00						11102.06	0.00	0.00		11102.06	17080.95	0.00	17080.92		-14664.71		
Year 4	0.00						10733.30	0.00	0.00		10733.30	17080.95		17080.92		-13809.79		
Year 5	0.00						10341.79	0.00	0.00		10341.79	17080.95	0.00	17080.92		-13004.71		
Year 6	0.00						9926.13	0.00	0.00	7154.82	9926.13	17080.95	0.00	17080.92	-17080.92	-12246.57		
Year 7	0.00						9484.84	0.00	0.00	7596.11	9484.84	17080.95	0.00	17080.92	-17080.92	-11532.63		
Year 8	0.00						9016.33	0.00	0.00	8064.62	9016.33	17080.95	0.00	17080.92	-17080.92	-10860.30		
Year 9	0.00						8518.92	0.00	0.00	8562.03	8518.92	17080.95	0.00	17080.92	-17080.92	-10227.17		
Year 10	0.00						7990.83	0.00	0.00	9090.12	7990.83	17080.95	0.00	17080.92	-17080.92	-9630.95		
Year 11	0.00						7430.17	0.00	0.00		7430.17	17080.95	0.00	17080.92		-9069.49		
Year 12	0.00						6834.93	0.00	0.00		6834.93	17080.95		17080.92		-8540.76		
Year 13	0.00						6202.98	0.00	0.00		6202.98	17080.95		17080.92		-8042.86		
Year 14	0.00						5532.05	0.00	0.00		5532.05	17080.95	0.00	17080.92		-7573.98		
Year 15	0.00						4819.74	0.00	0.00		4819.74	17080.95	0.00	17080.92		-7132.44		
Year 16	0.00						4063.50	0.00	0.00		4063.50	17080.95		17080.92		-6716.63		
Year 17	0.00						3260.61	0.00	0.00		3260.61	17080.95	0.00	17080.92		-6325.07		
Year 18	0.00						2408.20	0.00	0.00		2408.20	17080.95	0.00	17080.92		-5956.33		
Year 19 Year 20	0.00						1503.22 542.42	0.00	0.00		1503.22 542.42	17080.95 17080.95	0.00	17080.92		-5609.09 -5282.10		
							139134.97									-5282.10		
Total	20000.00						139134.97	4000.00	0.00	200000.00	139134.97	339134.97	4000.00	543134.40	-143134.40	0.00		

Description of the creat product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Amount 2000
B) Con ditions go verning draw dow ns
Solicot Immediately and in full
C) Conditions governing repayments (DYNAMIC)
Frequency of repayments must have the second state of regular periods shown in the table as: MONTHS
Amount Equal Infalments (to be calculated)
Social Permonts (*)
Advance payment" No of the credit int
Linal Payment" Finad arount 💌
The length with a hid period of represent with terms
D) Duration of the credit agreement
Duration Fixed 💌 of 🖼 periods
COSTS OF THE CREDIT
A) Borrowing rate
Level Two offerent levels 💽 Defined as Normal (annua) 💽 D NAMIC
Credit of ArSide 17(5) of the MCO: 5-year or more fixed followed by negotiation on new fixed
Level 1 5.000 from period 1 to
Level 2 5
B) O ther cost in cluded in the Total Cost of the Credit
Cost 1 % of the credit Int T T T T T T T T T T T T T T T T T T T
Cost 2 Wofthe preclimit V No* V At conclusion V Cost 5 Wofthe drawdowraith each parked V No* V
Cost 4 Wofthe balance outstanding (aptial + htered) in each particip 💌 No" 💌
Cost 6 W of the credit not used at the beginning of each particle 💌 No* 💌
Examples Obs(*) Obs(*)
L Shared equity credit

Main re	sults																	
													Illustrative s	cenario of ch	nange in the l	orrowing rate		
	the first repay the first repay the credit		0.00 1319.91 240		Recalcu	llate							opportunity, th	ne instalment		evel entered ab shown in the la		
																	7.2%	
Present valu	ue of the cash	n flows	0.00															
Annual Perc	centage Rate	of Charge	5.9%	DYNAMIC	Recalcu	late												
Total cost of	f the credit		133287.05															
Total amour			200000.00															
Total amour			333287.05															
			Bala	ance		Interest o	n capital	Other	costs	Dearer	ment of the cre	Payments			Cash	flows	Illustrative	scenarios -
Period	Drawdowns		Outstanding	Outstanding		Deservites	Interest			керау	ment of the cre	edit	Costs not		Value at	1	highest	highest
. c.iou		Initial	(only capital)	(capital plus interest)	Final	Borrowing rate (%)	charges	Not financed	Financed	Capital amortisation	Interest	Total	financed	Total	each period	Present value	borrowing rate (credit	exchange rat (domestic
										amortisation							currency)	currency)
0					200000.00			4000.00					4000.00	4000.00			4000.00	
1		200000.00	200000.00				833.33			486.58	833.33	1319.91	0.00	1319.91	-1319.91	-1313.67	1319.91	
2		199513.42	199513.42				831.31			488.61	831.31	1319.91	0.00	1319.91	-1319.91	-1307.46	1319.91	
3		199024.82 198534.17	199024.82 198534.17			5.00%	829.27 827.23			490.64 492.69	829.27 827.23	1319.91 1319.91	0.00	1319.91 1319.91	-1319.91	-1301.27 -1295.12	1319.91 1319.91	
		198041.49	198041.49				827.23			492.03	825.17	1319.91	0.00	1319.91	-1319.91	-1235.12	1319.91	
6		197546.75	197546.75				823.11			496.80	823.11	1319.91	0.00	1319.91	-1319.91	-1282.90	1319.91	
7		197049.95	197049.95				821.04			498.87	821.04	1319.91	0.00	1319.91	-1319.91	-1276.83	1319.91	
8		196551.08	196551.08	197370.04	196050.13	5.00%	818.96			500.95	818.96	1319.91	0.00	1319.91	-1319.91	-1270.79	1319.91	
9		196050.13	196050.13	196867.01	195547.10	5.00%	816.88			503.04	816.88	1319.91	0.00	1319.91	-1319.91	-1264.78	1319.91	
10		195547.10	195547.10				896.26			477.80	896.26	1374.06	0.00	1374.06	-1374.06	-1310.44	1530.61	
11		195069.30	195069.30			5.50%	894.07			479.99	894.07	1374.06	0.00	1374.06	-1374.06	-1304.24	1530.61	
12		194589.31	194589.31	195481.17	194107.12	5.50%	891.87			482.19	891.87	1374.06	0.00	1374.06	-1374.06	-1298.08	1530.61	
Sums Year 1	200000.00						10108.49	4000.00	0.00	5892.88	10108.49	16001.38	4000.00	20001.37	179998.63	180485.43	20471.02	
Year 2	0.00						10108.49		0.00		10108.49	16488.69	4000.00	16488.72		-15106.29	18367.32	
Year 3	0.00						10190.82		0.00		10190.82	16488.69	0.00	16488.72		-14270.93	18367.32	
Year 4	0.00						9835.57	0.00	0.00	6653.12	9835.57	16488.69	0.00	16488.72	-16488.72	-13481.77	18367.32	
Year 5	0.00						9460.28	0.00	0.00	7028.41	9460.28	16488.69	0.00	16488.72	-16488.72	-12736.25	18367.32	
Year 6	0.00						9063.82		0.00		9063.82	16488.69	0.00	16488.72			18367.32	
Year 7	0.00						8645.00		0.00		8645.00	16488.69	0.00	16488.72		-11366.61	18367.32	
Year 8	0.00						8202.56		0.00		8202.56	16488.69	0.00	16488.72	-16488.72	-10738.06	18367.32	
Year 9 Year 10	0.00						7735.15 7241.38		0.00		7735.15 7241.38	16488.69 16488.69	0.00	16488.72 16488.72		-10144.26 -9583.30	18367.32 18367.32	
Year 10 Year 11	0.00						6719.76		0.00		6719.76	16488.69	0.00	16488.72		-9583.30	18367.32	
Year 12	0.00						6168.72		0.00		6168.72	16488.69	0.00	16488.72		-8552.72	18367.32	
Year 13	0.00						5586.59		0.00		5586.59	16488.69	0.00	16488.72		-8079.77	18367.32	
Year 14	0.00						4971.63	0.00	0.00	11517.06	4971.63	16488.69	0.00	16488.72	-16488.72	-7632.97	18367.32	
Year 15	0.00						4321.97		0.00		4321.97	16488.69	0.00	16488.72		-7210.88	18367.32	
Year 16	0.00						3635.68		0.00		3635.68	16488.69	0.00	16488.72		-6812.13	18367.32	
Year 17	0.00						2910.67	0.00	0.00		2910.67	16488.69	0.00	16488.72		-6435.43	18367.32	
Year 18	0.00						2144.76		0.00		2144.76	16488.69	0.00	16488.72		-6079.56	18367.32	
Year 19	0.00						1335.65		0.00	15153.04	1335.65	16488.69	0.00	16488.72		-5743.37	18367.32	
Year 20	0.00						480.90	0.00	0.00	16007.79	480.90	16488.69	0.00	16488.72	-16488.72	-5425.78	18367.32	

Case 1

Description of the credit product	
MAIN FEATURES OF THE CREDIT PRODUCT	
A) Total amount of the credit	Tick the box for an illustrative scenario if the credit is in a foreign currency
Amount	 The one best for an insufficient scenario in one origination and any commency
8) Conditions governing drawdowns	
Soloci Inmediately and Inful	
C) Conditions governing repayments (DYNAMIC)	
Frequency of repayments merthly	NOTE: This will determine the length of regular periods shown in the table as: <u>MONTHS</u>
Amount Equil Intellects (to be calculated)	
Special Payments (*) Advance payment* Nofthe redt int	
Final Payment* Fixed amount	
The long th of the first period of repayment is different	
	of 🛛 🗯 parioda
	of 🛛 🗯 parioda
COSTS OF THE CREDIT	of 🛛 🗯 pariada
Duration Red • o	of mariada
COSTS OF THE CREDIT	of periods Defined as Nertral (anna) V NAMIC V Tick the box for an illustrative scenario if the credit allows variations in the borrowing rate
DuneSten Fixed COSTS OF THE CREDIT A) Borrowing rate Level The offerent levels	Defined as Northal (annua) To NAMIC Vita the box for an illustrative scenario if the credit allows variations in the borrowing rate
Duration Frad COSTS OF THE CREDIT A)Borrowing rate Lovel Two different invite Lovel 1	Defined as Normal (arrwal) Tick the bex for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(3) of the MCD: 5-year or more fixed followed by negotiation on new d 1 to period I I redit to borrowing rate if lower)
DuneSten Fixed COSTS OF THE CREDIT A) Borrowing rate Level The offerent levels	Defined as Northal (annua) To NAMIC Vita the box for an illustrative scenario if the credit allows variations in the borrowing rate
Duration Fixed COSTS OF THE CREDIT A) Borrowing rate Level Tredfforent levels Level 1 1 1 1000 from peried Level 2 1 1000 from peried	Defined as Normal (arrwal) Tick the bex for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(3) of the MCD: 5-year or more fixed followed by negotiation on new d 1 to period I I redit to borrowing rate if lower)
Duration Fixed COSTS OF THE CREDIT A) Borrowing rate Level Two offerent levels Level 1 5.000 from period Level 2 5.000 from period B) Other cost included in the Total Cost of the Cred it Civen as	Defined as Nertral (annua) Image: Constraint of the box for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(3) of the MCD: 5-year or more fixed followed by negotiation on new sightest borrowing rate in the borrowing rate if lower) Stopprind Image: Credit of Article 17(3) of the MCD: 5-year or more fixed followed by negotiation on new sightest borrowing rate in the borrowing rate if lower) Amounter% Image: Credit of Article 17(3) of the MCD: 5-year or more fixed followed by negotiation on new sightest borrowing rate in the borrowing rate if lower) Amounter% Image: Credit of Article 17(3) of the MCD: 5-year or capitation on the borrowing rate if lower) Amounter% Image: Credit of Article 17(3) of the MCD: 5-year or capitation on the borrowing rate if lower) Amounter% Image: Credit of Article 17(3) of the MCD: 5-year or capitation on the borrowing rate if lower) Amounter% Image: Credit of Article 17(3) of the MCD: 5-year or capitation of the second when that highest rate could be charged (1, 2, 3,)
Duration Fixed COSTS OF THE CREDIT ()Borrowing rate Level Two offerent levels Level 1 summer from period Level 2 summer from period Cover as	Defined as Northal (annua) Defined as Northal (annua) Tick the bex for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(3) of the MCD: 5-year or more fixed followed by negotiation on new and rightst borrowing rate in % (in at least the last 20 years or cap rate if lower) Anounter% Financed Date of charge Tick the Date of charge Tick the could be charged (1, 2, 3,)
Duration Fixed Duration Fixed COSTS OF THE CREDIT A) Borrowing rate Level 1 summer levels Level 2 summer b) Other cost in cluded in the Total Cost of the Credit Given as Cost 2 Fixed amount Cost 2 Fixe	Defined as Nertral (annua) Image: Constraint of the box for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(3) of the MCD: 5-year or more fixed followed by negotiation on new sightest borrowing rate in the borrowing rate if lower) Stopprind Image: Credit of Article 17(3) of the MCD: 5-year or more fixed followed by negotiation on new sightest borrowing rate in the borrowing rate if lower) Amounter% Image: Credit of Article 17(3) of the MCD: 5-year or more fixed followed by negotiation on new sightest borrowing rate in the borrowing rate if lower) Amounter% Image: Credit of Article 17(3) of the MCD: 5-year or capitation on the borrowing rate if lower) Amounter% Image: Credit of Article 17(3) of the MCD: 5-year or capitation on the borrowing rate if lower) Amounter% Image: Credit of Article 17(3) of the MCD: 5-year or capitation on the borrowing rate if lower) Amounter% Image: Credit of Article 17(3) of the MCD: 5-year or capitation of the second when that highest rate could be charged (1, 2, 3,)
Duration Fixed COSTS OF THE CREDIT A)Borrowing rate Level Two offerent levels Level 1 5	Defined as Nortal (annus) V D NAMIC V Tick the box for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(5) of the MCD: 5-year or more fixed followed by negotiation on new Stitepened AnsunterN: Financed Date of charge V Stite Provide V V Stite Prov
Duration Fixed COSTS OF THE CREDIT A) Borrowing rate Level Two offerent levels Level 3 3	Defined as Northal (annual) Defined as Northal (annual) Tick the box for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(5) of the MCD: 5-year or more fixed followed by negotiation on new and righted borrowingrate in 56 (in at least the last 20 years or cap rate if lower) Taking the theorem in the borrowing rate if lower) Amountants financed Date of charge Amountants financed Date of charge Amountants financed Date of charge Amountants financed Not a store may mart take plus Amountants A
Duration Fixed • e COSTS OF THE CREDIT A) Borrowing rate Level 1 1 100 Level 2 1 100 From period Level 2 1 100 From period Cost 4 for the Total Cost of the Credit Cost 5 Cost 5 Cost 6	Defined as Nortal (anna) V D NAMIC Tick the box for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(5) of the MCD: 5-year or more fixed followed by negotiation on new d 1 to period Anounter's financed Date of charge Net all constant Anounter's financed Date of charge Net all constant Net all constant Net all constant Net all
Duration Fixed to e COSTS OF THE CREDIT A) Borrowing rate Level 1 1 100 from period Level 2 100 from period Level 3 100 from period Level	Defined as Nerital (annus) V D NAMIC Tick the box for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(5) of the MCD: 5-year or more fixed followed by negotiation on new State period Anounter N: Financed Date of charge Anounter N: Financed Date of charge Anounter N: Financed Date of charge Anounter N: Financed Anounter N: Finance Anounter N: Financed Anounter N: Finance Anounte
Duration Fixed • e COSTS OF THE CREDIT A) Borrowing rate Level 1 1 100 Level 2 1 100 From period Level 2 1 100 From period Cost 4 for the Total Cost of the Credit Cost 5 Cost 5 Cost 6	Defined as Nortal (anna) V D NAMIC Tick the box for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(5) of the MCD: 5-year or more fixed followed by negotiation on new d 1 to period Anounter's financed Date of charge Net all constant Anounter's financed Date of charge Net all constant Net all constant Net all constant Net all

Main re	esults																	
													Illustrative so	enario of ch	ange in the b	porrowing rate		
	ce in the last the first repa f the credit		0.00 1319.91 240		Recalcu	llate							opportunity, th	ne instalment		level entered at shown in the la :		
																	7.1%	
Present val	ue of the cas	h flows	0.00															
Annual Per	centage Rate	of Charge	6.1%	DYNAMIC	Recalcu	late												
Total cost o	of the credit		140487.05															
	int of credit		200000.00															
Total amou			340487.05															
			Bala	ance		Interest o	n capital	Other	costs	Bonou	ment of the cr	Payments			Cash	flows	Illustrative	scenarios
Period	Drawdowns		Outstanding	Outstanding		Borrowing	Interest			керау	ment of the ch	eun	Costs not		Value at		highest	highest
	Dianaonis	Initial	(only capital)	(capital plus interest)	Final	rate (%)	charges	Not financed	Financed	Capital amortisation	Interest	Total	financed	Total	each period	Present value	borrowing rate (credit	exchange rat (domestic
			capital)	meresty						amortisation							currency)	currency)
C	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00	4000.00	
1		200000.00	200000.00				833.33	30.00		486.58	833.33	1319.91	30.00	1349.91	-1349.91	-1343.23	1349.91	
2		199513.42	199513.42				831.31	30.00		488.61	831.31	1319.91	30.00	1349.91	-1349.91		1349.91	
3		199024.82	199024.82			5.00%	829.27	30.00		490.64	829.27	1319.91	30.00	1349.91	-1349.91	-1329.97	1349.91	
4		198534.17 198041.49	198534.17 198041.49				827.23 825.17	30.00 30.00		492.69 494.74	827.23 825.17	1319.91 1319.91	30.00 30.00	1349.91 1349.91	-1349.91 -1349.91	-1323.38 -1316.83	1349.91 1349.91	
6		198041.49	198041.49				823.11	30.00		494.74	823.11	1319.91	30.00	1349.91	-1349.91	-1310.85	1349.91	
7		197049.95	197049.95				821.04	30.00		498.87	821.04	1319.91	30.00	1349.91	-1349.91	-1303.83	1349.91	
8		196551.08	196551.08				818.96	30.00		500.95	818.96	1319.91	30.00	1349.91	-1349.91	-1297.38	1349.91	
9	9	196050.13	196050.13	196867.01	195547.10	5.00%	816.88	30.00		503.04	816.88	1319.91	30.00	1349.91	-1349.91	-1290.96	1349.91	
10)	195547.10	195547.10	196443.35	195069.30	5.50%	896.26	30.00		477.80	896.26	1374.06	30.00	1404.06	-1404.06	-1336.10	1515.81	
11		195069.30	195069.30			5.50%	894.07	30.00		479.99	894.07	1374.06	30.00	1404.06			1515.81	
12	2	194589.31	194589.31	195481.17	194107.12	5.50%	891.87	30.00		482.19	891.87	1374.06	30.00	1404.06	-1404.06	-1322.90	1515.81	
Sums	200000.00						40400 40	4260.00	0.00	5002.00	40400.40	4 6 0 0 4 0 0	4200.00	20264.27	470600.60	400450.04	20505 52	
Year 1 Year 2	20000.00						10108.49 10527.10	4360.00 360.00	0.00		10108.49 10527.10	16001.38 16488.69	4360.00 360.00	20361.37 16848.72			20696.62	
Year 3	0.00						10327.10	360.00	0.00		10327.10	16488.69	360.00	16848.72			18189.72	
Year 4	0.00						9835.57	360.00	0.00		9835.57	16488.69	360.00	16848.72			18189.72	
Year 5	0.00						9460.28	360.00	0.00		9460.28	16488.69	360.00	16848.72			18189.72	
Year 6	0.00						9063.82	360.00	0.00	7424.87	9063.82	16488.69	360.00	16848.72	-16848.72	-12115.41	18189.72	
Year 7	0.00						8645.00	360.00	0.00		8645.00	16488.69	360.00	16848.72			18189.72	
Year 8	0.00						8202.56	360.00	0.00		8202.56	16488.69	360.00	16848.72			18189.72	
Year 9	0.00						7735.15	360.00	0.00		7735.15	16488.69	360.00	16848.72			18189.72	
Year 10	0.00						7241.38	360.00	0.00		7241.38	16488.69	360.00	16848.72 16848.72			18189.72	
Year 11 Year 12	0.00						6719.76 6168.72	360.00 360.00	0.00		6719.76 6168.72	16488.69 16488.69	360.00 360.00	16848.72 16848.72			18189.72 18189.72	
Year 13	0.00						5586.59	360.00	0.00		5586.59	16488.69	360.00	16848.72			18189.72	
Year 14	0.00						4971.63	360.00	0.00		4971.63	16488.69	360.00	16848.72			18189.72	
Year 15	0.00						4321.97	360.00	0.00		4321.97	16488.69	360.00	16848.72			18189.72	
Year 16	0.00						3635.68	360.00	0.00	12853.01	3635.68	16488.69	360.00	16848.72	-16848.72	-6679.83	18189.72	
Year 17	0.00						2910.67	360.00	0.00		2910.67	16488.69	360.00	16848.72			18189.72	
Year 18	0.00						2144.76	360.00	0.00		2144.76	16488.69	360.00	16848.72			18189.72	
Year 19	0.00						1335.65	360.00	0.00		1335.65	16488.69	360.00	16848.72			18189.72	
Year 20	0.00						480.90	360.00	0.00		480.90	16488.69	360.00	16848.72			18189.72	
Total	200000.00						129286.49	11200.00	0.00	200000.00	129286.49	329286.49	11200.00	340487.05	-140487.05	0.00	366301.30	

Case 2

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A)Total amount of the credit
Amount The box for an illustrative scenario if the credit is in a foreign currency
8) Conditions governing drawdowns
Solod Immediate) and Inful 💌
C) Conditions governing repayments (DYNAMIC)
Frequency of repayments monthly NOTE: This will determine the length of regular periods shown in the table as: MONTHS
Amount Squal Indeinents (to be calculated)
Special Payments(*)
Révence payment * Noftha rest int 💌
Final Payment" Fload amount 💌
_ The long the The Trad periods in space and a different
D) Duration of the credit agreement
Duration Fixed 💌 of 🗯 poriods
COSTS OF THE CREDIT
A)Borrowing rate
Level Two different levels 🔍 Defined es Northal (annual) 💽 D NAMIC
Credit of Article 17(5) of the MCD: 5-year or more fixed followed by negotiation on new fixed Level 1 5.000 from period 1 to period • • • • • • • • • • • • • • • • • • •
Level 2 S. Mar Mandat Correcting and a construction of the set of
B) O ther cost in cluded in the Total Cost of the Credit
Given as Amounter's financed Date of charge
🗹 Cost 2 Fixed around V 🐨 🐨 Ke ² V Sach time a repayment takes place V
L Cost Place intervent 2 1 Nor V Advisor to a soft gride V Advisor Transportance Cast Place V
Cosi 4 % of the balance outstanding (aptal + htered) in each parted 💌 No " 💌
Cost 3 K offee bains a custanding (na) cost a) (h a cap hardod 💌 Ne* 💌
Cost 6 No of the availance used at the baginning of each parted 💌 No* 💌
Cost 7 Northe finalizations ineschiparted
Examples Obs(*) Obs(*)
L Shared aquity credit

Main re	esults																	
													Illustrative s	cenario of ch	nange in the l	orrowing rate	2	
	e in the last		0.00	1 1												evel entered al		
	the first repa	yment	1319.91		Recalcu	late									ts would be as APR would be	shown in the la	ast column but	one of
Duration of	the credit		240	MONTHS									uniorasuton		and would be			
N		. n	0.00														7.4%	
	ue of the casl		0.00			. 1												
Annual Pero	centage Rate	of Charge	6.0%	DYNAMIC	Recalcu	late												
Total cost o	f + h =		138087.05															
Total amou			200000.00															
Total amou			338087.05															
	in payable		330007.03															
			Bala	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
										Repay	ment of the cr	edit						
Period	Drawdowns	Intelation	0	Outstanding	final	Borrowing	Interest	Netform	Classes 1				Costs not	Treat	Value at	Descent in t	highest	highest
		Initial	(only capital)	(capital plus interest)	Final	rate (%)	charges	Not financed	Financed	Capital amortisation	Interest	Total	financed	Total	each period	Present value	borrowing rate (credit	exchange ra (domestic
				,						amortisation							currency)	currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00	4000.00	
1		200000.00	200000.00	200833.33	199513.42	5.00%	833.33	20.00		486.58	833.33	1319.91	20.00	1339.91	-1339.91	-1333.38	1339.91	
2		199513.42				5.00%	831.31	20.00		488.61	831.31	1319.91	20.00	1339.91		-1326.87	1339.91	
3		199024.82	199024.82		198534.17	5.00%	829.27	20.00		490.64	829.27	1319.91	20.00	1339.91		-1320.40	1339.91	
4		198534.17			198041.49	5.00%	827.23	20.00		492.69	827.23	1319.91	20.00	1339.91	-1339.91	-1313.97	1339.91	
5		198041.49				5.00%	825.17	20.00		494.74	825.17	1319.91	20.00	1339.91		-1307.56	1339.91	
6		197546.75			197049.95	5.00%	823.11	20.00		496.80	823.11	1319.91	20.00	1339.91		-1301.18	1339.91	
7		197049.95			196551.08	5.00%	821.04	20.00		498.87	821.04	1319.91 1319.91	20.00	1339.91 1339.91		-1294.84 -1288.52	1339.91 1339.91	
8		196551.08 196050.13			196050.13 195547.10	5.00%	818.96 816.88	20.00		500.95 503.04	818.96 816.88	1319.91	20.00	1339.91		-1288.52	1339.91	
10		195547.10				5.50%	896.26	20.00		477.80	896.26	1315.51	20.00	1394.06		-1327.55	1550.61	
10		195069.30			193009.30	5.50%	894.07	20.00		479.99	894.07	1374.00	20.00	1394.00		-1327.55	1550.61	
12		194589.31				5.50%	891.87	20.00		482.19	891.87	1374.06	20.00	1394.06		-1314.64	1550.61	
Sums																		
Year 1	200000.00						10108.49	4240.00	0.00	5892.88	10108.49	16001.38	4240.00	20241.37	179758.63	180267.76	20711.02	
Year 2	0.00						10527.10	240.00	0.00	5961.59	10527.10	16488.69	240.00	16728.72	-16728.72	-15284.49	18607.32	
Year 3	0.00						10190.82	240.00	0.00	6297.87	10190.82	16488.69	240.00	16728.72	-16728.72	-14413.72	18607.32	
Year 4	0.00						9835.57	240.00	0.00	6653.12	9835.57	16488.69	240.00	16728.72			18607.32	
Year 5	0.00						9460.28	240.00	0.00	7028.41	9460.28	16488.69	240.00	16728.72			18607.32	
Year 6	0.00						9063.82	240.00	0.00	7424.87	9063.82	16488.69	240.00	16728.72			18607.32	
Year 7	0.00						8645.00	240.00	0.00	7843.69	8645.00	16488.69	240.00	16728.72			18607.32	
Year 8 Year 9	0.00						8202.56 7735.15	240.00 240.00	0.00	8286.13 8753.54	8202.56 7735.15	16488.69	240.00 240.00	16728.72 16728.72			18607.32	
Year 9 Year 10	0.00						7735.15	240.00	0.00	8/53.54 9247.31	7735.15	16488.69 16488.69	240.00	16728.72			18607.32 18607.32	
Year 10 Year 11	0.00						6719.76		0.00	9247.31 9768.93	6719.76	16488.69	240.00	16728.72		-9559.89	18607.32	
Year 12	0.00						6168.72	240.00	0.00	10319.97	6168.72	16488.69	240.00	16728.72			18607.32	
Year 13	0.00						5586.59	240.00	0.00	10912.10	5586.59	16488.69	240.00	16728.72			18607.32	
Year 14	0.00						4971.63	240.00	0.00	11517.06	4971.63	16488.69	240.00	16728.72			18607.32	
Year 15	0.00						4321.97		0.00	12166.72	4321.97	16488.69	240.00	16728.72			18607.32	
Year 16	0.00						3635.68	240.00	0.00	12853.01	3635.68	16488.69	240.00	16728.72			18607.32	
Year 17	0.00						2910.67	240.00	0.00	13578.03	2910.67	16488.69	240.00	16728.72	-16728.72	-6340.59	18607.32	
Year 18	0.00						2144.76	240.00	0.00	14343.93	2144.76	16488.69	240.00	16728.72	-16728.72	-5979.36	18607.32	
Year 19	0.00						1335.65	240.00	0.00	15153.04	1335.65	16488.69	240.00	16728.72	-16728.72	-5638.72	18607.32	
Year 20	0.00						480.90	240.00	0.00	16007.79	480.90	16488.69	240.00	16728.72	-16728.72	-5317.48	18607.32	
Total	200000.00						129286.49	8800.00	0.00	200000.00	129286.49	329286.49	8800.00	338087.05	-138087.05	0.00	374250.10	

Description of the credit product		
MAIN FEATURES OF THE CREDIT PRODUCT		
A) Total amount of the credit	Tick the box for an illustrative scenario if the credit is in	n a foreign currency
Amount		
B) Con dition s go vern in g draw downs		
Solosi Immediately and Inful		
C) Conditions governing repayments (DYNAMIC)		
Frequency of repayments monthly	NOTE: This will determine the length of regular periods a	hown in the table as: <u>MONTHS</u>
Amount Equal Indalments (to be calculated)		
Special Payments (*)		
Advance payment* % of the credit init	-	
Final Paymont* Fixed amount		
The long the title had periodial repayment is different		
D) Duration of the credit agreement		
Duration Fixed 💌 o	perioda 🖿	
COSTS OF THE CREDIT		
A) Borrowing rate		
Lovel Samalanal for the orbit term Porconlage 3	Defined as Northal (annual)	 Tick the box for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(5) of the MCD: 5-year or more fixed followed by negotiation on new fixed Tight borrowing rate in % (in at least the last 20 years or cap rate if lower) Earliest period when that highest rate could be charged (1, 2, 5,)
8) O ther cost included in the Total Cost of the Credit Given as	Amountor% financcó Daloc	of charac
Cost 1 % of the madt int		
Cost 2 % of the made limb	Image: Second	
Cost 5 Nof the drawdowns in each parted		
Cost 4 % of the balance outstanding (aptal + interest) in ea		
Cost 5 % of the balance outstanding (only capital) in each per		
Cost 6 % of the credit not used at the beginning of each park Cost 7 % of the final balance in each parked	nd v No* v	
Examples	Obs(*)	Obs(*)
Shared aguity credit	cut, y	

Main results

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Main	results																		
Amount	Final balance in the last period 0.00 Final balance in the last period 0.00 Amount of the first repayment 1319.91 Amount of the credit 240 MONTHS Recalculate Recalculate																		
																	7.6%		
Present	alue of the cas	h flows	0.00	0.00											7.0%				
	ercentage Rate			DYNAMIC	Recalcu	lato													
,	incentage nate	or enarge	5.170		Necarcu														
Total cost	of the credit		120778.40																
	ount of credit		200000.00																
	Total amount payable		320778.40																
rotar ann	ant payable		520770.10																
			Bala	ance		Interest o	n capital	Other costs				Payments			Cash	flows	Illustrative	scenarios	
										Repay	ment of the cre	edit					•	-	
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing rate (credit currency)	exchange rate (domestic currency)	
	0 20000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00	4000.00		
	1	200000.00	200000.00	200833.33	199513.42	5.00%	833.33			486.58	833.33	1319.91	0.00	1319.91	-1319.91	-1314.17	1319.91		
	2	199513.42	199513.42	200344.73	199024.82	5.00%	831.31			488.61	831.31	1319.91	0.00	1319.91	-1319.91	-1308.45	1319.91		
	3	199024.82	199024.82	199854.09	198534.17	5.00%	829.27			490.64	829.27	1319.91	0.00	1319.91	-1319.91	-1302.76	1319.91		
	4	198534.17	198534.17	199361.40	198041.49	5.00%	827.23			492.69	827.23	1319.91	0.00	1319.91	-1319.91	-1297.09	1319.91		
	5	198041.49	198041.49	198866.66	197546.75	5.00%	825.17			494.74	825.17	1319.91	0.00	1319.91	-1319.91	-1291.45	1319.91		
	6	197546.75	197546.75			5.00%	823.11			496.80	823.11	1319.91	0.00	1319.91	-1319.91	-1285.83	1319.91		
	7	197049.95				5.00%	821.04			498.87	821.04	1319.91	0.00	1319.91	-1319.91	-1280.24	1319.91		
	8	196551.08				5.00%	818.96			500.95	818.96	1319.91	0.00	1319.91	-1319.91	-1274.67	1319.91		
	9	196050.13			195547.10	5.00%	816.88			503.04	816.88	1319.91	0.00	1319.91	-1319.91	-1269.13	1319.91		
	10	195547.10			195041.96	5.00%	814.78			505.13	814.78	1319.91	0.00	1319.91	-1319.91	-1263.61	1578.43		
	11 12	195041.96				5.00%	812.67			507.24	812.67	1319.91	0.00	1319.91	-1319.91	-1258.11	1578.43		
Sums	12	194534.73	194534.73	195345.29	194025.38	5.00%	810.56			509.35	810.56	1319.91	0.00	1319.91	-1319.91	-1252.64	1578.43		
Year 1	200000.00						9864.32	4000.00	0.00	5974.62	9864.32	15838.94	4000.00	19838.92	180161.08	180601.83	20614.48		
Year 2	0.00						9558.64	0.00	0.00			15838.94	4000.00	15838.92	-15838.92	-14613.39	18941.16		
Year 3	0.00						9237.33	0.00	0.00		9237.33	15838.94	0.00	15838.92	-15838.92	-13868.60	18941.16		
Year 4	0.00						8899.58	0.00	0.00		8899.58	15838.94	0.00	15838.92	-15838.92	-13161.78	18941.16		
Year 5	0.00						8544.55	0.00	0.00			15838.94	0.00	15838.92	-15838.92	-12490.98	18941.16		
Year 6	0.00						8171.35	0.00	0.00	7667.58	8171.35	15838.94	0.00	15838.92	-15838.92	-11854.36	18941.16		
Year 7	0.00						7779.07	0.00	0.00	8059.87	7779.07	15838.94	0.00	15838.92	-15838.92	-11250.20	18941.16		
Year 8	0.00						7366.71	0.00	0.00	8472.23	7366.71	15838.94	0.00	15838.92	-15838.92	-10676.82	18941.16		
Year 9	0.00						6933.25	0.00	0.00	8905.69	6933.25	15838.94	0.00	15838.92	-15838.92	-10132.67	18941.16		
Year 10	0.00						6477.62	0.00	0.00		6477.62	15838.94	0.00	15838.92	-15838.92	-9616.25	18941.16		
Year 11	0.00						5998.68	0.00	0.00			15838.94	0.00	15838.92	-15838.92	-9126.15	18941.16		
Year 12	0.00						5495.23	0.00	0.00		5495.23	15838.94	0.00	15838.92	-15838.92	-8661.03	18941.16		
Year 13	0.00						4966.03	0.00	0.00		4966.03	15838.94	0.00	15838.92	-15838.92	-8219.61	18941.16		
Year 14	0.00						4409.75	0.00	0.00			15838.94	0.00	15838.92	-15838.92	-7800.69	18941.16		
Year 15	0.00						3825.01	0.00	0.00		3825.01	15838.94	0.00	15838.92	-15838.92	-7403.12	18941.16		
Year 16	0.00						3210.35	0.00	0.00			15838.94	0.00	15838.92	-15838.92	-7025.81	18941.16		
Year 17	0.00						2564.25	0.00	0.00		2564.25 1885.09	15838.94	0.00	15838.92	-15838.92	-6667.74	18941.16		
Year 18 Year 19	0.00						1885.09	0.00	0.00			15838.94 15838.94	0.00	15838.92 15838.92	-15838.92	-6327.91 -6005.40	18941.16 18941.16		
Year 19 Year 20	0.00						420.76	0.00	0.00		420.76	15838.94	0.00	15838.92	-15838.92	-5699.33	18941.16		
Total	200000.00						420.76		0.00				4000.00	320778.40		0.00	380496.52		
TOTAL	20000.00						110/10.75	4000.00	0.00	20000.00	110/10.75	510//0.75	4000.00	520116.40	-120776.40	0.00	300490.52		

Description of the credit product			
MAIN FEATURES OF THE CREDIT PRODUCT			
A) Total amount of the credit			
	Tick the box for an illustrative scenario if the credit is in	In a foreign currency	
Amount			
B) Con ditions go vern in g draw downs			
Sciect Immediately and Inful			
C) Conditions governing repayments (DYNAMIC)			
Frequency of repayments monthly	NOTE: This will determine the length of regular periods sh	shown in the table as: MONTHS	
Amount Equal Intainents (to be calculated)			
Special Payments (*)			
Advance payment* % of the credit limit			
Final Paymont* Fixed amount	•		
The length of the first period of represent is different			
D) Duration of the credit agreement			
Duration Fixed 💌 e	of 🔰 perioda		
COSTS OF THE CREDIT			
A) Borrowing rate			
Lovel Same level for the artist cradit term 💌	Defined as Northal (annual) 🔽 DYNAMIC	 Tick the bex for an illustrative scenario if the credit allows variations in the borrow Credit of Article 17(3) of the MCD: 5-year or more fixed followed by negotiation S.00% The borrowing rate is assumed to be the initial fixed rate 	on on newfixed
		Period when the negotiation on a new fixed rate takes place (6, 7, 5,	
8) O ther cost included in the Total Cost of the Credit Given as	Amountor% financed Date o	of charge	
Cost 1 % of the madt int			
Cost 2 % of the medit init	Image: Construction Image: Construction Image: Construction No* Image: Construction Image: Construction No* Image: Construction	v v	
Cost 5 % of the drawdowns in each parted			
Cost 4 % of the balance outstanding (copital + interest) in ea			
Cost 5 % of the balance outstanding (only capital) in each pe Cost 6 % of the credit not used at the beginning of each peri			
Cost 7 % of the final balance in each period			
Examples	obs(*)	obs(*)	
L Shared equity credit			

Main results

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Ma	in re	sults																	
									Illustrative scenario of change in the borrowing rate										
Final balance in the last period 0.00					The illustrative APR calculated on the basis of the borrowing rate for the initial period														
Amount of the first repayment 1319.91 Recalculate and the assumption that at the end of this period the capital outstanding is repaid Duration of the credit 240 MONTHS										ling is repaid is:									
			-															5.6%	6
Prese	Present value of the cash flows 0.00																		
Annu	al Pero	entage Rate	of Charge	5.4%	DYNAMIC	Recalcu	late												
Tetal		f the credit		120778.40															
		nt of credit		200000.00															
		nt payable		320778.40															
TOtal	amoui	it payable		320778.40															
				Bala	ance		Interest o	n capital	Other costs				Payments			Cash flows		Illustrative scenarios	
0		Description		Outstanding	Outstanding						Repay	ment of the cro	edit					шансат шансат	
Per	nod	Drawdowns	Initial	(only capital)	(capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing rate (credit currency)	exchange rate (domestic currency)
	0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00		
	1		200000.00	200000.00	200833.33	199513.42	5.00%	833.33			486.58	833.33	1319.91	0.00	1319.91	-1319.91	-1314.17		
	2		199513.42	199513.42	200344.73	199024.82	5.00%	831.31			488.61	831.31	1319.91	0.00	1319.91	-1319.91	-1308.45		
	3		199024.82					829.27			490.64	829.27	1319.91	0.00	1319.91	-1319.91	-1302.76		
	4		198534.17	198534.17				827.23			492.69	827.23	1319.91	0.00	1319.91	-1319.91			
	5		198041.49	198041.49				825.17			494.74	825.17	1319.91	0.00	1319.91	-1319.91	-1291.45		
	5		197546.75 197049.95				5.00% 5.00%	823.11 821.04			496.80 498.87	823.11 821.04	1319.91 1319.91	0.00	1319.91 1319.91	-1319.91	-1285.83 -1280.24		
	8		197049.95	197049.95				821.04			498.87	821.04 818.96	1319.91	0.00	1319.91	-1319.91	-1280.24		
	9		196050.13					816.88			503.04	816.88	1319.91	0.00	1319.91	-1319.91	-1269.13		
	10		195547.10					814.78			505.13	814.78	1319.91	0.00	1319.91	-1319.91	-1263.61		
	11		195041.96	195041.96				812.67			507.24	812.67	1319.91	0.00	1319.91	-1319.91	-1258.11		
	12		194534.73	194534.73	195345.29	194025.38	5.00%	810.56			509.35	810.56	1319.91	0.00	1319.91	-1319.91	-1252.64		
Sums																			
Year		200000.00						9864.32	4000.00	0.00		9864.32	15838.94	4000.00	19838.92				
Year		0.00						9558.64	0.00	0.00		9558.64	15838.94	0.00	15838.92				
Year		0.00						9237.33	0.00	0.00		9237.33	15838.94	0.00	15838.92				
Year		0.00						8899.58	0.00	0.00		8899.58	15838.94	0.00	15838.92				
Year		0.00						8544.55 8171.35	0.00	0.00		8544.55 8171.35	15838.94 15838.94	0.00	15838.92 15838.92				
Year		0.00						7779.07	0.00	0.00		7779.07	15838.94	0.00	15838.92				
Year		0.00						7366.71	0.00	0.00		7366.71	15838.94	0.00	15838.92				
Year		0.00						6933.25	0.00	0.00		6933.25	15838.94	0.00	15838.92	-15838.92			
Year		0.00						6477.62	0.00	0.00		6477.62	15838.94	0.00	15838.92				
Year	11	0.00						5998.68	0.00	0.00	9840.26	5998.68	15838.94	0.00	15838.92	-15838.92	-9126.15		
Year	12	0.00						5495.23	0.00	0.00	10343.71	5495.23	15838.94	0.00	15838.92	-15838.92	-8661.03		
Year		0.00						4966.03	0.00	0.00		4966.03	15838.94	0.00	15838.92				
Year		0.00						4409.75	0.00	0.00		4409.75	15838.94	0.00	15838.92				
Year		0.00						3825.01	0.00	0.00		3825.01	15838.94	0.00	15838.92				
Year		0.00						3210.35	0.00	0.00		3210.35	15838.94	0.00	15838.92				
Year		0.00						2564.25	0.00	0.00		2564.25	15838.94	0.00	15838.92				
Year		0.00						1885.09	0.00	0.00		1885.09 1171.19	15838.94 15838.94	0.00	15838.92 15838.92				
Year		0.00						1171.19 420.76	0.00	0.00		420.76	15838.94	0.00	15838.92				
I Cal 4	20	0.00						420.70	0.00	0.00	10410.10	420.70	10000.94	0.00	10000.92	-10000.92	-2022.22		

Description of the credit product		
MAIN FEATURES OF THE CREDIT PRODUCT		
A) To tal amount of the credit	Tick the box for an illustrative scenario if the credit is i	
Amount 200		n a norm gn currency
B) Conditions governing draw downs		
Solicit Immediately and Inful		
C) Conditions governing repayments (DYNAMIC)		
Frequency of repayments monthly	NOTE: This will determine the length of regular periods :	Hown in the table as: MONTHS
Amount Equal Infairents (to be calculated)	•	
Soccial Payments (*)		
Advance payment* % of the predit init	-	
Final Payment* Fixed amount	•	
The length of the first period of represent to the forest		
D) Duration of the credit agreement		
Duration Fluid e of	m perioda	
COSTS OF THE CREDIT		
A)Borrowing rate		
Love) Same level for the arbite credit term	Defined as Northal (annual) 💌 DYNA MIC	Mick the box for an illustrative secratio if the credit allows variations in the borrowing rate Credit of Article 17(5) of the MCD: 5-year or more fixed followed by negotiation on new fixed
Percentage sumti		Yandi Highest borrowing rate in % (in at least the last 20 years or tag rate if lower) In deficit period when that highest rate could be charged (1, 2, 5,)
B)Other cost included in the Total Cost of the Credit		
Civen as Cost 3 Nofthe methint	Amountor% Financed Date	of charge
Cost 2 % of the madt limb	No* At conclusion	v v
Cost 5 % of the drawdowns in each partici-	▼ No* ▼	
Cost 4 % of the balance outstanding (capital + interest) in each		
Cost 5 % of the balance outstanding (only capital) in each period Cost 6 % of the creditinot used at the beginning of each period		
Cost 6 % of the credit not used at the beginning of each period Cost 7 % of the final balance in each period	No* 💌	
Examples	Obs(*)	Cb2 (*)
L Shared equity credit		

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Main re	esults																	
													Illustrative s	cenario of cl	nange in the l	orrowing rate		
	ce in the last the first repa	•	0.00) 												evel entered at shown in the la		
Duration of		yment		MONTHS	Recalcu	late									APR would be			
																	7.6%	
Present val	ue of the cas	h flows	0.00															
Annual Per	centage Rate	of Charge	5.4%	DYNAMIC	Recalcu	late												
-	6 d		420770 40															
Total cost o Total amou	of the credit		120778.40 200000.00															
Total amou			320778.40															
rotal amou	in payable		520770.40															
			Bali	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
			Outstanding	Outstanding						Repay	ment of the cr	edit					highest	highest
Period	Drawdowns	Initial	(only	(capital plus	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing	exchange rate
			capital)	interest)		1010 (70)	charges			amortisation	Interest	Total	manceu		each periou		rate (credit currency)	(domestic currency)
0	200000.00				200000.00			4000.00					4000.00	4000.00	196000.00	196000.00	4000.00	currency
1		200000.00	200000.00	200833.33		5.00%	833.33			486.58	833.33	1319.91	0.00	1319.91	-1319.91	-1314.17	1319.91	
2	2	199513.42	199513.42	200344.73	199024.82	5.00%	831.31			488.61	831.31	1319.91	0.00	1319.91	-1319.91	-1308.45	1319.91	
3	5	199024.82	199024.82	199854.09	198534.17	5.00%	829.27			490.64	829.27	1319.91	0.00	1319.91	-1319.91	-1302.76	1319.91	
4		198534.17				5.00%	827.23			492.69		1319.91	0.00	1319.91	-1319.91	-1297.09	1319.91	
5		198041.49				5.00%	825.17			494.74	825.17	1319.91	0.00	1319.91	-1319.91	-1291.45	1319.91	
6		197546.75					823.11			496.80		1319.91	0.00	1319.91	-1319.91	-1285.83	1319.91	
7		197049.95 196551.08				5.00%	821.04 818.96			498.87 500.95	821.04 818.96	1319.91 1319.91	0.00	1319.91 1319.91	-1319.91	-1280.24	1319.91 1319.91	
9		196050.13					816.88			503.04	816.88	1319.91	0.00	1319.91	-1319.91	-12/4.07	1319.91	
10		195547.10					814.78			505.13	814.78	1319.91	0.00	1319.91	-1319.91	-1263.61	1578.43	
11		195041.96			194534.73	5.00%	812.67			507.24	812.67	1319.91	0.00	1319.91	-1319.91	-1258.11	1578.43	
12	2	194534.73	194534.73	195345.29	194025.38	5.00%	810.56			509.35	810.56	1319.91	0.00	1319.91	-1319.91	-1252.64	1578.43	
Sums																		
Year 1	200000.00						9864.32		0.00	5974.62	9864.32	15838.94	4000.00	19838.92		180601.83	20614.48	
Year 2	0.00						9558.64		0.00	6280.30	9558.64	15838.94	0.00	15838.92	-15838.92	-14613.39	18941.16	
Year 3 Year 4	0.00						9237.33 8899.58		0.00	6601.61 6939.36	9237.33 8899.58	15838.94 15838.94	0.00	15838.92 15838.92		-13868.60 -13161.78	18941.16 18941.16	
Year 5	0.00						8544.55		0.00	7294.39	8544.55	15838.94	0.00	15838.92		-12490.98	18941.16	
Year 6	0.00						8171.35		0.00	7667.58		15838.94	0.00	15838.92			18941.16	
Year 7	0.00						7779.07	0.00	0.00	8059.87	7779.07	15838.94	0.00	15838.92			18941.16	
Year 8	0.00						7366.71	0.00	0.00	8472.23	7366.71	15838.94	0.00	15838.92	-15838.92	-10676.82	18941.16	
Year 9	0.00						6933.25	0.00	0.00	8905.69	6933.25	15838.94	0.00	15838.92	-15838.92	-10132.67	18941.16	
Year 10	0.00						6477.62		0.00	9361.32		15838.94	0.00	15838.92		-9616.25	18941.16	
Year 11	0.00						5998.68		0.00	9840.26		15838.94	0.00	15838.92		-9126.15	18941.16	
Year 12 Year 13	0.00						5495.23		0.00	10343.71 10872.91	5495.23 4966.03	15838.94 15838.94	0.00	15838.92 15838.92		-8661.03 -8219.61	18941.16 18941.16	
Year 13 Year 14	0.00						4966.03 4409.75		0.00	10872.91		15838.94 15838.94	0.00	15838.92		-8219.61	18941.16	
Year 15	0.00						3825.01		0.00	12013.93	3825.01	15838.94	0.00	15838.92		-7403.12	18941.16	
Year 16	0.00						3210.35		0.00	12628.58		15838.94	0.00	15838.92		-7025.81	18941.16	
Year 17	0.00						2564.25	0.00	0.00	13274.69	2564.25	15838.94	0.00	15838.92	-15838.92	-6667.74	18941.16	
Year 18	0.00						1885.09	0.00	0.00	13953.84	1885.09	15838.94	0.00	15838.92	-15838.92	-6327.91	18941.16	
Year 19	0.00						1171.19		0.00	14667.75	1171.19	15838.94	0.00	15838.92	-15838.92	-6005.40	18941.16	
Year 20	0.00						420.76		0.00	15418.18	420.76	15838.94	0.00	15838.92		-5699.33	18941.16	
Total	200000.00						116778.75	4000.00	0.00	200000.00	116778.75	316778.75	4000.00	320778.40	-120778.40	0.00	380496.52	

This example requires changing manually the values in the amortisation table.

The two parts of the credit, the fixed-rate part and the variablerate part, are dealt separately to obtain all the relevant amounts which are subsequently added up to obtain the APR figures.

Fixed-rate part

Click on the button *Reset* and then enter the information highlighted in red.

	Description of the credit product
	MAIN FEATURES OF THE CREDIT PRODUCT
	A) Total amount of the credit
5	Tick the box for an illustrative scenario if the credit is in a foreign currency
د	
•	B) Con ditions go verning draw dowins
	SolotS Immediately and Inful 💌
	C) Conditions governing repayments (DY NAMIC)
į	Frequency of repayments monthly 💌 NOTE: This will determine the length of regular periods shown in the table as: MONTHS
-	
、	Amount Equal Indalments (to be calculated)
,	Special Payments (*)
5	Advance payment* Northa cract lint 💌
	Linal Reymont* Predemount 💌
)	_ The length at the Indipendent represent a different
	D) Duration of the credit agreement
	Duration Fired • of m poriods
	COSTS OF THE CREDIT
	A)Borrowing rate
J	
1	Level Samalavel for the artife and term 💽 Defined as Northal (annual) 💽 DYNAMIC 🗖 Tick the box for an illustrative scepario if the predict allows variations in the borrowing rate
۱	Percentage sumb
	B)Other cost included in the Total Cost of the Credit
	Given as Announter% Financed Date of charge ∠ Cost 1 % of the evel timt ▼ 2 No* ▼ At conclusion ▼
	Cost1 % of the oracle int V Cost2 % of the oracle int V No ⁴ No ⁴ No ⁴ No ⁴ No ⁴ V
	Cost S Nofthe drawdowne in each parted V No* V
	L Cost 4 Nofthe balance outstanding (aptail + https:// bilasch.partod 💌 No* 💌
	📙 Cost S 🐘 of the balance cutatandra (on) capital) heach partod 💌 No* 💌
	Cost 6 Ve of the oraclinot used at the beginning of each parked 💌 No* 💌
	Cost 7 No of the final balance in each partod
	Examples Obs (*) Obs (*)
	L Shand equity codit

Click on the buttons *Generate* and then *Calculate* to obtain the the amortisation table of this part of the credit.

	Main re	sults																	
d e	Final balance Amount of t Duration of t	he first repa		0.00 843.86 180		Recalcul	late												
of	Present valu Annual Perc			0.00 6.5%	DYNAMIC	Recalcul	late												
	Total cost of Total amoun Total amoun	the credit at of credit		53894.80 100000.00 153894.80															
				Bala	ance		Interest or	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
											Repay	ment of the cre							
	Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
	0	100000.00				100000.00			2000.00					2000.00	2000.00	98000.00	98000.00		
~	1		100000.00	100000.00	100500.00	99656.14	6.00%	500.00			343.86	500.00	843.86	0.00	843.86	-843.86	-839.44		
of	2		99656.14	99656.14		99310.57	6.00%	498.28			345.58	498.28	843.86	0.00	843.86	-843.86	-835.05		
	3		99310.57	99310.57		98963.26	6.00%	496.55			347.30	496.55	843.86	0.00	843.86		-830.67		
n	4		98963.26	98963.26		98614.22	6.00%	494.82			349.04	494.82	843.86	0.00	843.86		-826.32		
	5		98614.22 98263.44	98614.22 98263.44		98263.44 97910.90	6.00% 6.00%	493.07 491.32			350.79 352.54	493.07 491.32	843.86 843.86	0.00	843.86 843.86	-843.86 -843.86	-822.00 -817.69		
0	7		98203.44	97910.90		97556.59	6.00%	491.52			354.30	491.52	843.86	0.00	843.86		-817.09		
-1	8		97556.59	97556.59		97200.52	6.00%	487.78			356.07	485.55	843.86	0.00	843.86		-809.15		
d	9		97200.52	97200.52		96842.67	6.00%	486.00			357.85	486.00	843.86	0.00	843.86		-804.91		
	10		96842.67	96842.67		96483.02	6.00%	484.21			359.64	484.21	843.86	0.00	843.86		-800.70		
	11		96483.02	96483.02		96121.58	6.00%	482.42			361.44	482.42	843.86	0.00	843.86	-843.86	-796.50		
	12		96121.58	96121.58	96602.19	95758.33	6.00%	480.61			363.25	480.61	843.86	0.00	843.86	-843.86	-792.33		
	Sums																		
	Year 1	100000.00						5884.61	2000.00	0.00	4241.67	5884.61	10126.28	2000.00	12126.32	87873.68	88211.83		
	Year 2	0.00						5623.00	0.00	0.00		5623.00	10126.28	0.00	10126.32		-9190.49		
	Year 3	0.00						5345.25	0.00	0.00		5345.25	10126.28	0.00	10126.32		-8629.31		
	Year 4	0.00						5050.36	0.00	0.00		5050.36	10126.28	0.00	10126.32		-8102.40		
	Year 5	0.00						4737.29	0.00	0.00		4737.29	10126.28	0.00	10126.32		-7607.66		
	Year 6 Year 7	0.00						4404.91 4052.03	0.00	0.00		4404.91 4052.03	10126.28 10126.28	0.00	10126.32 10126.32		-7143.13 -6706.96		
	Year 8	0.00						3677.38	0.00	0.00		3677.38	10126.28	0.00	10126.32		-6297.42		
	Year 9	0.00						3279.63	0.00	0.00		3279.63	10126.28	0.00	10126.32		-5912.90		
	Year 10	0.00						2857.34	0.00	0.00		2857.34	10126.28	0.00	10126.32		-5551.85		
	Year 11	0.00						2409.01	0.00	0.00		2409.01	10126.28	0.00	10126.32		-5212.85		
	Year 12	0.00						1933.02	0.00	0.00		1933.02	10126.28	0.00	10126.32		-4894.55		
	Year 13	0.00						1427.68	0.00	0.00		1427.68	10126.28	0.00	10126.32		-4595.68		
	Year 14	0.00						891.17	0.00	0.00	9235.11	891.17	10126.28	0.00	10126.32	-10126.32	-4315.06		
	Year 15	0.00						321.57	0.00	0.00	9804.72	321.57	10126.28	0.00	10126.32	-10126.32	-4051.58		

0.00 100000.00 51894.23 151894.23 2000.00 153894.80 -53894.80

51894.23 2000.00

Copy the column with the *Total* of *Repayment of the credit* from period 1 (disregard period 0) to another sheet, as it will be used later.

Total

100000.00

0.00

Variable-rate part

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Amount amount amount amount and the second s
B)Conditions governing drawdowns
Soloof Immediately and Inful 💌
C) Conditions governing repayments (DY NAMI C)
Proguency of repayments methy NOTE: This will determine the length of regular periods shown in the table as: MONTHS
Amount Equal Induinents (to be addusted)
Special Payments (*)
Advance payment* N of the owdElint 💌
Final Paymont* Fixadamount
D) Duration of the credit agreement
COSTS OF THE CREDIT
A) Borrowing rate
Level Same available at the cast term Control as Northal (annul) Control of Control (annul) Control of the Control of the cast term Control of the Control
B) O ther cost in cluded in the Total Cost of the Credit Given as Amounton's Amounton's Amounton's Date of charge
Cost 1 % of the and timt Cost 2 % of the and timt V No* V No* V Ke and timt
Cost 5 % of the drawdowns h each particid 💌 No* 💌
📙 Cost 4 Norfthe balanze outstanding (apital + internet) in each period 🐨 Nor 💌
L Cost 5 W of the balance outstanding (only capital) in each parked 💌 Ho* 💌
Cost 6 Vorthe creditor used at the beginning of each partod 💌 Hoff 💌
Cost 7 Vs of the final balance in each particid 💌
Examples Obs(*) Obs(*)
L Shared equity credit

Main results

Click on the buttons *Generate* and then *Calculate* to obtain the the amortisation table of this part of the credit.

	iviain re	suits																	
~		e in the last he first repa the credit		0.00 817.08 180		Recalcu	late							If the borrowi opportunity, t	ng rate rises t ne instalment	o the highest l	orrowing rate evel entered ab shown in the la		
		ue of the casi centage Rate		0.00 6.0%	DYNAMIC	Recalcu	late												
	Total cost of Total amour Total amour	nt of credit		49074.40 100000.00 149074.40															
				Bala			1-1-1-1-1-1	n an alta l	Other				Deverse			Cash	61 m	Illustrative s	
				Bala	ance		Interest o	n capitai	Other	costs	-		Payments			Cash	tiows	Illustrative s	scenarios
	Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Notfinanced	Financed	Capital amortisation	ment of the cr Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
	0	100000.00				100000.00			2000.00					2000.00	2000.00	98000.00	98000.00	2000.00	
	1		100000.00	100000.00	100458.33	99641.25	5.50%	458.33			358.75	458.33	817.08	0.00	817.08	-817.08	-813.14	817.08	
٦l	2		99641.25	99641.25	100097.94	99280.86	5.50%	456.69			360.39	456.69	817.08	0.00	817.08	-817.08	-809.22	817.08	
	3		99280.86	99280.86	99735.89	98918.81	5.50%	455.04			362.05	455.04	817.08	0.00	817.08	-817.08	-805.32	817.08	
d	4		98918.81	98918.81		98555.10	5.50%	453.38			363.71	453.38	817.08	0.00	817.08	-817.08	-801.44	817.08	
u	5		98555.10	98555.10	99006.81	98189.73	5,50%	451.71			365.37	451.71	817.08	0.00	817.08	-817.08	-797.58	817.08	
~ +	6		98189.73	98189.73		97822.68	5.50%	450.04			367.05	450.04	817.08	0.00	817.08	-817.08	-793.73	817.08	
st	7		97822.68			97453.95	5.50%	448.35			368.73	448.35	817.08	0.00	817.08	-817.08	-789.91	890.52	
	. 8		97453.95	97453.95		97083.53	5.50%	446.66			370.42	446.66	817.08	0.00	817.08	-817.08	-786.10	890.52	
е	9		97083.53	97083.53		96711.42	5.50%	444.97			372.12	444.97	817.08	0.00	817.08	-817.08	-782.31	890.52	
а.	10		96711.42	96711.42		96337.59	5.50%	443.26			373.82	443.26	817.08	0.00	817.08	-817.08	-778.54	890.52	
d	10		96337.59	96337.59		95962.06	5.50%	441.55			375.54	441.55	817.08	0.00	817.08	-817.08	-774.78	890.52	
	11		95962.06	95962.06		95584.80	5.50%	439.83			375.34	439.83	817.08	0.00	817.08	-817.08	-771.05	890.52	
IS	Sums		55502.00	33302.00	50401.00	55564.00	5.50%	433.03			377.20	433.03	017.00	0.00	017.00	-017.00	-771.05	830.32	
	Year 1	100000.00						5389.80	2000.00	0.00	4415.20	5389.80	9805.00	2000.00	11804.96	88195.04	88496.88	12245.60	
	Year 2	0.00						5140.75	0.00	0.00		5140.75	9805.00	0.00	9804.96	-9804.96	-8967.76	10686.24	
	Year 3	0.00						4877.65	0.00	0.00		4877.65	9805.00	0.00	9804.96	-9804.96	-8462.57	10686.24	
	Year 4	0.00						4599.71	0.00	0.00		4599.71	9805.00	0.00	9804.96	-9804.96	-7985.83	10686.24	
	Year 5	0.00						4306.09	0.00	0.00		4306.09	9805.00	0.00	9804.96	-9804.96	-7535.95	10686.24	
	Year 6	0.00						3995.91	0.00	0.00		3995.91	9805.00	0.00	9804.96	-9804.96	-7111.42	10686.24	
	Year 7	0.00						3668.23	0.00	0.00		3668.23	9805.00	0.00	9804.96	-9804.96	-6710.80	10686.24	
	Year 8	0.00						3322.07	0.00	0.00		3322.07	9805.00	0.00	9804.96	-9804.96	-6332.75	10686.24	
		0.00							0.00	0.00		2956.38	9805.00		9804.96	-9804.96	-5975.99	10686.24	
	Year 9 Year 10	0.00						2956.38 2570.06	0.00	0.00		2956.38	9805.00	0.00	9804.96	-9804.96	-5975.99	10686.24	
	Year 10 Year 11	0.00						2161.96	0.00	0.00		2570.06	9805.00	0.00	9804.96	-9804.96	-5039.34	10686.24	
		0.00							0.00	0.00					9804.96	-9804.96	-5321.65	10686.24	
	Year 12							1730.83				1730.83	9805.00	0.00					
	Year 13	0.00						1275.38	0.00	0.00		1275.38	9805.00	0.00	9804.96	-9804.96	-4738.95	10686.24	
	Year 14	0.00						794.24	0.00	0.00		794.24	9805.00	0.00	9804.96	-9804.96	-4471.98 -4220.06	10686.24	
	Year 15	0.00						285.97	0.00	0.00		285.97	9805.00	0.00	9804.96	-9804.96		10686.24	
	Total	100000.00						47075.02	2000.00	0.00	100000.00	47075.02	147075.02	2000.00	149074.40	-49074.40	0.00	161852.96	

Copy the columns with the *Total* of *Repayment of the credit* and the *Payments if highest borrowing rate* of the *Illustrative scenario* from period 1 (disregard period 0) to another sheet, as they will be used in the following.

Integrating the two parts

Delete the cells highlighted in red, corresponding to the *Amount of the first repayment* and the values of the columns of the amortisation table titled in black font. Be aware of not deleting the cells under variables titled in red font (*Period, Costs not financed, Total,* and the two columns of *Cash flows*), as these cells cannot be changed under any circumstance.

	Main re	sults																	
														Illustrative so	enario of ch	nange in the b	orrowing rate		
,		e in the last p the first repay the credit		817.08 180	MONTHS	Recalcul	late							If the borrowin	ig rate rises t e instalment	o the highest l s would be as	evel entered at shown in the la	ove at the earl	
f																		7.3%	
		ue of the cash centage Rate		0.00 6.0%	DYNAMIC	Recalcul	late												
2	Total cost of	f the credit		49074.40															
	Total amour	nt of credit		100000.00															
(Total amour	nt payable		149074.40															
<u>,</u>				Bala	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
											Repay	ment of the cre						•	
'	Period	Drawdowns	Initial	Outstanding (only	Outstanding	Final	Borrowing	Interest	Not financed	Financed				Costs not	Total	Value at	Present value	highest borrowing	highest
			initiai	capital)	(capital plus interest)	Final	rate (%)	charges	Not financed	Financed	Capital amortisation	Interest	Total	financed	Total	each period	Present value	rate (credit	exchange rate (domestic
																		currency)	currency)
	0		00000.00	400000.00	400450.00	100000.00	5 500/	450.00	2000.00	(250.75	450.00	017.00	2000.00	2000.00	98000.00	98000.00	2000.00	
	1		100000.00 99641.25	100000.00 99641.25		99641.25 99280.86	5.50% 5.50%	458.33 456.69			358.75 360.39	458.33 456.69	817.08 817.08	0.00	817.08 817.08	-817.08 -817.08	-813.14	817.08 817.08	
t i	3		99641.25 99280.86	99041.25		99280.86	5.50%	455.04			360.39	456.69	817.08	0.00	817.08	-817.08	-809.22	817.08	
	4		98918.81	98918.81		98555.10	5.50%	453.38			363.71	453.38	817.08	0.00	817.08	-817.08	-801.44	817.08	
'	5		98555.10	98555.10	99006.81	98189.73	5.50%	451.71			365.37	451.71	817.08	0.00	817.08	-817.08	-797.58	817.08	
	6		98189.73	98189.73	98639.77	97822.68	5.50%	450.04			367.05	450.04	817.08	0.00	817.08	-817.08	-793.73	817.08	
	7		97822.68	97822.68		97453.95	5.50%	448.35			368.73	448.35	817.08	0.00	817.08	-817.08	-789.91	890.52	
	8		97453.95	97453.95		97083.53	5.50%	446.66			370.42	446.66	817.08	0.00	817.08	-817.08	-786.10	890.52	
	9		97083.53	97083.53		96711.42	5.50%	444.97			372.12	444.97	817.08	0.00	817.08	-817.08	-782.31	890.52	
	10		96711.42 96337.59	96711.42 96337.59		96337.59 95962.06	5.50% 5.50%	443.26 441.55			373.82 375.54	443.26 441.55	817.08 817.08	0.00	817.08 817.08	-817.08 -817.08	-778.54	890.52 890.52	
	11		95962.06	95962.06		95584.80	5.50%	441.55			375.34	439.83	817.08	0.00	817.08	-817.08	-771.05	890.52	
	Sums		55502.00	55502.00	50101.00	5550 1.00	5.5070	135105			577120	155105	01/100	0.00	01/100	01/100	772105	000.02	
	Year 1	100000.00						5389.80	2000.00	0.00	4415.20	5389.80	9805.00	2000.00	11804.96	88195.04	88496.88	12245.60	
	Year 2	0.00						5140.75	0.00	0.00	4664.25	5140.75	9805.00	0.00	9804.96	-9804.96	-8967.76	10686.24	
	Year 3	0.00						4877.65	0.00	0.00		4877.65	9805.00	0.00	9804.96	-9804.96	-8462.57	10686.24	
	Year 4	0.00						4599.71	0.00	0.00		4599.71	9805.00	0.00	9804.96	-9804.96	-7985.83	10686.24	
	Year 5	0.00						4306.09	0.00	0.00		4306.09	9805.00	0.00	9804.96	-9804.96	-7535.95	10686.24	
	Year 6 Year 7	0.00						3995.91 3668.23	0.00	0.00		3995.91 3668.23	9805.00 9805.00	0.00	9804.96 9804.96	-9804.96 -9804.96	-7111.42	10686.24 10686.24	
	Year 7	0.00						3008.23	0.00	0.00		3008.23	9805.00	0.00	9804.96	-9804.96	-6710.80	10686.24	
	Year 9	0.00						2956.38	0.00	0.00		2956.38	9805.00	0.00	9804.96	-9804.96	-5975.99	10686.24	
	Year 10	0.00						2570.06	0.00	0.00		2570.06	9805.00	0.00	9804.96	-9804.96	-5639.34	10686.24	
	Year 11	0.00						2161.96	0.00	0.00	7643.05	2161.96	9805.00	0.00	9804.96	-9804.96	-5321.65	10686.24	
	Year 12	0.00						1730.83	0.00	0.00		1730.83	9805.00	0.00	9804.96	-9804.96	-5021.85	10686.24	
	Year 13	0.00						1275.38	0.00	0.00		1275.38	9805.00	0.00	9804.96	-9804.96	-4738.95	10686.24	
	Year 14	0.00						794.24	0.00	0.00		794.24	9805.00	0.00	9804.96	-9804.96	-4471.98	10686.24	
	Year 15	0.00						285.97 47075	0.00	0.00		285.97	9805.00	0.00	9804.96	-9804.96	-4220.06	10686.24	
	Total	100000.00						4/0/5/2	2000.00	0.00	100000.00	47075.02	147075.02	2000.00	149074.40	-49074.40	0.00	161852.96	

Main results Illustrative scenario of change in the borrowing rate Final balance in the last period 0.00 If the borrowing rate rises to the highest level entered above at the earliest possible opportunity, the instalments would be as shown in the last column but one of Amount of the first repayment Recalculate 180 MONTHS amortisation table and the APR would be: Duration of the credit 7.3% Present value of the cash flows 98813.14 Caution: The APR is not valid because the present value of the cash flows is not zero. Annual Percentage Rate of Charge 6.0% DYNAMIC Recalculate Total cost of the credit -49742.68 Total amount of credit 200000.00 Total amount payable 150257.32 Balance Interest on capital Other costs Illustrative scenarios Payments Repayment of the credit utstanding Outstandin nignest nignest rawdowi Interest Borrowing Initial (only (capital plus Final t financ Financed Capital Total esent val borrowing xchange rat charges rate (%) Interest Total ach perio capital) interest) rate (credi (domestic mortisatio urrency) currency) 200000.00 4000.00 4000.00 4000.00 196000.00 196000.00 2000.00 0.00 0.00 0.00 0.00 0.00 817.08 2 817.08 0.00 817.08 -817.08 -809.22 817.08 817.08 0.00 817.08 -817.08 -805.32 817.08 817.08 0.00 817.08 -817.08 -801.44 817.08 817.08 0.00 817.08 -817.08 -797.58 817.08 817.08 0.00 817.08 -817.08 -793.73 817.08 817.08 0.00 817.08 -817.08 -789.91 890.52 817.08 0.00 817.08 -817.08 -786.10 890.52 9 817.08 0.00 817.08 -817.08 -782.31 890.52 0.00 817.08 -817.08 10 817.08 -778.54 890 52 11 817.08 0.00 817.08 -817.08 -774 78 890.52 12 817.08 0.00 817.08 -817.08 -771.05 890.52 Sums 187012.12 200000.00 4000.00 187310.03 Year 1 8987.92 4000.00 12987.88 12245.60 0.00 9804.96 -9804.96 -8967.76 10686.24 Year 2 0.00 9805.00 0.00 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -8462.57 10686.24 Year 3 Year 4 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -7985.83 10686.24 0.00 0.00 Year 5 9805.00 0.00 9804 96 -9804 96 -7535.95 10686 24 Year 6 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -7111.42 10686.24 Year 7 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -6710.80 10686.24 Year 8 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -6332.75 10686.24 Year 9 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -5975.99 10686.24 Year 10 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -5639.34 10686.24 Year 11 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -5321.65 10686.24 Year 12 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -5021.85 10686 24 Year 13 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -4738.95 10686.24 Year 14 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -4471.98 10686.24 Year 15 0.00 0.00 9805.00 0.00 9804.96 -9804.96 -4220.06 10686.24 200000.00 4000.00 146257.94 4000.00 150257.32 49742.68 98813.14 161852.96 Total

In the row for period 0, duplicate the amount of the drawdown and the costs in order to reproduce the characteristics of the multipart credit.

To obtain the data of the illustrative scenario, copy to the column with the *Total* of the *Repayment of the credit* the following two columns from period 1 (period 0 should be kept empty): the Total of the Repayment of the credit corresponding to the fixed-rate part of the credit and the Payments if highest borrowing rate corresponding to the variable-rate part of the credit.

Then, click on the button Recalculate next to the cell showing the Annual Percentage Rate of Charge.

	Main re	sults																	
_														Illustrative s	cenario of ch	ange in the b	orrowing rate		
2	Final balanc	e in the last p	period	0.00	•													ove at the earli	
ē	Amount of t Duration of	the first repay the credit	yment	180	MONTHS	Recalcu	late									s would be as : APR would be:	shown in the la	st column but o	ne of
																		7.3%	
5	Present valu	ue of the cash	n flows	-11587.05	Caution: The	e APR is not	valid becars	<u>e th</u> e presei	nt value of th	e cash flows	s is not zero.								
	Annual Perc	entage Rate	of Charge	6.0%	DYNAMIC	Recalcu	ilate 🧹												
2								_											
•	Total cost of			115747.76															
	Total amour			200000.00															
t	Total amour	nt payable		315747.76															
Ľ																			
2				Bala	ance		Interest o	n canital	Other	costs			Payments			Cashi	lows	Illustrative :	scenarios
-							mereste		otilei		Repay	ment of the cr				Cusii I		indotro tive :	
t	Period	Drawdowns			Outstanding		Borrowing	Interest						Costs not		Value at	1	highest	highest
			Initial	(only capital)	(capital plus interest)	Final	rate (%)	charges	Not financed	Financed	Capital	Interest	Total	financed	Total	each period	Present value	borrowing rate (credit	exchange rate (domestic
5				capital)	meresty						amortisation							currency)	currency)
	0	200000.00							4000.00					4000.00	4000.00	196000.00	196000.00	2000.00	
ē	1												1660.94	0.00	1660.94	-1660.94	-1652.93	817.08	
	2												1660.94	0.00	1660.94	-1660.94	-1644.97	817.08	
J	3												1660.94	0.00	1660.94	-1660.94	-1637.04	817.08	
_	4												1660.94	0.00	1660.94	-1660.94	-1629.15	817.08	
9	5												1660.94	0.00	1660.94	-1660.94	-1621.29	817.08	
	6												1660.94 1734.38	0.00	1660.94 1734.38	-1660.94 -1734.38	-1613.48 -1676.70	817.08 890.52	
	8												1734.38	0.00	1734.38	-1734.38	-1668.62	890.52	
	9												1734.38	0.00	1734.38	-1734.38	-1660.57	890.52	
	10												1734.38	0.00	1734.38	-1734.38	-1652.57	890.52	
า	11												1734.38	0.00	1734.38	-1734.38	-1644.60	890.52	
	12												1734.38	0.00	1734.38	-1734.38	-1636.67	890.52	
I	Sums																		
~	Year 1	200000.00							4000.00				20371.92	4000.00	24371.92	175628.08	176261.42	12245.60	
5	Year 2	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-19035.47	10686.24	
	Year 3	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-17963.12	10686.24	
	Year 4	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-16951.17	10686.24	
	Year 5 Year 6	0.00							0.00				20812.56 20812.56	0.00	20812.56 20812.56	-20812.56 -20812.56	-15996.23 -15095.09	10686.24 10686.24	
	Year o Year 7	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-15095.09	10686.24	
	Year 8	0.00							0.00				20812.50	0.00	20812.50	-20812.56	-13442.24	10686.24	
	Year 9	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-12684.98	10686.24	
	Year 10	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-11970.38	10686.24	
	Year 11	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-11296.03	10686.24	
	Year 12	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-10659.67	10686.24	
	Year 13	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-10059.16	10686.24	
	Year 14	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-9492.48	10686.24	
	Year 15	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-8957.73	10686.24	
	Total	200000.00							4000.00				311747.76	4000.00	315747.76	-115747.76	-11587.05	161852.96	

The APR so obtained is the additional illustrative APR of the illustrative scenario, and the column Total of Payments from period 0 are the Payments if highest borrowing rate of the Illustrative scenarios. Copy these data to another sheet to avoid losing them in the next steps.

	Main re	sults																	
														Illustrative s	cenario of c	nange in the b	orrowing rate		
		e in the last the first repa the credit	•	0.00	MONTHS	Recalcu	llate							If the borrowi opportunity, tl	ng rate rises t ne instalment	o the highest l	evel entered ab shown in the la	ove at the ear	
	Annual Perc	ue of the cas centage Rate			YNAMIC	Recalcu	llate												
•	Total cost of Total amour Total amour	nt of credit		115747.76 200000.00 315747.76															
. [
				Bala	ance		Interest o	on capital	Other	costs		ment of the c	Payments			Cash	flows	Illustrative	scenarios
	Period	Dra wdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
	0	200000.00							4000.00					4000.00	4000.00	196000.00	196000.00		
	1												1660.94	0.00	1660.94	-1660.94	-1651.70		
	2												1660.94	0.00	1660.94	-1660.94	-1642.51		
	3												1660.94	0.00	1660.94	-1660.94	-1633.37		
	4												1660.94	0.00	1660.94	-1660.94	-1624.28		
	5												1660.94	0.00	1660.94	-1660.94	-1615.24		
	6												1660.94	0.00	1660.94	-1660.94	-1606.25		
	7												1734.38	0.00	1734.38	-1734.38	-1667.94		
	8												1734.38	0.00	1734.38	-1734.38	-1658.66		
	9 10												1734.38	0.00	1734.38 1734.38	-1734.38 -1734.38	-1649.43 -1640.26		
	10												1734.38 1734.38	0.00	1734.38	-1734.38	-1640.26		
	11												1734.38	0.00	1734.38	-1734.38	-1622.05		
	Sums												1734.30	0.00	1754.55	-1/34.30	-1022.05		
	Year 1	200000.00							4000.00				20371.92	4000.00	24371.92	175628.08	176357.17		
	Year 2	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-18774.81		
	Year 3	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-17558.85		
	Year 4	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-16421.65		
	Year 5	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-15358.10		
	Year 6	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-14363.43		
	Year 7	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-13433.18		
	Year 8	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-12563.18		
	Year 9	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-11749.52		
	Year 10	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-10988.56		
	Year 11	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-10276.89		
	Year 12	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-9611.30		
	Year 13	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-8988.83		
	Year 14	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-8406.66		
	Year 15	0.00							0.00				20812.56	0.00	20812.56	-20812.56	-7862.20		
	Total	200000.00							4000.00				311747.76	4000.00	315/4/.76	-115747.76	0.00		

To obtain the payments and the APR of the multi-part credit, copy to the column with the Total of the Repayment of the credit the following two columns from period 1 (period 0 should be kept empty): the Total of the Repayment of the credit corresponding to the fixed-rate part of the credit and the Total of the Repayment of the credit corresponding to the variablerate part of the credit.

Then, click on the button Recalculate next to the cell showing the Annual Percentage Rate of Charge to obtain the APR of the multi-part credit.

	Main re	sults																	
~														Illustrative so	enario of ch	ange in the b	orrowing rate		
е		e in the last	•	0.00													evel entered ab		
v		the first repa	yment			Recalcu	ulate							opportunity, th amortisation t			shown in the la	st column but	one of
y	Duration of	the credit		180	MONTHS														
of	Present valu	ue of the cas	h flows	7885 52	Caution: The	APR is not	valid begus	o tho nroso	nt value of th	e cash flow	s is not zero								
		centage Rate			DYNAMIC	Recalcu				c cash now.	51511002010.								
e						necore													
	Total cost of	f the credit		102969.20															
n	Total amour	nt of credit		200000.00															
. +	Total amour	nt payable		302969.20															
ot																			
e				01.	ance		Interest o	a an alta l	Other				Payments			Cash	0	Illustrative	connerios
C				Bali	ance		Interest o	on capitai	Uther	costs	Renau	yment of the cr				Cash	nows	inusuauve.	scenarios
it	Period	Drawdowns			Outstanding		Borrowing	Interest				,		Costs not		Value at	1	inguest	ingnesi
			Initial	(only capital)	(capital plus interest)	Final	rate (%)	charges	Not financed	Financed	Capital amortisation	Interest	Total	financed	Total	each period	Present value	borrowing rate (credit	exchange rate (domestic
e				capital)	interest)						amortisation							currency)	currency)
~	0	200000.00							4000.00					4000.00	4000.00	196000.00	196000.00		
)†	1												1660.94	0.00	1660.94	-1660.94	-1651.70		
:.	2												1660.94	0.00	1660.94	-1660.94	-1642.51		
it	3												1660.94	0.00	1660.94	-1660.94	-1633.37		
_د	4												1660.94 1660.94	0.00	1660.94 1660.94	-1660.94	-1624.28 -1615.24		
-	6												1660.94	0.00	1660.94	-1660.94	-1615.24		
	7												1660.94	0.00	1660.94	-1660.94	-1597.32		
	8												1660.94	0.00	1660.94	-1660.94	-1588.43		
	9												1660.94	0.00	1660.94	-1660.94	-1579.59		
n	10												1660.94	0.00	1660.94	-1660.94	-1570.80		
n	11												1660.94	0.00	1660.94	-1660.94	-1562.06		
II	12												1660.94	0.00	1660.94	-1660.94	-1553.37		
	Sums	200000.00							4000.00				10021-20	4000.00	23931.28	170000 72	176775 00		
~	Year 1 Year 2	0.00							4000.00				19931.28 19931.28	4000.00	23931.28 19931.28	176068.72 -19931.28	176775.08 -17979.81		
	Year 3	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-16815.35		
	Year 4	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-15726.30		
	Year 5	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-14707.78		
	Year 6	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-13755.23		
	Year 7	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-12864.37		
	Year 8	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-12031.21		
	Year 9	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-11252.01		
	Year 10	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-10523.27		
	Year 11 Year 12	0.00							0.00				19931.28 19931.28	0.00	19931.28 19931.28	-19931.28 -19931.28	-9841.73 -9204.33		
	Year 13	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-9204.33		
	Year 14	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-8050.69		
	Year 15	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-7529.29		
	Total	20000.00							4000.00				298969.20	4000.00	302969.20	-102969.20	7885.52		
	.otui	200000.00							+000.00				230303.20	+000.00	552505.20	102505.20	7005.52		

Complete the amortisation table and the area of 'Main results' with the results of the illustrative scenario. Specifically, copy to cell R89 the value of the additional illustrative APR and fill the column with the Payments if highest borrowing rate with the data saved before. Finally, extend the formulas of the annual and overall totals to obtain the totals for the column.

Note: The procedure described is general and can be used for a wide variety of multi-part credits. It can be simplified for the example if instead of copying columns the different instalments are identified and added up appropriately.

	Main re	esults																	
_														Illustrative s	cenario of ch	ange in the b	orrowing rate		
e s'		ce in the last the first repa f the credit	•	0.00	MONTHS	Recalcu	ulate							If the borrowi	ng rate rises t ne instalment	o the highest l s would be as	evel entered ab shown in the la	ove at the ear	one of
e II		ue of the casl centage Rate		0.00 6.2%	DYNAMIC	Recalcu	ulate											0.576	
al e	Total cost o Total amou Total amou	int of credit		102969.20 200000.00 302969.20															
;4																			
IJ				Bala	ance		Interest	on capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
e d	Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cr	redit Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
	0	200000.00							4000.00					4000.00	4000.00	196000.00	196000.00	4000.00	
d	1												1660.94	0.00	1660.94	-1660.94		1660.94	
	2												1660.94	0.00	1660.94	-1660.94		1660.94	
S	3												1660.94	0.00	1660.94	-1660.94		1660.94	
	4												1660.94	0.00	1660.94	-1660.94		1660.94	
	5												1660.94	0.00	1660.94	-1660.94		1660.94	
	6	-											1660.94	0.00	1660.94	-1660.94		1660.94	
	7												1660.94	0.00	1660.94	-1660.94		1734.38	
	9	-											1660.94	0.00	1660.94 1660.94	-1660.94		1734.38 1734.38	
	10												1660.94 1660.94	0.00	1660.94	-1660.94		1734.38	
	10												1660.94	0.00	1660.94	-1660.94	-1579.27	1734.38	
S	11												1660.94	0.00	1660.94	-1660.94	-1563.42	1734.38	
5	Sums	-											1000.54	0.00	1000.34	-1000.54	-1303.42	1/34.30	
а	Year 1	200000.00							4000.00				19931.28	4000.00	23931.28	176068.72	176708.44	24371.92	
4	Year 2	0.00							0.00				19931.28	0.00	19931.28	-19931.28		20812.56	
s	Year 3	0.00							0.00				19931.28	0.00	19931.28	-19931.28		20812.56	
	Year 4	0.00							0.00				19931.28	0.00	19931.28	-19931.28		20812.56	
е	Year 5	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-15144.62	20812.56	
C	Year 6	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-14255.45	20812.56	
g	Year 7	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-13418.49	20812.56	
g	Year 8	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-12630.67	20812.56	
s	Year 9	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-11889.11	20812.56	
3	Year 10	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-11191.08	20812.56	
n	Year 11	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-10534.03	20812.56	
μ	Year 12	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-9915.56	20812.56	
	Year 13	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-9333.41	20812.56	
	Year 14	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-8785.43	20812.56	
	Year 15	0.00							0.00				19931.28	0.00	19931.28	-19931.28	-8269.62	152716.04	
	Total	200000.00							4000.00				298969.20	4000.00	302969.20	-102969.20	0.00	315747.76	

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit Tick the box for an illustrative scenario if the credit is in a foreign currency Amount
8) Conditions governing draw dowins
Solice: Immediately and Inful 💌
C) Conditions governing repayments (DY NAMI C)
Proquency of repayments menthy NOTE: This will determine the length of regular periods shown in the table as: MONTHS
Amount Equal Indelments (to be calculated)
Social Payments(*)
Advance payments () Nofthe cadd int ()
Final Payment" Flad amout
L file length affile 1nd periods represent a different
D) Duration of the credit agreement
Duration Fixed of porriods
COSTS OF THE CREDIT
A) Borrowing rate
Level Samakeal for the oracit tarm 💌 Defined as Normal (annual) 💌 DYNAMIC
Percentage auth
8) Other cost in du ded in the Total Cost of the Credit
- Given as Anounter's Financed Date of charge
Cost1 % of the credit init w No* # At conclusion w Cost2 % of the credit init w No* # At conclusion w Cost3 % of the drawdowns in each parted w No* w
Cost 5 N of the drawdowne in each parted V No* V
📙 Cost 4 No of the balance outstanding (apital + Internet) In each period 🛛 💌 No "
L Cost 5 No of the balance outstanding (only capital) in each parked 💌 No" 💌
L Cost 6 No of the anext net used at the beginning of each partod 💌 No" 💌
Cost 7 N of the final balance in each period
Examples Obs(*) Obs(*)
L Shared equity credit

Main results

Year 19

Year 20

Total

0.00

0.00

170000.00

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Final balance in the last period 0.00 1217.93 Amount of the first repayment Recalculate 240 MONTHS Duration of the credit Present value of the cash flows 0.00 Annual Percentage Rate of Charge 6.4% DYNAMIC Recalculate Total cost of the credit 125703.20 Total amount of credit 170000.00 Total amount payable 295703.20 Balance Illustrative scenarios Interest on capital Other costs Payments Repayment of the credit utstanding Outstandin Period Drawdown ignest nignes Borrowing Interest Value at Initial (only (capital plus Final ot financed Financed Capital Total borrowing exchange rat rate (%) charges Interest Total ach perio capital) interest) mortisation rate (credit (domestic urrency) currency) 0 170000.00 3400.00 3400.00 166600.00 170000.00 3400.00 166600.00 1 170000.00 170000.00 170850.00 169632.07 6.00% 850.00 367.93 850.00 1217.93 0.00 1217.93 -1217.93 -1211.62 2 169632.07 169632.07 170480.23 169262.29 6.00% 848 16 369.77 848.16 1217.93 0.00 1217.93 -1217.93 -1205.34 169262 29 169262 29 170108 61 168890 67 6.00% 846 31 371 62 846 31 1217 93 0.00 1217.93 -1217.93 -1199.09 168890.67 168890.67 169735.13 168517.19 6.00% 844.45 373.48 844.45 1217.93 0.00 1217.93 -1217.93 -1192.88 168517.19 168517.19 169359.78 168141.85 6.00% 842.59 375.35 842.59 1217.93 0.00 1217.93 -1217.93 -1186.69 168141.85 168141.85 168982.56 167764.62 6.00% 840.71 377.22 840.71 1217.93 0.00 1217.93 -1217.93 -1180.54 167764.62 167764.62 168603.45 167385.51 6.00% 838.82 379.11 838.82 1217.93 0.00 1217.93 -1217.93-1174.42 8 167385.51 167385.51 168222.44 167004.51 6.00% 836.93 381.01 836.93 1217.93 0.00 1217.93 -1217.93 -1168.34 9 167004.51 167004.51 167839.53 166621.60 6.00% 835.02 382.91 835.02 1217.93 0.00 1217.93 -1217.93 -1162.28 833 11 384 82 833.11 1217.93 -1217.93 10 166621.60 166621.60 167454.71 166236.77 6.00% 1217 93 0.00 -1156.26 11 166236.77 166236.77 167067.96 165850.02 6.00% 831.18 386.75 831.18 1217.93 0.00 1217.93 -1217.93 -1150.26 12 165850.02 165850.02 166679.27 165461.34 6.00% 829.25 388.68 829.25 1217.93 0.00 1217.93 -1217.93 -1144.30 Sums 152467.99 10076.54 151984.84 Year 1 170000.00 3400.00 0.00 4538.66 10076.54 14615.19 3400.00 18015.16 0.00 9796.60 0.00 0.00 4818.59 9796.60 14615.19 0.00 14615.16 -14615.16 -13277.67 Year 2 0.00 9499.40 0.00 0.00 5115.79 9499.40 14615.19 0.00 14615.16 -14615.16 -12474.98 Year 3 Year 4 0.00 9183.87 0.00 0.00 5431.32 9183.87 14615.19 0.00 14615.16 -14615.16 -11720.82 0.00 8848.88 0.00 0.00 5766.32 8848.88 14615.19 0.00 14615.16 -14615.16 -11012.25 Year 5 0.00 8493.22 0.00 0.00 6121.97 8493.22 14615.19 0.00 14615.16 -14615.16 10346.51 Year 6 0.00 8115.63 0.00 0.00 6499.56 8115.63 14615.19 0.00 14615.16 -14615.16 -9721.02 Year 7 Year 8 0.00 7714.76 0.00 0.00 6900.44 7714.76 14615.19 0.00 14615.16 -14615.16 -9133.34 7289.15 0.00 7326.04 7289.15 14615.19 -14615.16 -8581.20 Year 9 0.00 0.00 0.00 14615.16 6837.30 0.00 7777.90 6837.30 14615.19 0.00 14615.16 -14615.16 -8062.43 Year 10 0.00 0.00 Year 11 0.00 6357.57 0.00 0.00 8257.62 6357.57 14615.19 0.00 14615.16 -14615.16 -7575.02 5848.26 Year 12 0.00 8766.93 5848.26 14615.19 0.00 14615.16 -14615.16 -7117.08 0.00 0.00 Year 13 0.00 5307.54 0.00 0.00 9307.66 5307.54 14615.19 0.00 14615.16 -14615.16 -6686.82 Year 14 4733.46 0.00 0.00 9881.73 4733.46 14615.19 0.00 -14615.16 -6282.58 0.00 14615.16 Year 15 0.00 4123.98 0.00 0.00 10491.22 4123.98 14615.19 0.00 14615.16 -14615.16 -5902.77 3476.90 Year 16 0.00 0.00 0.00 11138.29 3476.90 14615.19 0.00 14615.16 -14615.16 -5545.92 2789.92 Year 17 0.00 0.00 0.00 11825.28 2789.92 14615.19 0.00 14615.16 -14615.16 -5210.65 Year 18 0.00 2060.56 0.00 0.00 12554.63 2060.56 14615.19 0.00 14615.16 -14615.16 -4895.64

0.00

0.00

0.00

0.00

3400.00

13328.98

14151.08

1286 22

0.00 170000.00 122303.87 292303.87

14615.19

464.12 14615.19

0.00

14615.16

3400.00 295703.20 -125703.20

0.00 14615.16

-14615 16

-14615.16

1286 22

122303.87

464.12

-4599 68

-4321.61

0.00

Click on the button Reset and then enter the information highlighted in red.

Note that the exchange rate entered at the top is expressed as domestic currency per unit of foreign currency, and hence its value is 1/1.25=0.8.

Also note that cost number 2 corresponds to the currency conversion cost linked to the single sum cost of 2% of the total of credit (i.e., amount 200000x0.02x0.002=\$8), which is payable at the conclusion of the agreement, and cost number 3 corresponds to the currency conversion cost linked to the (i.e., monthly instalments 1319.91x0.002=\$2.64), which is payable each time a repayment takes place. If such instalments are not known in advance, it will be necessary to obtain them for this same credit but excluding the cost number 3. Once obtained, the cost can be quantified.

Description of the credit product MAIN FEATURES OF THE CREDIT PRODUCT

A) Total amount of the credit		
Amount	Tick the box for an illustrative scenario if the credit is in a foreign currency Initial exchange rate (domestic currency per unit of foreign currency)	
Amoun.	Automating execution and (20% or obtained of form appraid of forwary)	
B) Conditions governing draw downs	2 selicist period when that highest depreciation could occur (1, 2, 3,)	
Solod Innedately and Inful		
C) Conditions governing repayments (DYNAMIC)		
Frequency of repayments monthly	NOTE: This will determine the length of regular periods shown in the table as: MONTHS	
Amount Equal Indelments (to be calculated)	T	
Special Payments (*) Advance payment* Nothe cadt int	▼	
Final Payment* Fixed amount		
The long that the trad particular represent is different		
D) Duration of the credit agreement		
Duration Fired	of mpcriods	
COSTS OF THE CREDIT		
COSTS OF THE CREDIT		
A) Borrowing rate		
Lovol Samelavel for the artire credit term 💌	Defined as Northal (Annual) 💽 DYNA MIC 🗌 Tick the box for an illustrative accoratio if the credit allows variations in the borrowing rate	
Percentage 3.mth		
B)Other cost included in the Total Cost of the Credit		
Civen as Provid Northe mediant	Amountor's financed Date of charge	
Cost 2 Redamount	Ke* At conclusion	
Cost 5 Predamount	The second secon	
Cost + Northe calance cutstanong (optar + ntered) in		
Cost 5 % of the balance outstanding (only capital) in each Cost 6 % of the credit not used at the beginning of each p		
Cost 7 % of the final balance in each period		
Exemples	obs(*) obs(*)	
Shared equity credit		

Click on the buttons Generate and then *Calculate* to obtain the main results and the amortisation table.

Main r	esults																	
	ice in the last the first repa f the credit		0.00 1319.91 240	MONTHS	Recalcu	late												
Present val	lue of the casl	h flows	0.00										llustrative so	enario of ch	ange in the e	exchange rate		
Annual Per	rcentage Rate	of Charge	5.4%	DYNAMIC	Recalcu	late										the high deprec	iation rate en	tered above at
				-									the earliest po	ossible oppor	rtunity , the pa	yments would b	e as shown in	the last
	of the credit		121420.00										column of amo of the domesti		le and the am	ount of capital v	vould increase	e to (in terms
	unt of credit		200000.00															
Total amou	unt payable		321420.00														191922.15	
			Bala	ince		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	e scenarios
			Outstanding	Outstanding						Repay	ment of the cr	edit					highest	highest
Period	Drawdowns	Initial	(only capital)	(capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing rate (credit currency)	exchange rate (domestic currency)
(0 200000.00				200000.00			4008.00					4008.00	4008.00	195992.00	195992.00		3206.40
1	1	200000.00	200000.00	200833.33	199513.42	5.00%	833.33	2.64		486.58	833.33	1319.91	2.64	1322.55	-1322.55	-1316.77		1058.04
2	2	199513.42	199513.42	200344.73	199024.82	5.00%	831.31	2.64		488.61	831.31	1319.91	2.64	1322.55	-1322.55	-1311.02		1269.65
3	3	199024.82	199024.82	199854.09	198534.17	5.00%	829.27	2.64		490.64	829.27	1319.91	2.64	1322.55	-1322.55	-1305.29		1269.65
4	4	198534.17	198534.17	199361.40	198041.49	5.00%	827.23	2.64		492.69	827.23	1319.91	2.64	1322.55	-1322.55	-1299.58		1269.65
5	5	198041.49	198041.49	198866.66	197546.75	5.00%	825.17	2.64		494.74	825.17	1319.91	2.64	1322.55	-1322.55	-1293.90		1269.65
	6	197546.75	197546.75	198369.86	197049.95	5.00%	823.11	2.64		496.80	823.11	1319.91	2.64	1322.55	-1322.55	-1288.25		1269.65
	7	197049.95	197049.95		196551.08	5.00%	821.04	2.64		498.87	821.04	1319.91	2.64	1322.55	-1322.55			1269.65
	8	196551.08	196551.08		196050.13	5.00%	818.96			500.95	818.96	1319.91	2.64	1322.55	-1322.55			1269.65
	9	196050.13	196050.13		195547.10	5.00%	816.88			503.04	816.88	1319.91	2.64	1322.55	-1322.55			1269.65
10		195547.10	195547.10		195041.96	5.00%	814.78			505.13	814.78	1319.91	2.64	1322.55	-1322.55			1269.65
11		195041.96	195041.96		194534.73	5.00%	812.67	2.64		507.24	812.67	1319.91	2.64	1322.55	-1322.55			1269.65
12	2	194534.73	194534.73	195345.29	194025.38	5.00%	810.56	2.64		509.35	810.56	1319.91	2.64	1322.55	-1322.55	-1254.84		1269.65
Sums Year 1	200000.00						9864.32	4039.68	0.00	5974.62	9864.32	15838.94	4039.68	19878.60	180121.40	180565.06		18230.57
Year 2	0.00						9558.64	31.68	0.00		9558.64	15838.94	4039.68	15870.60				15235.78
Year 3	0.00						9237.33	31.68	0.00	6601.61	9237.33	15838.94	31.68	15870.60				15235.78
Year 4	0.00						8899.58		0.00	6939.36	8899.58	15838.94	31.68	15870.60				15235.78
Year 5	0.00						8544.55	31.68	0.00		8544.55	15838.94	31.68	15870.60				15235.78
Year 6	0.00						8171.35	31.68	0.00	7667.58	8171.35	15838.94	31.68	15870.60				15235.78
Year 7	0.00						7779.07	31.68	0.00	8059.87	7779.07	15838.94	31.68	15870.60	-15870.60	-11254.66		15235.78
Year 8	0.00						7366.71	31.68	0.00	8472.23	7366.71	15838.94	31.68	15870.60	-15870.60	-10678.44		15235.78
Year 9	0.00						6933.25	31.68	0.00	8905.69	6933.25	15838.94	31.68	15870.60	-15870.60	-10131.73		15235.78
Year 10	0.00						6477.62	31.68	0.00	9361.32	6477.62	15838.94	31.68	15870.60				15235.78
Year 11	0.00						5998.68	31.68	0.00		5998.68	15838.94	31.68	15870.60				15235.78
Year 12	0.00						5495.23	31.68	0.00	10343.71	5495.23	15838.94	31.68	15870.60				15235.78
Year 13	0.00						4966.03	31.68	0.00	10872.91	4966.03	15838.94	31.68	15870.60				15235.78
Year 14	0.00						4409.75	31.68	0.00		4409.75	15838.94	31.68	15870.60				15235.78
Year 15	0.00						3825.01	31.68	0.00	12013.93	3825.01	15838.94	31.68	15870.60				15235.78
Year 16 Year 17	0.00						3210.35 2564.25	31.68 31.68	0.00	12628.58 13274.69	3210.35 2564.25	15838.94 15838.94	31.68 31.68	15870.60 15870.60				15235.78 15235.78
Year 17 Year 18	0.00						1885.09	31.68	0.00	13274.69	1885.09	15838.94	31.68	15870.60				15235.78
Year 18 Year 19	0.00						1885.09		0.00	13953.84	1885.09	15838.94	31.68	15870.60				15235.78
Year 20	0.00						420.76		0.00	14007.73	420.76	15838.94	31.68	15870.60	-15870.60			15235.78
Total	20000.00						116778.75		0.00		116778.75		4641.60	321420.00				307710.31

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product

Note that the exchange rate entered at the top is expressed as domestic currency per unit of foreign currency, and hence its value is 1/1.25=0.8. Also note that cost number 2 corresponds to the currency conversion cost linked to the single sum cost of 2% of the total amount of credit (i.e., 200000x0.02x0.002=\$8), which is payable at the conclusion of the agreement, the cost number 3 corresponds to the currency conversion cost linked to the monthly instalments* (i.e., 1319.91x0.002=\$2.64), which is payable each time a repayment takes place, and the cost number 3 corresponds to the monthly cost of the cap and its currency conversion (i.e. costs 360/12x1.002=\$30.06), which is also payable each time a repayment takes place (as they are monthly).

MAIN FEATURES OF THE CREDIT PRODUCT			
A) Total amount of the credit			
·	Tick the box for an illustrative scenario if the credit is		
Amount 2000	 Initial exchange rate (domestic currency Highest depreciation in % (20% or obtain 		
B) Conditions governing drawdowns	Earliest period when that highest depres		
o / containing or control of the			
Scied Innedately and Inful			
C) Conditions governing repayments (DYNAMIC)			
Frequency of repayments monthly	NOTE: This will determine the length of regular period	a shown in the table as: MONTHS	
Amount Equal Indements (to be calculated)			
a second second			
Special Payments (*) Advance payment* Northe redt int	-		
Final Payment* Fixed amount			
The long that the lost period of repays and is deferred.			
D) Duration of the credit agreement			
DuraSon Foad	of 💴 perioda		
COSTS OF THE CREDIT			
A) Borrowing rate			
Lovel Samalaval for the antihe practitions 📼	Defined as Northal (annua) 💽 DYNA MIC	L Tick the bex for an illustrative scenario if the credit all	ows variations in the borrowing rate
B)Other cost included in the Total Cost of the Credit			
Civen as Civen as	Amountor% Financod Dati	c of charge	
Cost 2 Fixed amount		Ē.	
Cost 5 Fixed amount	v v korolusion v v v korolusion		
Cost 4 Fixed amount	💌 SELE No" 💌 Each time a repsyme		
Cost 5 % of the balance outstanding (only capital) in each p	eriod 💌 No* 💌		
Cost 6 % of the credit not used at the beginning of each pe			
Cost 7 % of the final balance in each period	· ·		
Examples	Obs(*)	Oba (*)	
Shared aquity could			

*If such instalments are not known in advance, it will be necessary to obtain them for this same credit but excluding the cost number 3. Once obtained, the cost can be quantified.

Click on the buttons Generate and then *Calculate* to obtain the main results and the amortisation table.

Main re	esults																	
	ce in the last the first repa the credit		0.00 1319.91 240	MONTHS	Recalcu	late												
Present val	ue of the cas	h flows	0.00										Illustrative so	cenario of ch	nange in the e	exchange rate		
Annual Per	centage Rate	of Charge	5.7%	DYNAMIC	Recalcu	late							If the value of	the domestic	c currency fells	the high deprec	iation rate en	tered above at
	6 .1 11.															yments would be ount of capital v		
Total cost o Total amou			128634.40 200000.00										of the domest		ne anu the am	ount of capital v	outu mcrease	to (in terms
Total amou			328634.40														175961.07	
Total alliou	псрауарте		528034.40														175501.07	
																I		
			Bala	ince		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
Deried	Drawdawaa		Outstanding	Outstanding						Repay	ment of the cr	eait				1	highest	highest
Period	Drawdowns	Initial	(only capital)	(capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing rate (credit currency)	exchange rate (domestic currency)
0	200000.00				200000.00			4008.00					4008.00	4008.00	195992.00	195992.00		3206.40
1		200000.00	200000.00	200833.33	199513.42	5.00%	833.33	32.70		486.58	833.33	1319.91	32.70	1352.61	-1352.61	-1346.39		1082.09
2		199513.42	199513.42	200344.73	199024.82	5.00%	831.31	32.70		488.61	831.31	1319.91	32.70	1352.61	-1352.61	-1340.21		1190.30
3	8	199024.82	199024.82	199854.09	198534.17	5.00%	829.27	32.70		490.64	829.27	1319.91	32.70	1352.61	-1352.61	-1334.05		1190.30
4		198534.17	198534.17		198041.49	5.00%	827.23			492.69	827.23	1319.91	32.70	1352.61	-1352.61			1190.30
5		198041.49	198041.49		197546.75	5.00%	825.17			494.74		1319.91	32.70	1352.61	-1352.61			1190.30
6		197546.75	197546.75		197049.95	5.00%	823.11			496.80	823.11	1319.91	32.70	1352.61	-1352.61			1190.30
7		197049.95	197049.95		196551.08	5.00%	821.04			498.87	821.04	1319.91	32.70	1352.61	-1352.61			1190.30
8		196551.08	196551.08		196050.13	5.00%	818.96			500.95	818.96	1319.91	32.70	1352.61	-1352.61			1190.30
10		196050.13 195547.10	196050.13 195547.10		195547.10 195041.96	5.00%	816.88 814.78			503.04 505.13	816.88 814.78	1319.91 1319.91	32.70 32.70	1352.61 1352.61	-1352.61			1190.30 1190.30
10		195547.10	195547.10		195041.96	5.00%	814.78			505.13	814.78	1319.91	32.70	1352.61	-1352.61			1190.30
11		193041.30	194534.73		194025.38	5.00%	812.07			509.35	812.07	1319.91	32.70	1352.61	-1352.61			1190.30
Sums		104004.70	134334.73	155545.25	134023.30	5.0070	010.50	52.70		505.55	010.50	1515.51	52.70	1552.01	1552.01	1275.00		1150.50
Year 1	200000.00						9864.32	4400.40	0.00	5974.62	9864.32	15838.94	4400.40	20239.32	179760.68	180237.42		17381.75
Year 2	0.00						9558.64		0.00	6280.30		15838.94	392.40	16231.32				14283.56
Year 3	0.00						9237.33	392.40	0.00	6601.61	9237.33	15838.94	392.40	16231.32	-16231.32	-14105.87		14283.56
Year 4	0.00						8899.58		0.00	6939.36		15838.94	392.40	16231.32				14283.56
Year 5	0.00						8544.55		0.00	7294.39		15838.94	392.40	16231.32				14283.56
Year 6	0.00						8171.35					15838.94	392.40	16231.32				14283.56
Year 7	0.00						7779.07	392.40	0.00	8059.87	7779.07	15838.94	392.40	16231.32				14283.56
Year 8	0.00						7366.71		0.00	8472.23	7366.71	15838.94	392.40	16231.32				14283.56
Year 9 Year 10	0.00						6933.25 6477.62		0.00		6933.25 6477.62	15838.94 15838.94	392.40 392.40	16231.32 16231.32				14283.56 14283.56
Year 10 Year 11	0.00						5998.68		0.00	9361.32		15838.94	392.40	16231.32				14283.56
Year 12	0.00						5495.23		0.00		5495.23	15838.94	392.40	16231.32				14283.50
Year 13	0.00						4966.03		0.00		4966.03	15838.94	392.40	16231.32				14283.50
Year 14	0.00						4409.75		0.00	11429.19		15838.94	392.40	16231.32				14283.56
Year 15	0.00						3825.01	392.40	0.00	12013.93	3825.01	15838.94	392.40	16231.32	-16231.32	-7267.03		14283.56
Year 16	0.00						3210.35	392.40	0.00	12628.58	3210.35	15838.94	392.40	16231.32	-16231.32	-6876.28		14283.56
Year 17	0.00						2564.25	392.40	0.00	13274.69	2564.25	15838.94	392.40	16231.32	-16231.32	-6506.54		14283.56
Year 18	0.00						1885.09			13953.84	1885.09	15838.94	392.40	16231.32				14283.56
Year 19	0.00						1171.19		0.00	14667.75	1171.19	15838.94	392.40	16231.32				14283.56
Year 20	0.00						420.76		0.00	15418.18	420.76	15838.94	392.40	16231.32	-16231.32			14283.56
Total	20000.00						116778.75	11856.00	0.00	200000.00	116778.75	316778.75	11856.00	328634.40	-128634.40	0.00		288769.42

This example requires changing manually the values in the amortisation table.

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product		
MAIN FEATURES OF THE CREDIT PRODUCT		
A) To tal amount of the credit		
Amount see	"Tick the box for an illustrative scenario if the credit is	(in a foreign currency
B) Conditions governing drawdowns		
Soloof Immediately and Inful		
C) Conditions governing repayments (DYN AMIC)		
Frequency of repayments menthy	NOTE: This will determine the long th of regular periods :	altown in the table as: <u>NONTHS</u>
A mount Interest plus equal repsyments of capital regularly	Ī	
Special Payments (*)		
Advance payment* % of the credt link	-	
Final Paymont* Read amount		
The long B of Che Trick period of repayment is different.		
D) Duration of the credit agreement		
Duration Fixed e of	periods	
COSTS OF THE CREDIT		
A) Borrowing rate		
Level Samalaval for the antihe creditions 💌 🗾 De	fined as Sflective (annual)	Thek the box for an illustrative scenario if the credit allows variations in the borrowing rate Credit of Article 17(5) of the MCD/5-year or more fixed followed by negotiation on new fixed E inplest borrowing rate in % (in at least the last 20 years or cap rate if lower)
		Farliest period when that highest rate could be charged (1, 2, 5,)
B) Other cost included in the Total Cost of the Credit Given as	Amountor % Financed Date	of charge
Costs % of the credit line		
Cost2 % of the credit limit	Korr Korr	
Cost3 % of the drawdowns in each period	• N° •	
Cost4 % of the balance outstanding (capital + interact) in each pa		
Cost5 % of the balance outdanding (only capital) in each period	■ No* ■	
Cost6 % of the credit not used at the beginning of each period	■ No* ■	
Cost7 % of the final balance in each period		
Examples	Obs(*)	Obs (*)
Shared equity credit		

Click on the buttons Generate and then Calculate to obtain the main results and the amortisation table.

As shown, the simulator has obtained the results for a credi with equal repayments of the capital from period 1, while the credit of the example restric those payments to take place from the 6th year (period 61).

Main re	esults																	
inal halan	ce in the last	neriod	0.00													oorrowing rate		
	the first repa			MONTHS	Recalcu	late								ne instalment	ts would be as	evel entered at shown in the la		
																	8.7%	
nnual Per otal cost o otal amou	ue of the casi centage Rate f the credit nt of credit nt payable		0.00 7.4% 15951.01 30000.00 45951.01	DYNAMIC	Recalcu	late												
			Bala	nce		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cr Interest	edit Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rat (domestic currency)
0	30000.00				30000.00			600.00					600.00	600.00	29400.00	29400.00	600.00	
1		30000.00	30000.00	30169.62	29833.33	7.00%	169.62			166.67	169.62	336.29	0.00	336.29	-336.29	-334.30	336.29	
2		29833.33	29833.33	30002.02	29666.67	7.00%	168.68			166.67	168.68	335.35	0.00	335.35	-335.35	-331.39	335.35	
3		29666.67	29666.67	29834.41	29500.00	7.00%	167.74			166.67	167.74	334.41	0.00	334.41	-334.41	-328.50	334.41	
4		29500.00	29500.00	29666.80	29333.33	7.00%	166.80			166.67	166.80	333.46	0.00	333.46	-333.46	-325.63	333.46	
5		29333.33	29333.33	29499.19	29166.67	7.00%	165.85			166.67	165.85	332.52	0.00	332.52	-332.52	-322.78	332.52	
6		29166.67	29166.67	29331.58	29000.00	7.00%	164.91			166.67	164.91	331.58	0.00	331.58	-331.58	-319.96	331.58	
7		29000.00	29000.00	29163.97	28833.33	7.00%	163.97			166.67	163.97	330.64	0.00	330.64	-330.64	-317.17	362.02	
8		28833.33	28833.33	28996.36	28666.67	7.00%	163.03			166.67	163.03	329.69	0.00	329.69	-329.69	-314.38	360.90	
9		28666.67	28666.67	28828.75	28500.00	7.00%	162.09			166.67	162.09	328.75	0.00	328.75	-328.75	-311.63	359.78	
10		28500.00	28500.00	28661.14	28333.33	7.00%	161.14			166.67	161.14	327.81	0.00	327.81	-327.81	-308.89	358.65	
11		28333.33	28333.33	28493.53	28166.67	7.00%	160.20			166.67	160.20	326.87	0.00	326.87	-326.87	-306.18	357.53	
12		28166.67	28166.67	28325.93	28000.00	7.00%	159.26			166.67	159.26	325.93	0.00	325.93	-325.93	-303.49	356.41	
ims																		
ear 1	30000.00						1973.30	600.00	0.00		1973.30	3973.30	600.00	4573.30		25575.71	4758.90	
ear 2	0.00						1837.60	0.00	0.00		1837.60	3837.60	0.00	3837.60		-3439.42	4189.33	
ear 3	0.00						1701.90	0.00	0.00		1701.90	3701.90	0.00	3701.90		-3089.42	4027.65	
ear 4	0.00						1566.20	0.00	0.00		1566.20	3566.20	0.00	3566.19		-2771.30	3865.98	
ear 5	0.00						1430.50	0.00	0.00		1430.50	3430.50	0.00	3430.50		-2482.35	3704.31	
ear 6	0.00						1294.80	0.00	0.00		1294.80	3294.80	0.00	3294.80		-2220.05	3542.63	
'ear 7	0.00						1159.10	0.00	0.00		1159.10	3159.10	0.00	3159.10		-1982.09	3380.96	
ear 8	0.00						1023.40	0.00	0.00		1023.40	3023.40	0.00	3023.40		-1766.38	3219.29	
ear 9	0.00						887.70	0.00	0.00		887.70	2887.70	0.00	2887.70		-1570.98	3057.62	
ear 10	0.00						752.00	0.00	0.00		752.00	2752.00	0.00	2752.00	-2752.00	-1394.10	2895.94	
ear 11	0.00						616.30	0.00	0.00		616.30	2616.30	0.00	2616.30		-1234.14	2734.27	
ear 12	0.00						480.60	0.00	0.00		480.60	2480.60	0.00	2480.61	-2480.61	-1089.59	2572.60	
ear 13	0.00						344.90	0.00	0.00		344.90	2344.90	0.00	2344.91	-2344.91	-959.10	2410.92	
ear 14	0.00						209.20	0.00	0.00		209.20 73.50	2209.20	0.00	2209.20 2073.50		-841.40	2249.24	
ear 15	0.00						73.50					2073.50	0.00			-735.37	2087.57	
Total	30000.00						15351.00	600.00	0.00	30000.00	15351.00	45351.00	600.00	45951.01	-15951.01	0.00	48697.21	

To solve this, first replace the formulas in the column Total of Repayment of the credit (column M; the title is in a blue font, and hence can be changed after clicking on the button Calculate) by proper formulas. Specifically, the cells for periods 1 to 60 should be equated to the cells with Interest charges in column H, and the cells for the rest of periods should add to the interest charges equal amounts of capital given as 30000/120=250. For the example, cell M109 (corresponding to the first period) should have the formula =H109 and the cell M169 (corresponding to period 61) is the first one which includes the repayment of capital and should have the formula =H169+30000/120.

Am	ount of th ation of	te in the last he first repe the credit	ment	0.00 1150	MONTHS	Receive	iate							The borown	grate tilai och Histoleventa	he highest leve	borrowing rate	othe autorp	
Ann Yeta Yeta	nial Perc al cost el al amou	e of the cas entage Rate The credit et of credit et payable	14	0.00 7.4% 15951.01 80000.00 45951.01	DHILANDIC .	Receiru	late												
5				Bala	128		Interest in	noapeal	Oter	osata	-		Payments		_	Las	0.44	Illustrative	scenarios
6	-	Drapscorm	inami.	Overnanding tenly capital)	Okenandesp teaptatplar enseart)	Final	Boxoving 1999/DO	kuones: charger	Non Kriwycodd	Financed	Espiral amenta alton	ment dithe co Paneet	inde Toolaa	Construct thatsaid	Table	Canadian Street	Proventicidae	Cornelly Cornelly	nation packages and dorse
	0	10000.00	200			30000.00			600.00			_		600.006	-600 00	29400.00	29400.00	000.00	_
ł	1		300000 00	50000 00	30169.62	29833.33	7.00%	169.62			166 67	169.62	135.29	00.0	93629	-936.29	-354.30	336.29	
	- 2		29835.33	20853.55	30002.02	29666.67	7.00%	168.68			165.67	168.68	335,35	0.00	\$35.35	535.35	-\$31.89	\$35.35	
	3		29666.67	29966.67	29834 41	29500.00	7,00%	347.74			105.07	167.74	354.41	0.00	334.41	-334.43	-528 50	334.41	
	.4		29500.00			29833-38	7.00%	166.80			165.67	166.80	333.46	0.00	333.4E	333.46		333.46	
	-5		29933 33			20166.63	1.00%	165.85			166.67	165.85	\$32.52	0.00	352,52	352 62		352.52	
	6		29105,67	29386-87	29331.58	29000.00	7.00%	164,91			166 67	164,91	331,38	0.00	331.58	-333.58		301.98	
5	7		29000.00		29163.97	28833.35	7.00%	163.97			165.67	153.97	330.64	0.00	. 530.64	-330.64		962.02	
6			28853.33			28655.67	7.00%	163.03			168.67	263.08	329.59	0.00	329.69	329.69	-314.38	360.00	
	.9		28566.67	28666,67	28828.75	28500.00	7.00%	162.09			165.67	142.09	128.75	0.00	528.75	-328.75		339.78	
8	10		28500.00		18663.14	28333-38	7.00%	161.14			165.67	181.14	327.81	0.00	877.81	827.81		358.65	
·	11		28553.53		28493 53	2#165.63	7.00%	160.30			165.87	360.20	126.87	11.00	325.87	-326.87	-306 III	357.53	
5	12		28105.87	28306.87	28325.90	28000.00	7.00%	159.26			166.67	159.26	325.93	0.00	525.93	-325.95	-505.49	556.41	
Sur		Adding the						Teres de	10000	- 110	and the second	Anna bh	and the second	A Mar da	-				
Yea Yea		30000.00						1837.60	00.008	0.00	2000.00	1973.50	3975 30 3837.60	00.006	4575.50	25428-70		4189.00	
Yea	-	0.00						1701.90	0.00	0.00	2000.00	1537.00	3837.00	0.00	8701.90	3701.90		4037.65	
Yes		0.00						1568.20	0.00	0.00	2000.00	1566.20	3566.10	0.00	3556 19	-5566.19		3865.98	
Yea		0.00						1430.50	0.00	0.00	2000.00	1430.50	\$430.50	0.00	3430 50	-5430.50		3704.31	
Yea		0.00						1294 80	0.00	0.00	2000.00	1294 80	3294.80	0.00	5294 80	5294 80		3542.83	
Yes		0.00						1159 10	0.00	0.00	2000.00	1159 10	\$159.10	0.00	3159.10	-515910		1280.98	
Yea		0.00						1023.40	0.00	0.00	2000.00	1023.40	3028.40	0.00	3023.40	-9023.40		3219.28	
Yea		0.00						887.70	0.00	0.00	2000.00	887.70	2887.70	0.00	1687 70	2887.70		5057 61	
Yes	10	0.00						752 00	0.00	0.00	2000.00	752.00	2753.00	0.00	1752.00	-2752.00		2895.94	
Vea		0.00						616.50	0.00	0.00	2000.00	516.50	2616.30	0.00	2616.30	-2616.30		2734.27	
Yea		0.00						480.60	-0.00	0.00	2000.00	480.60	2480.60	0.00	2480 61	2480.61		2572.60	
Yes		0.00						344.90	0.00	0.00	7000.00	344.90	2344.90	00.0	2344.91	-1544.91		2410.92	
Yea		0.00						209.20	0.00	0.00	2000.00	209 20	2209.20	0.00	2209.20	1209.20		2249.24	
	+15	0.00						79.50	0.00	0.00	2000.00	/3.50	2075.50	0.00	2073 50	2073.50		2067.57	
rea																			

Next, obtain the payments of the credit in the illustrative scenario by changing the borrowing rates from periods 7 to 180 by the highest level of 8.39%. These payments are displayed in the column *Total* of *Payments* (column O).

Also obtain the illustrative APR of this scenario by clicking on the button *Recalculate* next to the cell showing the *Annual Percentage Rate of Charge*.

87		ce in the las he first repa the credit		0.00	MONTHS	Receivu	late							I the borowny	piałe rines (s.) w Parlakveniy	ha highest level	oorrowing rate	at the working	
11 12 13 14		it of credit			Caution The DINAMIC	APR is out			n) quality with (he sade line	ay ka valan anta pi							1.75	
00 05	_			Bala			theorem of	o a spinal	Other	oont	-		Pauterre	_	-	Call	Barri	Illustrative	scenarios
06					One of the local	1					Енра	mant of the case	and the second second		_	1			Section
07:	Feed	Diardorn	instal.	Channending Terriy capitali	Duritanding Icapitalplas Irossett	Final	Borowing tate (K)	bassed chieges	Net Interico di	Financied	Espiral arestsation	.itterest	Telle	Cases for the areased	Tidal	-peed	Properties	region bothymgrate Linede Linede	Land domain
08		30000.00				30000.00			600.000					600.003	600.00	29400.00	29400.00	00.000	
19	1		30000 00				7.00%	189.62			168.67	369,62	336.29	0.00	33629	-336.29	-334,00	556 29	
0			29533.33		30002.02	29666.67	T.00%	168,69			169.67	168.68	±35.35	0.00	885.35	-335.35	-332.89	835,35	
11	13		29568-57		29834.41		7 130%	167.74			\$65.57	167.74	334.41	0.00	534.41	-554 A1	-528.50	154 43	
11	4.5		29500.00		29666,80		7.00%	166.80			165.67	156 80	\$33.46	0.00	533.40	-533.46	-325.63	333.4E	
13	3		28333.38 29165.57		29499.19 29331.58		7.00%	165.85			166.67	165.85	332.52	0.00	332.52	-882.52 881.58	-822.78	882.52 351.58	
IS	7		29000.00		29195 36		8 29%	195.36			166.67	195.30	362.02	000	551.58	-562.02	-547 27	552.02	
16	8		18833.33		29027 57		8.39%	194.23			165.57	194.29	362.02	0.00	860.90	-850.90	-344 14	360.02	
17			28655.57		28859 78		0.30%	293.33			165.67	198 11	159.78	0.00	550.78	-559.78	341.04	359 78	
18	50		28500.00		28091.99		8.39%	191.99			155 67	191 99	358.65	0.00	058.65	-038 65	-537.95	358.65	
19	11		28333.33		28524.20		8.99%	190.86			166.67	190.86	397.55	0.00	857.58	857.53	534.90	357.58	
20	11		28165 57			38000.00	8.395	189.74			165.67	189.74	356.41	10.0	556 41	556.41	-531.87	.356 41	
	Sums	Carlin					_		dances	200	-		1100		-	-	TRANT	1000	
	Year I.	3000006						1158.90	600.00	0.00	2000.00	1158.90	4158.90	600 00	4758.90	35341 18	25400.27	4758.90	
V-04	Year 2	0.00						2189.33	0.00	0.00	2000 00	2189 55	4189 33	0.00	4182.55	-4189.55	-3754 75	4189.35	
	E 169Y	0.00						2027.63	0.00	0.00	2000.00	1865.98	4027.65	0.00	3865.96	-4017 65	-3004.83	4037.65	
	Year 5	0.00						1865.98	0.00	0.00	2000.00	1704.31	3704.11	0.00	5704.51	-5704 31	-3680.55	5704-51	
	Year 5	000						1542.63	0.00	0.00	2000.00	1542.63	3342.63	000	3542 65	-5542.83	-2587.10	0542.63	
-	Year 7	0.00						1380.96	0.00	0.00	2000.00	1380.95	33942.00	0.00	3380.96	3380.96	-2121.06	3380.96	
	Year B	0.00						1219.29	0.00	0.00	2000.00	1219.29	3218.2%	0.00	3219.29	-5219.28	-1880 89	5316.29	
	Year 9	8.00						1037 61	0.00	0.00	2000.00	1057.61	3087.61	8.00	3057.62	-9057.67	-1653 47	0097.62	
	Year 10	0.00						895.94	0.00	0.00	2000.00	895.94	2895.94	0.00	2895.94	1895 94	-1467.08	1895.94	
	Year 11	0.00						/34.17	0.00	0.00	2000.00	754.22	2734.27	0.00	2754 27	-2734.27	1289 84	2754.27	
	Year 12	00.0						\$72,59	0.00	0.00	2000.00	572.59	2572.59	00.0	1572.60	-2572.60	-1130 05	2572.00	
	Year 13	0.00						410.92	0.00	0.00	2000.00	410.92	2410.92	0.00	2410.92	-2410.92	986 15	1410.92	
	Year 14	0.00						249.25	0.00	0.00	2000 00	249.25	2249.25	0.00	1249.24	2249.24	850.71	2349.24	
Off	Yeat 15	0.00						87.57	0.00	0.00	2000.00	87.5T	2087.57	0.00	2087.57	-2087.57	-740.61	2087.57	
	Total	30000.00						18097.31	600.00	0.80	30000.00	18097.11	48097.71	600.00	48697 21	18697.21	-1928 75	48697.21	

Copy the payments and the illustrative APR of the illustrative scenario to another sheet as they will be used later.

15			-											Illustrative s	enario of d	ange in the h	orrowing rate		
	Pittal trailer	ce in the las	teriod.	0.00													entered above i	(the extern	and the second
		the first reput				Retaicu	inte										wn in the last co		
	Duration of	2010 2010	aldaula.	180	MONTHS	- Metalica	TRUE							table and the A					
1		alle series			- and the														
	Brisself and	ue of the cas	i time.	2.00															
		centage Rate	the second se	8.7%	TRAAATIC.	Recalcu	inter a												
2	a come i dei	centrage note	de certar p	2.11	1	HELAICU	nece												
	the local of	the credit.		18697 21															
		nt of credit		3000000															
2	Tutisl emou	TT DIRVECTION		48697.23															
		_				-								_			- 4		_
5		-	-	1949	Wide-	_	Internet of	ncipile.	Oher	coati	-		Paymenta			Call	krai	Illustrative s	scenario
e)				The second second	a-mail	1					Repe	mint of the co	ede	(•	
	Field	Dawdowne	bola:	Ovolanding	Outstanding of coopical place	The	Borowing	Reneal	NAX TRANSAC	Financied	PULL			Gampton	Tina	Volume of starting		Contraction of the local	and the
			1004	tonly capital	(meserce	C. C. C.	IMP(%)	charger.	The Internation	and set	Capital	Anness	1444	Insued	1000	2 million	THE OWNER OF THE OWNER OF	triede	a with balance
7				Internet 1	-													- Aprendia	
8	0	300000.00	-			30006.00			600.00					600.00	600.00	29400.00	25400.00		-
9	1		50006.00	30000BE	30169.62	29833.53	7.00%	149.62			165.57	169 62	556.29	0.00	356.29	355.29	555.97		
ŋ)	2		29833.33	29835.33	30003.01	29866.67	7.00%	155.65			165.67	168.68	333.55	0.00	135.35	-335.95	-530.75		
1	- 3		29666.67	29666.67	29834.41	19500.00	7.00%	167.74			166.67	167.74	334.41	0.00	934.41	-334.41	-327.53		
2			29500.00	29500.00	29668.80	29333.33	7.00%	156.80			166.67	155-80	333.46	0:00	333.46	333.46	814.84		
2	-5		29333.35	29335.38	79499.19	19105/57	7.00%	145-85			108-67	165.85	332.52	0.00	157 17	-032.52	-521.19		
4	6		29166.67	29166.67	29331.58	19000.00	7.00%	164.91			166.67	164.91	331.58	0.00	331.58	-351.58	-318.07		
3	7		29008.00	21000.00	29195.56	28833.33	8.39%	195.36			165.67	195.3fi	362.02	0.00	362.02	362.02	344.87		
1	- 8		28833.33			28656 67	8.39%	194.73			166.67	194 25	360.90	0.00	\$80.90	-560.90	-541.42		
7	9		28666.67				8.39%	193.11			166.67	193.11	359.78	0.00	353.78	+359.78	-538.01		
8	18		28500.00				8.33%	195.99			166.67	191.99	358.55	8.00	338 65	358.65	654.62		
분	11		28153.55			28106.67	8.39%	190.88			186.67	190.88	257.53	0.00	357.58	-157,55	-551 27		
0	12		28166.67	28166.67	28356.41	18005.00	8.39%	189.74			166.67	189.74	356.41	0.00	356.41	-356.41	327.95		
	Suma	20002.20						-			100000	ALC: N	And And	200	and the second	ALC: NO	-		
-	Year 1	30000.00						2154,90	600.008	0.00		2158.90	4158.90	600.00	4758.90	25241.10	25476.03		
	Year 2 Hear 3	0.00						2189.53	0.00	0.00	2000.00	2189.33	4189.33	0.00	4189.38	-4189.33	3585.98		
	rear 2	0.00						2027.85	0.00	0.00		1865 98	3863.98	00.0	3865.98	-3865.98	-7880.82		
-4.	rear 5	0.00						1704.51	0.00	0.00		1704 31	5704.31	0.00	3704.31	-3704.31	-2539.99		
-	rear 5	0.00						1542.65	6.00	11.00		1542.63	3542.63	0.00	3542 63	1542.65	2235.21		
	Tear T	0.00						1542.85	000	100		1380 98	3580.96	0.00	3380.96	-5380 96	-1967 91		
	Hear B	0.00						1219.29	0.00	0.00	4,000,000	1219.29	3219-29	0.00	3219.29	-5215 25	-1719.84		
	Rair B	0.00						1057.61	6.00	0.00		1057.61	3057.61	5.00	3057 62	-3057 62	-1503.07		
	fear 10	0.00						895.94	0.00	0.00		895.94	2893.94	0.00	2895.94	-1095.94	-1809.95		
	Year 11	0.00						734.27	0.00	0.00		784.27	2734.27	0.00	2734.27	-2784.27	-113810		
÷.	fear 12	0.00						572.50	6.00	0.00		572.59	1572.59	0.00	2572.60	2572.60	-985.33		
	Fear 13	0.00						\$10.92	000	8.00		410 97	3410.97	0.00	2410 92	-2410.92	-649.70		
	Fear 14	0.00						149.25	0.00	0.00		249.25	2249.25	0.00	2249.24	-1145.24	729.45		
16	Reat-15	00.00						87.57	6.00	0.00	2000.00	:87:57	2087.57	0.00	2087.57	-2087.57	-622.91		

Next, obtain the main results and the amortisation table of the credit by changing the borrowing rates from periods 7 to 180 by the normal level of 7% and clicking on the button *Recalculate* next to the cell showing the *Annual Percentage Rate of Charge*.

67 / 88 1 90 1 91 / 92 1 94 1	Amount of t Surition of Present vali Annual Pers Intal cost o	ue of the cas certage Rate f the credit et of credit	yment h flaws	1822 39		Recalcu Administration Recalcu	unit here	e the press	nt salar of t	he sade llow	n la v ois ar rei.			I the bostowing	grate tises to t winutalitarity	he high estimation of the high estimates of	porrowing rate		
00	_	-		Bala		_	Werette	No. of Concession, or	Dhe	osete	_		Paunente	_		Ebu	Paral A	Illustrative	conarios
06	C				10.00	_	THE REAL OF	Contraction of Contraction		0000	Bena	ment of the ca		1	-			inusuauve .	scenarios
107	Frent	Diaedosm	bosal.	Dumenting (only capital)	Outlanding (capitalplus (researc)	the	Scrowing tate (23)	iverest shieger	Not financed	Financed	Саря и атехто акол	States:	Typian.	Contrast Internal	- tank	Value at social second	Name (1967) a	regnert botne ing tare Eredit sustanrel	regres exclusion mais fabres sharees
108	0	30000.00				10000.00			600.000					600.00	600.00	29400.00	29400-00		
35	1		30000.00	30000.00	30169.82	29833.33	7.00%	169.62			166.67	169.62	336.29	0.00	536.29	-386.29	-333.97		
142	12		29835.35	29833.99	50002.02	29666.67	7.00%	168.68			165.67	168.68	335.35	0.00	333.35	335.85	330.71		
11	1		19006.67	29656.67	29834.41	29500.00	7.00%	107.74			166 67	167.74	334.41	0.00	334.41	-334.41	-527.53		
12			19500.00	29500.00	29555.80	29333.33	7.00%	166.80			165.67	166.80	333.46	0.00	333.46	-333,46	-324.34		
16	5		29333.33	29533 33	2949919	20166.67	1,00%	165 BS			166.67	169.85	332.52	0.00	332,52	-332 52	321.19		
14	.8		29166.67	29106.67	29331.58	29000.00	7.00%	164.91			100 67	164.91	\$51.58	0.00	833.58	-331.58	-318.07		
15	7		29000.00	29000 Dtl	29163.97	28833.35	7.00%	163.97			165.67	153.97	330.64	0.00	330.64	-330.64	-314.97		
18			78833.33	78855 35	28996.35	28666.67	7.00%	183.(11			168.67	263.05	329.69	0.00	329.69	-319.69	\$11.00		
17:	. 8		28008.97	28665.67	18828.75	28500.00	7.00%	162,09			165.67	167.09	328.75	0.00	528.75	-528.75	-308.80		
18	10		28500.00	28500.00	1866514	28333.33	7.00%	161.14			165.67	161.14	327,81	0.00	327 B3	-317.B1	305.85		
19	11		78333.93	28555.35	28493.53	28166.67	7.00%	160.20			165.67	360.20	326,87	0.00	326.87	-328,87	-302.88		
105	12		28166.67	28166-67	18323.95	28000.00	T.00%	159.26			165.67	159.20	325.93	0.00	373 95	-375.98	-299:91		
	iums							102174											
	mar 2	30000.00						1973.33	800.00	0.00	5000.00	1973.30	5975.30	600.00	4573.50	25428,70	23599.65		
	fear 2	0.00						1837.00	0.00	0.00	2000.00	1537.00	\$817,00	0.00	3537.00	-5837.60	-9.877.33		
	Har S	0.00						1701 90	0.00	0.00	2000.00	1701.90	3701.90	0.00	3701.90	3701.90	-1997.81		
	tear-4	0.00						1568.20		0.00	2000.00	1566.20	3566.30	0.00	3558.19	-5568.19	-7657.56		
	leaf 5	0.00						1430.50		0.00	2000.00	1436.50	\$430.50	0.00	3430.50	-5430.50	-2352.18		
	rear 6	0.00						1794 80		0.00	2000.00	1194 BD	3294.80	0.00	3294.80	-3294.BD	2078.77		
	mar 7	0.00						1159-10		0.00	2000.00	1159 10	3159.10	0.00	3150.10	-3139.30	-1834.04		
	lear 8	0.00						1023.40		0.00	2000.00	1023.40	3023.40	0.00	3023.40	-3023.40	-1613.13		
	isar-9	0.00						887,70	0.00	0.00	2000.00	887.70	2887.70	0.00	2887.70	-1887.70	-1419 49		
	fear 10	0.00						752.00		0.00	2000.00	752.00	2792.00	0.00	3752.00	-2792.00	-1244.79		
	fear 11	0.00						616.30		0.00	2000-00	616.50	2616.00	0.00	2616,90	-1616,30	-1088.94		
	fear 12	0.00						480.60	0.00	0.00	2000.00	450.60	2480.60	0.00	2480.61	2488 61	950.05		
	mar 18	0.00						344.90	0.00	0.00	2000.00	344.90	7344.90	0.00	2344.93	-2344.91	-878.39		
	feer 14	0.00						109.10		0.00	2000.00	209 20	2205.20	0.00	2205.20	-1209.20	-716.41		
		0.00						73.50	0.00	00.07	2000.00	73.50	2073.50	DO D	2073.50	2073.50	618.74		

Complete the amortisation table and the area of 'Main results' with the results of the illustrative scenario. Specifically, copy to cell R89 the value of the illustrative APR and fill the column with the *Payments if highest borrowing rate* with the data saved before. Finally, extend the formulas of the annual and overall totals to obtain the totals for the column.

13														Illustrative se	enario of ch	nange in the l	orrowing rate		
	Final balan	ice in the lat	nerint	0.00													arrenal stove		and the
84		the first repe	1000			- Received as	(ata 1										own in the last co		
- 1	Duration of	Contraction of the second	Tittelut		MONTHS	Recalcu	400							table and the A				Trans and	
91	our action of	The Themir		_	webarries.													E.F.	ר
	Bearing trail	he of the cas	Service .	0.00														2.2.2	J
		centage Rate			DIMANIC														
1	Auntracia	centage vare	Su cuarte	1,00	TILINA AND	Recalcu	late												
	Total cost a	a the shade		21039.48															
	Totel amou			80000.00															
	Total articlu	ur bekaple		51039.48															
é 30		_	-						_						_				
05		-		Dala		_	Water of the	nit apital	Oter	costs	-		Payments			Carr	Harris .	Illustrative :	scenarios
oe (/	Sugar	1					Repe	men differen	rdit.	1		11 TY		· · ·	
	Tant	Braudowne	222.0	Destanding	Diraranding	-	Bonning	(Interest		main	and a second			Constant of	Time	and the second second	6-5-6	a tagiwa (represe
			investat -	inney capitali	to apiral plum.	Pinal	Late (SC)	-charges	Millionet	Financed	Espiral amortication	Weeters:	Tiest	Molecelle.	THEM	gillet.	Press of asker	training a deal	anthana ant
07		1		Constant of the							anoneasch	-	1					Summed	COOTIN-
8	0	30000.00	-	-		30000.00			600.00					600.00	600.00	29400.00	29400.00	600.00	
gi	1		900000.00	50000.02	30169.62	30000.00	1.00%	169.62			0.00	169.61	169.62	0.00	169 62	159.62	158.65	159.62	
0	1		30000 00	\$0000.00	30169 62	30000 00	7.00%	109.62			in do	189.67	109.67	0.00	169.67	-169.67	-187.64	169 117	
1	3		300000 00	30000.00	90169.62	30000.00	7.00%	169.62			0.00	169.62	169.62	0.00	169.62	-169.61	-166 66	169.62	
2	4		30000.00	90000.00	30169,62	300000.00	7.00%	169.62			0.00	169.62	169.62	0.00	169.63	169.62	185.68	159 62	
3	3		30000.00	900000	\$0169.62	3000000	7.00%	169,62			0.00	169 6.1	109.62	0.00	169.62	-169.62	-19471	159.62	
4	6		30000.00	50000.00	30169.62	30000.00	7.00%	169.62			0.00	1,69,62	169.62	0.00	169.62	-169.62	-163.75	169.62	
5	7		30000.00	50000.00	30169.62	30000.00	7.00%	169.62			0.00	169.61	189.62	0.00	169.62	-169 62	152.79	202.09	
북			30000.00	90000.00	30169 62	30000 00	7.00%	109.07			in do	149.67	109.62	0.00	109.67	-169.67	-161.83	202.06	-
7	-9		30000.00		90169.62		7.00%	169.62			0.00	169.62	169.62	0.00	169.62	-159.61	-160.89	202.09	_
8	10		30000.00		30169,62	30000.00	7.00%	160.62			0.00	169.61	169/62	0.00	169.62	169.62	159.94	202.09	
19	11		30000.00		2019203	3000001	7.00%	169.62			0.00	169.62	109.62	0.00	169.62	-169.83	-159.01	207.09	
Ū.	12		30000.00	30000.00	30169.62	30000.00	7.00%	169.62			0.00	169.61	169.62	0.00	169.62	-169.62	-158.08	202.09	
	Sums							1000			1000	1000				1.00			
	Year 1	30000.00						2033-49	800.00	0.00	0.00	2055.49	2035.49	600.00	2035.44	27564.56	27440.61	2850.28	
	Year 2	0.00						2085.49	0.00	0.00	0.00	2035.49	2035.49	0.00	1035.44	-2035.44	-1826 23	2425.08	-
	Year 3	0.00						2035.49	0.00	0.00	0.00	2035.49	2035.49	0.00	2083.44	2035.44	-1588.10	2425.08	
-	Veer5	0.00						2035.49	0.00	0.00	0.00	2035.49	2035.49	0.00	2035.44	-2035.44	-1478.15	1415-08	
	Veare	0.00						2035 43	0.00	0.00		1942.20	4942.20	0.00	4942.20	-8942.20	18/8.15	5513.95	-
	Year 7	0.00						1738.55	0.00	0.00	3000.00	1738.65	4738.65	0.00	4738.54	4738.64	-2989.51	5071.44	
	Year B	0.00						1535 10	0.00	0.00	3000.00	1535 10	4335.10	0.00	4535.10	-4535 10	-2666.41	4828.93	-
	Year 9	0.00						13331.55	0.00	0.00	3000.00	1331.55	4333.10	0.00	4331.56	4331.56	-1373.44	4585.42	
-	Viter 10	0.00						1128.00	0.00	0.00	3000.00	1133.00	4128.00	0.00	4128 00	4178.00	-2107 58	4545.01	
	Vear 11	0.00						924.45	0.00	0.00		924.45	3924.45	0.00	3924.45	-5924.45		4101.40	
	Vear 12	0.00						726.90	0.00	0.00	3000.00	720.90	3720.90	0.00	3720 90	-3720.90	(1650.91	5858 89	
	Venr 13	0.00						517.85	0.00	0.00	1000.00	517.55	3517.35	0.00	5517 38	-5517.38	-1453.88	2826.38	
	Year 14	0.00						513 81	0.00	0.00	3000.00	518.81	3313.81	0.00	3313.80	-0313.80	-1276.55	3573.87	
1																		And a contraction	
16	Year 15	0.00						110.26	0.00	0.00	3000.00	110.16	3110.36	0.00	8110.25	-3110.25	·I116.62	8131.38	

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product			
MAIN FEATURES OF THE CREDIT PRODUCT	t in the second s		
A) Total amount of the credit	Tick the box for an illustrative scenario if the cred	It is in a foreign currency	
B) Conditions governing drawd owns			
Solool Immediately and inful 💌			
C) Conditions governing repayments (DYN AM IC)			
Proquency of repayments menthy	NOTE: This will determine the length of regular peri	ods shown in the table as: <u>MONTHS</u>	
Amount: Interest plus equal repsyments of capital regularly	E		
Special Payments (*)			
Advance payment* Nof the credt int	-		
Final Paymont* Read amount			
The long that the first particular repayment is different			
D) Duration of the credit agreement			
buration Other gen ended redts 💌	of 12 periods		
COSTS OF THE CREDIT			
A) Borrowing rate			
Lovel Same level for the antihe credit term 💌	Defined as Effective (annual)	Mick the bex for an illustrative scenario if the credit all Credit of Article 17(5) of the NCD: 5-year or more f stand Highest borrowing rate in % (in at least th principariest poried when that highest rate excents	ixed followed by negotiation on new fixed clast 20 years or capitate if lower)
8) Other cost included in the Total Cost of the Credit			
Given as Courts is of the credit int		ate of charge	
	Z No* At conclusion At conclusion		
Cost2 % of the credit limit Cost5 % of the drawdowns in each period	No* No*	N	
Cost4 % of the balance outstanding (aptal + interact) in			
Cost5 % of the balance outstanding (only capital) in each			
Cost6 % of the credit not used at the beginning of each p			
Cost7 % of the final balance in each period	-		
Examples	Obs(*)	Obs (*)	
Shared equity credit			

Main results

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

IV	lain re	suits																	
Ar		e in the last he first repa the credit		0.00	MONTHS	Recalcu	late							If the borrowin opportunity, th	ng rate rises t ne instalment	o the highest	oorrowing rate level entered at shown in the la :		
			. n	0.00														11.5%	
		e of the casl entage Rate			DYNAMIC														
Ar	inual Perce	entage Rate	of Charge	11.2%	DYNAIVIIC	Recalcu	late												
То	tal cost of	the credit		1702.56															
	tal amoun			30000.00															
То	tal amoun	t payable		31702.56															
				Bala	ince		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
				Outstanding	Outstanding						Repay	ment of the cr	edit					highest	highest
	Period	Drawdowns	Initial	(only	(capital plus	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing	exchange rate
				capital)	interest)		1ate (70)	citalges			amortisation	Interest	Total	manceu		each period		rate (credit currency)	(domestic currency)
	0	30000.00				30000.00			600.00					600.00	600.00	29400.00	29400.00	600.00	currency
	1		30000.00	30000.00	30169.62	27500.00	7.00%	169.62			2500.00	169.62	2669.62	0.00	2669.62	-2669.62	-2646.18	2669.62	
	2		27500.00	27500.00	27655.49	25000.00	7.00%	155.49			2500.00	155.49	2655.49	0.00	2655.49	-2655.49	-2609.06	2655.49	
	3		25000.00	25000.00	25141.35	22500.00	7.00%	141.35			2500.00	141.35	2641.35	0.00	2641.35	-2641.35	-2572.37	2641.35	
	4		22500.00	22500.00	22627.22	20000.00	7.00%	127.22			2500.00	127.22	2627.22	0.00	2627.22	-2627.22	-2536.14	2627.22	
	5		20000.00			17500.00	7.00%	113.08			2500.00	113.08	2613.08	0.00	2613.08	-2613.08	-2500.34	2613.08	
	6		17500.00			15000.00	7.00%	98.95			2500.00	98.95	2598.95	0.00	2598.95	-2598.95	-2464.99	2598.95	
	7		15000.00			12500.00	7.00%	84.81			2500.00	84.81	2584.81	0.00	2584.81	-2584.81	-2430.05	2601.05	
	8		12500.00			10000.00	7.00%	70.68			2500.00		2570.68	0.00	2570.68	-2570.68	-2395.54	2584.20	
	9		10000.00			7500.00 5000.00	7.00%	56.54 42.41			2500.00 2500.00		2556.54 2542.41	0.00	2556.54 2542.41	-2556.54	-2361.44	2567.36	
	10 11		500.00	500.00		2500.00	7.00%	42.41 28.27			2500.00	42.41 28.27	2542.41	0.00	2542.41 2528.27	-2542.41	-2327.77	2550.52 2533.68	
	11		2500.00			2300.00	7.00%	14.14			2500.00	14.14	2528.27	0.00	2528.27	-2528.27	-2294.49	2516.84	
	12		2500.00	2500.00	2014.14	0.00	7.0076	14.14			2500.00	14,14	2314.14	0.00	2314.14	2014.14	2201.03	2010.04	
Su	ims																		
Ye	ar 1	30000.00						1102.56	600.00	0.00		1102.56	31102.56	600.00	31702.56	-1702.56		31759.36	
То	otal	30000.00						1102.56	600.00	0.00	30000.00	1102.56	31102.56	600.00	31702.56	-1702.56	0.00	31759.36	

Click on the button *Reset* and then enter the information highlighted in red.

As explained in the note in blue font which appears after selecting *Other* in the *Conditions governing drawdowns*, this choice implies that drawdowns should be entered manually in the amortisation table once the button *Generate* is clicked on.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit I "Tick the box for an illustrative scenario if the credit is in a foreign currency Amount see
B) Conditions governing drawdowns Select Other TE: Fill in the americation table after dicking on the button Generate below.
C) Conditions governing repayments (D YN AMIC)
Proquency of repayments monthly IV NOTE: This will determine the length of regular periods shown in the table as: <u>NONTHS</u>
Amount Interest pike equal repayments of ceptual regularly
Special Payments (*) Advance payment* N of the cred: Init Minal Payment* N of accurt The length of the brief of payment is different
D) Duration of the credit agreement Duration Other gan anded pacts = of 32 periods COSTS OF THE CREDIT
A) Borrowing rate
Level Same level for the active scenario of the credit allows variations in the borrowing rate Percentage 7.000 Percentage 7.0000 Percentage 7.0000 Percentage 7.0000 Percentage 7.0000 Percen
B)Other cost included in the Total Cost of the Credit
Given as Amountor N Financed Date of charge Cost1 % ofthe crudel init V % conclution V Cost2 % ofthe drawdows in each parked V % % conclution Cost3 % ofthe drawdows in each parked V % % conclution Cost4 % ofthe drawdows in each parked V % % Cost5 % ofthe balance outpanding (option parked) Not* V Cost6 % ofthe area to the bagining of expanded Not* V Cost6 % of the area to the bagining of expanded Not* V
E cost / Examples CDs (*) CDs (*)

Main results

Click on the button *Generate* to obtain this incomplete amortisation table

Illustrative scenario of change in the borrowing rate Final balance in the last period 0.00 If the borrowing rate rises to the highest level entered above at the earliest possible Amount of the first repayment opportunity, the instalments would be as shown in the last column but one of Recalculate amortisation table and the APR would be: Duration of the credit MONTHS Present value of the cash flows -600.00 Caution: The APR is not valid because the present value of the cash flows is not zero. Annual Percentage Rate of Charge DYNAMIC Recalculate Total cost of the credit 600.00 Total amount of credit 0.00 Total amount payable 600.00 Balance Interest on capital Other costs Payments Illustrative scenarios Repayment of the credit utstandin Outstanding highest highest Period rawdow Borrowing Interest Initial Financed Total (only (capital plus Final ot financed Capital borrowing exchange rate financed rate (%) charges Interest Total ach perio capital) interest) mortisation rate (credit (domestic curre ncv currency) 0 0.00 600.00 600.00 600.00 -600.00 -600.00 1 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 2 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 3 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 4 0.00 7.00% 0.00 0.00 5 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 6 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 0.00 7 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 8 9 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 10 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 11 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 12 0.00 0.00 0.00 0.00 7.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00

	Main re	esults																	
	Amount of Duration of Present val Annual Per Total cost o	lue of the cash centage Rate of the credit int of credit	yment n flows	29400.00	Caution: The MONTHS	Recalcul	ate		If the borrowin opportunity, th	ng rate rises ne instalmen	to the highest l	porrowing rate evel entered at shown in the la	ove at the earl						
				Bala	nce		Interest on	i capital	Other	costs	Renaw	ment of the cr	Payments			Cash	flows	Illustrative	scenarios
the drawdowns in the	Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing rate (credit currency)	exchange ra (domestic currency)
	(7500.00				7500.00			600.00					600.00	600.00	6900.00	6900.00		
vdowns, as shown.	1	L	7500.00	7500.00	7542.41	7542.41	7.00%	42.41			-42.41	42.41		0.00	0.00				
	2	2	7542.41	7542.41	7585.05	7585.05	7.00%	42.65			-42.65	42.65		0.00	0.00				
		3 7500.00	7585.05 15127.94	15085.05 15127.94	15127.94 15213.47	15127.94 15213.47	7.00%	42.89 85.54			-42.89 -85.54	42.89 85.54		0.00	0.00				
		+	15127.94	15127.94	15213.47	15213.47	7.00%	85.54			-85.54	85.54		0.00	0.00				
	F	5 15000.00	15215.47	30299.49	30386.00	30386.00	7.00%	86.51			-86.51	86.51		0.00	0.00				
	7	7	30386.00	30386.00	30557.81	30557.81	7.00%	171.81			-171.81	171.81		0.00	0.00				
	8	3	30557.81	30557.81	30730.58	30730.58	7.00%	172.78			-172.78	172.78		0.00	0.00	0.00	0.00		
	9	9	30730.58	30730.58	30904.34	30904.34	7.00%	173.76			-173.76	173.76		0.00	0.00	0.00	0.00		
	10)	30904.34	30904.34	31079.08	31079.08	7.00%	174.74			-174.74	174.74		0.00	0.00	0.00	0.00		
	11		31079.08	31079.08	31254.80	31254.80	7.00%	175.73			-175.73	175.73		0.00	0.00				
	12	2	31254.80	31254.80	31431.52	31431.52	7.00%	176.72			-176.72	176.72		0.00	0.00	0.00	0.00		

Then enter the column *Draw*

Main results

Finally, click on the button *Calculate* to obtain the repayments and the APR of the credit.

iviain re	esuits																	
Amount of	ce in the last the first repa f the credit		0.00	MONTHS	Recalcu	late							If the borrowi opportunity, t	ng rate rises t he instalment	o the highest l	shown in the la	e bove at the earli ast column but o 13.9%	
resent val	lue of the casl	h flows	0.00														13.9%	
nnual Per	centage Rate	of Charge	13.1%	DYNAMIC	Recalcu	late												
otal cost c	of the credit		1384.52															
otal amou	int of credit		30000.00															
otal amou	int payable		31384.52															
			Bala	ance		Interest o	n canital	Other	costs			Payments			Cash	flows	Illustrative s	scenarios
						interest o	on capital	Guite		Repay	ment of the cr				cush		inusuauve s	scenarios
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	nignest borrowing rate (credit currency)	nignest exchange r (domest currency
(7500.00				7500.00			600.00					600.00	600.00	6900.00	6900.00		
1	L	7500.00	7500.00	7542.41	6875.00	7.00%	42.41			625.00	42.41	667.41	0.00	667.41	-667.41	-660.62	667.41	
2	2	6875.00	6875.00	6913.87	6250.00	7.00%	38.87			625.00	38.87	663.87	0.00	663.87	-663.87	-650.42	663.87	
3	3 7500.00	6250.00	13750.00	13785.34	13125.00	7.00%	35.34			625.00	35.34	660.34	0.00	660.34	6839.66	6632.90	660.34	
4	1	13125.00	13125.00		11666.67	7.00%	74.21			1458.33	74.21	1532.54	0.00	1532.54	-1532.54		1532.54	
5	5	11666.67	11666.67		10208.33	7.00%	65.97			1458.33	65.97	1524.30	0.00	1524.30	-1524.30	-1448.28	1524.30	
e	5 15000.00	10208.33	25208.33		23750.00	7.00%	57.72			1458.33	57.72	1516.05	0.00	1516.05	13483.95	12681.05	1516.05	
7	7	23750.00	23750.00		19791.67	7.00%	134.29			3958.33	134.29	4092.62	0.00	4092.62	-4092.62		4118.32	
8		19791.67	19791.67		15833.33		111.90			3958.33	111.90	4070.24	0.00	4070.24	-4070.24		4091.66	
9		15833.33	15833.33		11875.00		89.52			3958.33	89.52	4047.86		4047.86	-4047.86		4064.99	
10		11875.00	11875.00		7916.67	7.00%	67.14			3958.33	67.14	4025.48	0.00	4025.48	-4025.48		4038.33	
11		7916.67	7916.67	7961.43	3958.33	7.00%	44.76			3958.33	44.76	4003.10		4003.10	-4003.10		4011.66	
12	<u> </u>	3958.33	3958.33	3980.71	0.00	7.00%	22.38			3958.33	22.38	3980.71	0.00	3980.71	-3980.71	-3520.76	3985.00	

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product			
MAIN FEATURES OF THE CREDIT PRODUCT			
A) Total amount of the credit			
Amount S	Tick the box for an illustrative scenario if the credit is	s in a foreign currency	
B) Conditions governing drawdowns			
Scippi Immediately and Inful 💌			
C) Conditions governing repayments (DYN AMIC)			
Frequency of repayments monthly	▼. NOTE: This will determine the length of regular periods	ahown in the table as: <u>MONTHS</u>	
Amount Interest plus equal repayments of capital regularly	I		
Special Payments (*)			
Advance payment? Wof the credt int	-		
Final Payment* Read amount			
the long that the tool particul of repayment is defined.			
D) Duration of the credit agreement			
buration Other gen ended medta 📧	of 12 periods		
COSTS OF THE CREDIT			
A) Borrowing rate			
Love) Same level for the entire credit term 💌	Defined as Streetive (annual)	Prick the box for an illustrative scenario if the credit allows variations in	
Percentage 7.mm		Credit of Article 17(3) of the MCD: 3-year or more fixed followed by K	
		Barliest period when that highest rate could be charged (1	1, Z, S,)
B) O ther cost included in the Total Cost of the Credit			
Given as		c of charge	
Cost1 % of the credit limit	Z No* At conclusion At conclusion		
Cost2 % of the credit limit	 No* At conclusion 	T	
CostS % of the drawdowns in each period	m No* m		
Cost4 % of the balance outstanding (capital + interest) in			
Cost5 % of the balance outdanding (only capital) in each Cost6 % of the credit not used at the beginning of each pu			
Cost % of the credit not used at the beginning of each pe	ried 💌 Ne* 💌		
Examples	obs(*)	Cbs (*)	
Shared equity credit			

Main results

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

	Main re	esults																	
ן ר		ce in the last the first repa the credit		0.00 12	MONTHS	Recalcu	late							If the borrowir opportunity, th	ng rate rises t ne instalment	o the highest l	borrowing rate evel entered at shown in the la	oove at the earl ist column but o	
า	Procent valu	ue of the cas	h flows	0.00														12.6%	
		centage Rate			DYNAMIC	Recalcul	late												
	, under i ert	ientuge nute	or enarge	11.2/0	-	Necarcu	late												
	Total cost o	f the credit		1702.56															
	Total amou	nt of credit		30000.00															
	Total amou	nt payable		31702.56															
											, , , , , , , , , , , , , , , , , , , ,								
				Bala			Interest o	a an altal	Other				Deven e e te			Crah	flows		
				Bala	ance		interest o	n capitai	Uther	costs	Banau	ment of the cr	Payments			Cash	nows	Illustrative	scenarios
	Period	Dra wdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	nignest borrowing rate (credit currency)	nignest exchange rate (domestic currency)
	0	30000.00				30000.00			600.00					600.00	600.00	29400.00	29400.00	600.00	
	1		30000.00	30000.00	30169.62	27500.00	7.00%	169.62			2500.00	169.62	2669.62	0.00	2669.62	-2669.62	-2646.18	2702.09	
	2		27500.00	27500.00	27655.49	25000.00	7.00%	155.49			2500.00	155.49	2655.49	0.00	2655.49	-2655.49	-2609.06	2685.25	
	3		25000.00	25000.00	25141.35	22500.00	7.00%	141.35			2500.00	141.35	2641.35	0.00	2641.35	-2641.35	-2572.37	2668.41	
	4		22500.00	22500.00		20000.00	7.00%	127.22			2500.00	127.22	2627.22	0.00	2627.22	-2627.22	-2536.14	2651.57	
	5		20000.00	20000.00		17500.00	7.00%	113.08			2500.00	113.08	2613.08	0.00	2613.08	-2613.08	-2500.34	2634.73	
	6		17500.00	17500.00		15000.00	7.00%	98.95			2500.00	98.95	2598.95	0.00	2598.95	-2598.95	-2464.99	2617.89	
	7		15000.00	15000.00		12500.00	7.00%	84.81			2500.00	84.81	2584.81	0.00	2584.81	-2584.81	-2430.05	2601.05	
	8		12500.00	12500.00		10000.00	7.00%	70.68			2500.00	70.68	2570.68	0.00	2570.68	-2570.68	-2395.54	2584.20	
	9		10000.00	10000.00		7500.00	7.00%	56.54			2500.00	56.54	2556.54	0.00	2556.54	-2556.54	-2361.44	2567.36	
	10		7500.00	7500.00		5000.00	7.00%	42.41			2500.00	42.41	2542.41	0.00	2542.41	-2542.41	-2327.77	2550.52	
	11		5000.00	5000.00		2500.00	7.00%	28.27			2500.00	28.27	2528.27	0.00	2528.27	-2528.27	-2294.49	2533.68	
	12		2500.00	2500.00	2514.14	0.00	7.00%	14.14			2500.00	14.14	2514.14	0.00	2514.14	-2514.14	-2261.63	2516.84	

This example requires changing manually the values in the amortisation table.

As a first step, click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product	
MAIN FEATURES OF THE CREDIT PRODUCT	
A) Total amount of the credit	
Amount 200	the credit is in a foreign currency
B) Conditions governing drawd owns	
Scient Immediately and Inful	
C) Conditions governing repayments (D YN AM IC)	
	sgular periods shown in the Lable as: <u>NONTHS</u>
Amount Ditanet plus equal repayments of capital regianly	
Social Payments(*)	
Advance payment* Nof the credt int	
final Paymont" Red arount	
The length of the Text period of regars much to different	
D) Duration of the credit agreement	
Duration Other gen ended gedits of 32 poniods	
COSTS OF THE CREDIT	
A) Borrowing rate	
Lovel Sameland for the enthe credit term 💌 Defined as "Pfective (annual) 💌 🗩	A MIC
Percentage X34	
B)Other cost included in the Total Cost of the Credit	
Given as Amounter N. Financed	Date of charge
	nelatin 💌
Cost2 Nofthecredtint No" R Ato	ncluion 💌
Cost4 Nofthe balance outdanding (aptal+ interest) in each partod 💌 No* 💌	
CostS % of the balance outdanding (only capital) in each period 💌 No* 💌	
Cost5 % of the credit not used at the beginning of each period 💌 No* 💌 Cost7 % of the final balance is each period 💌	
Examples Obs(*)	Obs (*)
Shared equity credit	

Main resu

Click on the buttons *Generate* and then *Calculate* to obtain the preliminary results and amortisation table.

As shown, the simulator has considered a single drawdown of the amount of the credit and equal monthly repayments of capital within the 1-year period.

Main re	esults																	
Amount of	ice in the last p the first repay f the credit		0.00	MONTHS	Recalcul	late												
	lue of the cash rcentage Rate		0.00 11.7%	DYNAMIC	Recalcul	late												
Total amou	of the credit int of credit int payable		88.94 1500.00 1588.94	I.														
Balance					Interest o	n capital	Other	r costs	Renav	ment of the cre	Payments			Cash	flows	Illustrative scenarios		
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing rate (credit currency)	exchange (dome: curren
C	0 1500.00				1500.00			30.00					30.00	30.00	1470.00	1470.00		
1	L	1500.00	1500.00	1509.07	1375.00	7.50%	9.07			125.00	9.07	134.07	0.00	134.07	-134.07	-132.84		
2		1375.00	1375.00		1250.00	7.50%	8.31			125.00	8.31	133.31	0.00	133.31	-133.31	-130.88		
3	3	1250.00				7.50%	7.56			125.00		132.56	0.00	132.56	-132.56			
4		1125.00				7.50%	6.80			125.00		131.80	0.00	131.80	-131.80			
5		1000.00				7.50%	6.04			125.00		131.04	0.00	131.04	-131.04			
e		875.00				7.50%	5.29			125.00		130.29	0.00	130.29	-130.29			
7		750.00				7.50%	4.53			125.00		129.53	0.00	129.53	-129.53			
8		625.00 500.00				7.50% 7.50%	3.78 3.02			125.00 125.00		128.78 128.02	0.00	128.78 128.02	-128.78			
10		375.00			250.00	7.50%	2.27			125.00		128.02	0.00	128.02	-128.02			
11		250.00				7.50%	1.51			125.00		127.27	0.00	127.27	-127.27			
12		125.00					0.76			125.00		125.76	0.00	125.76				
Sums	<u> </u>																	
Year 1	1500.00						58.94	30.00	0.00			1558.94	30.00	1588.94	-88.94			
Total	1500.00						58.94	30.00	0.00	1500.00	58.94	1558.94	30.00	1588.94	-88.94	0.00		

Changes should be done in order to provide full repayment of the amount of credit in period 9, and then a new drawdown of the total amount of credit repaid during the remaining 3 months.

Specifically, enter the new drawdown in the column Drawdowns for month 9, and change the formulas in the column *Total* of the *Repayment* of the credit as shown. The new formulas imply that the payment each month consists of interest plus equal amounts of capital of 1500/9=€166.67 for the first 9 months and 1500/3=€500 for the remaining 3 months.

Note that due to these changes, the area of Main results reports the error that the APR is not valid because the present value of the cash flows is not zero.

	Main re	esults																	
n t	Final baland Amount of f Duration of	the first repa	•	0,00	MONTHS	Recalcul	ate												
n	Present val	ue of the cas	h flows	2,03	Caution: The	APR is not v	alid becaus	e the presen	t value of th	e cash flows	is not zero.								
v	Annual Pero	I Percentage Rate of Charge 11,7% DYNAMIC Recalculate																	
	Total cost o	al cost of the credit 93,46 al amount of credit 3000,00																	
t	Total amou	nt of credit		3000,00															
е	Total amou	nt payable		3093,46															
2																			
				Bala	ince		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
											Rep	ayment of the							
v	Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
n	0	1500,00				1500,00			30,00					30,00	30,00	1470,00	1470,00		
	1		1500,00	1500,00	1509,07	1333,33	7,50%	9,07			166,67	9,0	=1500/9+H109	0,00	175,73	-175,73	-174,12		
d	2		1333,33			1166,67	7,50%	8,06			166,67		=1500/9+H110	0,00	174,73		-171,54		
	3		1166,67		1173,72	1000,00	7,50%	7,05			166,67		=1500/9+H111	0,00	173,72		-168,98		
е	4		1000,00			833,33	7,50%	6,04			166,67		=1500/9+H112	0,00	172,71		-166,46		
-	5		833,33			666,67	7,50%	5,04			166,67		=1500/9+H113	0,00	171,70		-163,97		
t	6		666,67		670,70	500,00	7,50%	4,03			166,67		=1500/9+H114	0,00	170,70		-161,52		
-	7		500,00			333,33	7,50%	3,02			166,67		=1500/9+H115	0,00	169,69		-159,09		
V	8	1500,00	333,33 166,67		335,35 1667,67	166,67 1500,00	7,50%	2,01			166,67 166,67		=1500/9+H116 =1500/9+H117	0,00	168,68 167,67	-168,68 1332,33	-156,69 1226,31		
	10		1500,00			1000,00	7,50%	9,07			500,00		=1500/3+H117 =1500/3+H118	0,00	509.07	-509,07	-464,26		
е	10		1000,00			500,00	7,50%	6,04			500,00		=1500/3+H119	0,00	506,04		-457,27		
	12		500,00			0,00	7,50%	3,02			500,00		=1500/3+H120	0,00	503,02		-450,37		
S					,.									.,					
S	Sums																		
-	Year 1	3000,00						63,47	30,00	0,00	3000,00	63,47		30,00	3093,46		2,03		
/	Total	3000,00						63,47	30,00	0,00	3000,00	63,47	3063,47	30,00	3093,46	-93,46	2,03		

To obtain the correct APR, click on the button *Recalculate* next to the cell showing the *Annual Percentage Rate of Charge*. A new APR of 11.4% is obtained and the error message disappears.

Main re	sults																	
	ce in the last the first repa the credit		0.00	MONTHS	Recalcu	late												
	ue of the cash centage Rate			Caution: The DYNAMIC	e APR is not Recalcu		e the presen	t value of th	e cash flows	s is not zero.								
Total cost o Total amour Total amour	nt of credit		93.46 3000.00 3093.46															
	in payable		Bala			Interest o	in capital	Other	costs			Payments			Cash	flows	Illustrative	scenarios
Period	Drawdowns	Initial		Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the cre	.,	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highes exchange (domes current
0	1500.00				1500.00			30.00					30.00	30.00	1470.00	1470.00		
1		1500.00	1500.00	1509.07	1333.33	7.50%	9.07			166.67	9.07	175.73	0.00	175.73	-175.73	-174.12		
2		1333.33	1333.33	1341.39	1166.67	7.50%	8.06			166.67	8.06	174.73	0.00	174.73	-174.73	-171.54		
3		1166.67	1166.67	1173.72	1000.00	7.50%	7.05			166.67	7.05	173.72	0.00	173.72	-173.72	-168.98		
4		1000.00	1000.00	1006.04	833.33	7.50%	6.04			166.67	6.04	172.71	0.00	172.71	-172.71	-166.46		
5		833.33	833.33		666.67	7.50%	5.04			166.67	5.04	171.70	0.00	171.70				
6		666.67	666.67		500.00	7.50%	4.03			166.67	4.03	170.70	0.00	170.70				
7		500.00	500.00		333.33	7.50%	3.02			166.67	3.02	169.69	0.00	169.69				
8		333.33	333.33		166.67 1500.00	7.50%	2.01			166.67 166.67	2.01	168.68 167.67	0.00	168.68 167.67	-168.68	-156.69 1226.31		
10		1500.00	1500.00		1000.00	7.50%	9.07			500.00	9.07	509.07	0.00	509.07	-509.07	-464.26		
10		1000.00	1000.00		500.00	7.50%	6.04			500.00	6.04	506.04	0.00	506.04	-506.04	-457.27		
12		500.00	500.00		0.00	7.50%	3.02			500.00	3.02	503.02	0.00	503.02	-503.02	-450.37		
Sums																		
Year 1	3000.00						63.47	30.00	0.00		63.47	3063.47	30.00	3093.46				
Total	3000.00						63.47	30.00	0.00	3000.00	63.47	3063.47	30.00	3093.46	-93.46	2.03		

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product

Amount me

Soloci Immediately and Inful

Producing of repayments quarterly

A mount Successive drawdowns and repayment in full each period

C) Conditions governing repayments (DYNAMIC)

•

W of the credt limb

Red amount

•

-

.

B) Conditions governing drawdowns

Special Payments (*)

Linel Reymont*

A) Total amount of the credit

MAIN FEATURES OF THE CREDIT PRODUCT

The long That the first partial of repayment is different D) Duration of the credit agreement Duration Other men ended medits - of 4 periods COSTS OF THE CREDIT A)Borrowing rate DYNAMIC Love) Same level for the entire credit term Defined as Effective (annual) Tick the bex for an illustrative scenario if the credit allows variations in the borrowing rate Percentage B)Other cost included in the Total Cost of the Credit Givenes Amountor % Financed Date of charge No* Other frequency (num. of periods)* -12 hadvance" 🖄 Cost2 Padamount • • Cost5 % of the drawdowns in each period No. L Cost4 % of the balance outdanding (capital + interact) in each period Ŧ No* 🖛 L Cost5 % of the balance outstanding (only capital) in each period . No* 💌 L Costé % of the credit not used at the beginning of each period . Cost7 % of the final balance in each period ÷. Exemples Obs(*) Obs (*) 📙 Shared equity credit

Tick the box for an illustrative scenario if the credit is in a foreign currency.

NOTE: This will determine the length of regular periods shown in the table as: QUARTERS

Note that the explanations in Obs(*) under the *Date of charge* of other costs indicate that 'costs paid in advance are payable at the beginning of the interval assuming that the first payment coincides with the first repayment of the credit'. This is the case of the example and thus, it is the option to choose.

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Note that in the amortisation table intermediate two balances amount to 6000 euros in several periods. This high amount which doubles the amount of credit is due to the definition of these balances. As explained in the instructions of the simulator, these two intermediate balances take into account the drawdowns made during the period but not the repayment of the balance of the previous period.

Main re	sults																	
	e in the last the first repa the credit		0.00 4	QUARTERS	Recalcu	late												
	ue of the cas centage Rate		0.00 5.6%	DYNAMIC	Recalcu	late												
Total cost o Total amou Total amou	nt of credit		160.00 3000.00 3160.00															
			Bala	ince		Interest o	in capital	Other	costs	Bonos	Payments Repayment of the credit				Cash	flows	Illustrative	scenarios •
Period	Dra wdown s	Initial		Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed		Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rat (domestic currency)
0	3000.00				3000.00			60.00					60.00	60.00	2940.00	2940.00		
1	3000.00	3000.00	6000.00	6000.00	3000.00	0.00%	0.00	100.00		3000.00	0.00	3000.00	100.00	3100.00	-100.00	-98.65		
2	3000.00	3000.00	6000.00	6000.00	3000.00	0.00%	0.00			3000.00	0.00	3000.00	0.00	3000.00	0.00			
3	3000.00	3000.00	6000.00	6000.00	3000.00	0.00%	0.00			3000.00	0.00	3000.00	0.00	3000.00	0.00	0.00		
4		3000.00	3000.00	3000.00	0.00	0.00%	0.00			3000.00	0.00	3000.00	0.00	3000.00	-3000.00	-2841.35		
Sums																		
Year 1	12000.00						0.00			12000.00		12000.00	160.00	12160.00				
Total	12000.00						0.00	160.00	0.00	12000.00	0.00	12000.00	160.00	12160.00	-160.00	0.00		

Click on the button *Reset* and then enter the information highlighted in red.

Note that the explanations in Obs(*) under the *Date of charge* of other costs indicate that 'costs paid in advance are payable at the beginning of the interval assuming that the first payment coincides with the first repayment of the credit'. This is coherent with the treatment of the regular costs in this example by virtue of assumption (h)(iii); therefore, payment *in advance* is the option to choose for these costs.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Amount =
B) Conditions governing drawdowns
Solici Immediate) and inful 💌
C) Conditions governing repayments (D YN AM IC)
Frequency of repayments monthly 💌 NOTE: This will determine the length of regular periods shown in the table as: <u>NONTHS</u>
A mount) Diterat pice equal repayments of capital regularly
Special Payments (*)
Advance payment" Not the creat line or
Enal Paymont" Read anount 💌
The long B of the Society and all representing different
D) Duration of the credit agreement
Duration Other gen ended medta of 12 porioda
COSTS OF THE CREDIT
A) Borrowing rate
Lovel Samelanel for the antite credit term 💌 Defined as Sflective (annual) 💌 DYNAMIC
Percentage and
B) Other cost included in the Total Cost of the Credit Given as Amountor N. Financed Date of charge
🗠 Cost 2 Flad amount 🗨 👥 Ke* V Other Frequency (rum. of particle) * V 312 Instrument 💌
Cost3 % of the drawdowns heach period R No*
Cost4 % of the balance subtanding (aptal + Interest) h ash partod 💌 No* 💌
L Costs N of the balance subtanding (only apta) is wash parted 💌 No* 💌
L Cost 8 V of the credit not used at the beginning of exchanged 🗶 10" 💌
Cost7 % of the final balance in each period 💌
Examples Obs (*) Obs (*)
Shared equity credit

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Main results

	ce in the last p the first repa the credit		0.00	MONTHS -	Recalcu	late												
	ue of the cash		0.00			1												
Annual Pero	centage Rate	of Charge	15.1%	DYNAMIC	Recalcu	late												
Fotal cost of	f the credit		225.54															
Total amour	nt of credit		3000.00															
Total amour	nt payable		3225.54															
			Bala	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative scenarios	
Period	Dra wdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	ment of the cr Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing rate (credit currency)	exchange ra (domestic currency)
0	3000.00				3000.00			60.00					60.00	60.00	2940.00	2940.00		
1		3000.00	3000.00	3021.62	2750.00	9.00%	21.62	25.00		250.00	21.62	271.62	25.00	296.62	-296.62	-293.16		
2		2750.00	2750.00	2769.82	2500.00	9.00%	19.82			250.00	19.82	269.82	0.00	269.82	-269.82	-263.57		
3		2500.00	2500.00		2250.00	9.00%	18.02			250.00	18.02	268.02	0.00	268.02	-268.02	-258.76		
4		2250.00	2250.00		2000.00	9.00%	16.22			250.00	16.22	266.22	0.00	266.22	-266.22	-254.02		
5		2000.00	2000.00		1750.00	9.00%	14.41			250.00	14.41	264.41	0.00	264.41	-264.41	-249.36		
6		1750.00	1750.00		1500.00	9.00%	12.61			250.00	12.61	262.61	0.00	262.61	-262.61	-244.77		
7		1500.00	1500.00		1250.00	9.00%	10.81			250.00	10.81	260.81	0.00	260.81	-260.81	-240.26		
8		1250.00	1250.00		1000.00	9.00%	9.01			250.00	9.01	259.01	0.00	259.01	-259.01	-235.82		
9 10		1000.00 750.00	1000.00 750.00		750.00 500.00	9.00% 9.00%	7.21 5.41			250.00 250.00	7.21	257.21 255.41	0.00	257.21 255.41	-257.21 -255.41	-231.45		
10		500.00	500.00		250.00	9.00%	3.60			250.00	3.60	255.41	0.00	255.41	-255.41			
12		250.00	250.00		0.00	9.00%	1.80			250.00	1.80	251.80	0.00	253.00	-251.80	-218.75		
Sums																		
/ear 1	3000.00						140.54	85.00	0.00	3000.00	140.54	3140.54	85.00	3225.54	-225.54	0.00		
Total	3000.00						140.54	85.00	0.00	3000.00	140.54	3140.54	85.00	3225.54	-225.54	0.00		

Click on the button *Reset* and then enter the information highlighted in red.

Note that the explanations in Obs(*) under the *Date of charge* of other costs indicate that 'costs paid in advance are payable at the beginning of the interval assuming that the first payment coincides with the first repayment of the credit'. This is coherent with the treatment of the regular costs in this example by virtue of assumption (h)(iii); therefore, payment *in advance* is the option to choose for these costs.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Amount 22
B) Con ditions governing drawdowns
Solice: Immediately and Inful 💌
C) Conditions governing repayments (D YN AM IC)
Frequency of repayments monthly NOTE: This will determine the length of regular periods shown in the table as: NONTHS
Amount) Intered plus equal repair regianly
Special Payments (*)
Advance payment" Not the credit line internet line
Efinal Paymont* Read amount 💌
_ The long T of the help proved of representation in the terms
D) Duration of the credit agreement
Duration Other gen ended resits - of 12 periods
COSTS OF THE CREDIT
A) Borrowing rate
Level Same level for an illustrative scenario if the credit allows variations in the borrowing rate
Level Same lavel for the entite credit allows variations in the borrowing rate
Percentage and
8) Other cost included in the Total Cost of the Credit Given as Amounter Ni Financed Date of charge
Provid Notification Provide Pr
Cost2 Fixedamount Salar Sa
Cost3 No of the drawdowne in each particid No. No
Cost4 % of the balance outstanding (appla) + Interest() in each particip
L Cost5 Nofthebalancecutanding (only capital) headh period 💌 No" 💌
L Cost6 Northa cradit no bagining of ech parted 💌 Nor 💌
Cost7 % of the final balance in each parted 💌
Examples Obs (*) Obs (*)
Shand equity credit

Main results

Click on the buttons Generate and then Calculate to obtain the main results and the amortisation table.

Iviaiii ie	Junes	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_		
	e in the last		0.00			. 1												
	mount of the first repayment buration of the credit 12 MONTHS			MONTHS	Recalcu	late												
	ue of the cash		0.00			1												
Annual Perc	entage Rate	of Charge	17.0%	DYNAMIC	Recalcu	late												
Fotal cost of			125.27															
Total amour			1500.00															
Total amour	nt payable		1625.27															
			Bala	ance		Interest o	n canital	Other	costs			Payments			Cash	flows	Illustrativo	contrior
								Other	rcosts	Repay	ment of the cr	-					Illustrative scenarios	
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing rate (credit currency)	exchange (domes current
0	1500.00				1500.00			30.00					30.00	30.00	1470.00	1470.00		
1		1500.00	1500.00	1510.81	1375.00	9.00%	10.81	25.00		125.00	10.81	135.81	25.00	160.81	-160.81	-158.72		
2		1375.00		1384.91	1250.00	9.00%	9.91			125.00	9.91	134.91	0.00	134.91	-134.91			
3		1250.00		1259.01	1125.00	9.00%	9.01			125.00	9.01	134.01	0.00	134.01				
4		1125.00		1133.11	1000.00	9.00%	8.11			125.00	8.11	133.11	0.00	133.11				
5		1000.00	1000.00	1007.21	875.00	9.00%	7.21			125.00	7.21	132.21	0.00	132.21				
6		875.00 750.00		881.31 755.41	750.00 625.00	9.00% 9.00%	6.31 5.41			125.00 125.00	6.31 5.41	131.31 130.41	0.00	131.31 130.41				
/ 8		625.00			500.00	9.00%	4.50			125.00	4.50	130.41	0.00	130.41				
° 9		500.00			375.00	9.00%	3.60			125.00	3.60	129.50	0.00	129.50				-
10		375.00			250.00	9.00%	2.70			125.00	2.70	127.70	0.00	127.70				-
11		250.00	250.00		125.00	9.00%	1.80			125.00	1.80	126.80	0.00	126.80				
12		125.00	125.00	125.90	0.00	9.00%	0.90			125.00	0.90	125.90	0.00	125.90	-125.90	-107.61		
Sums																		
Year 1	1500.00						70.27	55.00	0.00	1500.00	70.27	1570.27	55.00	1625.27	-125.27	0.00		
Total	1500.00						70.27	55.00	0.00	1500.00	70.27	1570.27	55.00	1625.27	-125.27	0.00		

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) To tal amount of the credit
Amount
B) Conditions governing drawdowns
Solod Immediately and Inful 💌
C) Conditions governing repayments (D YN AM IC)
Producing of repayments monthly NOTE: This will determine the long th of regular periods shown in the table as: NONTHS
A mount Interest regularly and repayment of capital at the and
Special Payments (*)
Advance payment? Not the crude line 💌
_final Paymont" Read amount 💌
The length of the first period of represent is different
D) Duration of the credit agreement
Duration Overdraft with unincern duration - Assumed: 3 periods
COSTS OF THE CREDIT
A) Borrowing rate
Level Same avail for the anthe credit allows variations in the borrowing rate
Personlage aut
B)Other cost included in the Total Cost of the Credit
Given as Amounter N / Financed Date of charge
Cost1 % of the credit limit 💌 🗶 lice* 💌 At conclusion 📼
🗠 Cost2 Fixed amount 💌 👥 No* 💌 Other/frequency (rum, of periods)* 💌 1 (narrears*
Costs No of the drawdowns in each period 💌 lice 💌
L Cost4 % of the balance outdanding (apta) - inteast) in each partod 💌 10.4 💌
CostS % of the balance outdanding (only capital) is each parted 💌 No" 💌
Cost6 % of the credit not used at the beginning of each period 💌 No* 💌
Examples Obs (*) Obs (*)
Shared equity credit

Click on the buttons Generate and then Calculate to obtain the main results and the amortisation table.

Mair	n re	suits																	
Amoun	Final balance in the last period Amount of the first repayment Duration of the credit			0.00	MONTHS -	Recalcu	late												
	Present value of the cash Annual Percentage Rate o			0.00 19.4%	DYNAMIC	Recalcul	late												
Total ar	moun	the credit t of credit t payable		132.36 3000.00 3132.36															
				Pals	1000		Interest o	n canital	Other	costs			Payments			Cach	flows	111 contractions	
				Bala	ince		Interest o	n capital	Other	costs	Repay	ment of the cr	Payments			Cash	flows	Illustrative	scenarios
Perio	bd	Drawdowns	Initial	Outstanding	outstanding (capital plus interest)	Final	Interest o Borrowing rate (%)	n capital Interest charges	Other Not financed	Financed	Repay Capital amortisation	ment of the cru		Costs not financed	Total	Cash Value at each period	flows Present value	Illustrative highest borrowing rate (credit currency)	scenarios highest exchange rate (domestic currency)
Perio	od O	Drawdowns 3000.00		Outstanding (only	Outstanding (capital plus	Final 3000.00	Borrowing	Interest		Financed	Capital		edit		Total 60.00	Value at	Present value	highest borrowing rate (credit	highest exchange rate (domestic
Perio	0		Initial 3000.00	Outstanding (only capital) 3000.00	Outstanding (capital plus interest) 3021.62	3000.00 3000.00	Borrowing rate (%) 9.00%	Interest charges 21.62	Not financed 60.00 2.50	Financed	Capital amortisation 0.00	Interest 21.62	edit Total 21.62	financed 60.00 2.50	60.00 24.12	Value at each period 2940.00 -24.12	Present value 2940.00 -23.77	highest borrowing rate (credit	highest exchange rate (domestic
Perio	0 1 2		Initial 3000.00 3000.00	Outstanding (only capital) 3000.00 3000.00	Outstanding (capital plus interest) 3021.62 3021.62	3000.00 3000.00 3000.00	Borrowing rate (%) 9.00% 9.00%	Interest charges 21.62 21.62	Not financed 60.00 2.50 2.50	Financed	Capital amortisation 0.00 0.00	Interest 21.62 21.62	edit Total 21.62 21.62	financed 60.00 2.50 2.50	60.00 24.12 24.12	Value at each period 2940.00 -24.12 -24.12	Present value 2940.00 -23.77 -23.42	highest borrowing rate (credit	highest exchange rate (domestic
Perio	0		Initial 3000.00	Outstanding (only capital) 3000.00	Outstanding (capital plus interest) 3021.62	3000.00 3000.00	Borrowing rate (%) 9.00%	Interest charges 21.62	Not financed 60.00 2.50 2.50	Financed	Capital amortisation 0.00	Interest 21.62	edit Total 21.62	financed 60.00 2.50	60.00 24.12	Value at each period 2940.00 -24.12	Present value 2940.00 -23.77 -23.42	highest borrowing rate (credit	highest exchange rate (domestic
Perio	0 1 2		Initial 3000.00 3000.00	Outstanding (only capital) 3000.00 3000.00	Outstanding (capital plus interest) 3021.62 3021.62	3000.00 3000.00 3000.00	Borrowing rate (%) 9.00% 9.00%	Interest charges 21.62 21.62	Not financed 60.00 2.50 2.50	Financed	Capital amortisation 0.00 0.00	Interest 21.62 21.62	edit Total 21.62 21.62	financed 60.00 2.50 2.50	60.00 24.12 24.12	Value at each period 2940.00 -24.12 -24.12	Present value 2940.00 -23.77 -23.42	highest borrowing rate (credit	highest exchange rate (domestic
	0 1 2		Initial 3000.00 3000.00	Outstanding (only capital) 3000.00 3000.00	Outstanding (capital plus interest) 3021.62 3021.62	3000.00 3000.00 3000.00	Borrowing rate (%) 9.00% 9.00%	Interest charges 21.62 21.62	Not financed 60.00 2.50 2.50	Financed	Capital amortisation 0.00 0.00	Interest 21.62 21.62	edit Total 21.62 21.62	financed 60.00 2.50 2.50	60.00 24.12 24.12	Value at each period 2940.00 -24.12 -24.12	Present value 2940.00 -23.77 -23.42 -2892.82 0.00	highest borrowing rate (credit	highest exchange rate (domestic

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit Inflick the box for an illustrative scenario if the credit is in a foreign currency Amount
8) Conditions governing drawd owns
Solid Immediately and Inful 💌
C) Conditions governing repayments (D YN AM IC)
Arroquency of repsymental har-yearly NOTE: This will determine the length of regular periods shown in the table as: <u>3X MONTHS</u> Arround: Interest plus aptailst the and T
Special Payments(*)
Advance payment* Vior the crede limb 📼
Linal Paymont* Read amount 📼
The long is at the lock period of repay much is it forend
D) Du ration of the credit agreement
Dumbon Rud ef 1 periods
COSTS OF THE CREDIT
A) Borrowing rate
Level Same level for the antihe credit allows variations in the borrowing rate
Percentage amin
8) O ther cost included in the Total Cost of the Credit
Given as Amounter % Financed Date of charge
Cost1 % of the credit linit v z No* v Cost2 % of the credit linit v No* v At conclusion Cost3 % of the drawdowna in each particid v No* v
Cost2 % office credit int
Cost4 Stoffte balance outdanding (apta) - inteast) in each parkod 💌 No*
L Cost5 % of the balance cutdanding (only capital) is each parted v Ite* v Cost6 % of the credit not used at the baghining of each parted v Ite* v
Cost6 % of the credit not used at the beginning of each period 💌 No* 💌
Examples Obs(*) Obs(*)
L Shaned equity credit

Click on the buttons Generate and then Calculate to obtain the main results and the amortisation table.

	Main re	sults																	
. /		te in the last the first repa the credit	•	0.00	SIX MONTHS	Recalcu	late												
	Present value of the cash flows Annual Percentage Rate of Charg			0.00 13.5%	DYNAMIC	Recalcu	late												
		f the credit nt of credit nt payable		192.09 3000.00 3192.09															
- E																			
				Bala	ance		Interest o	on capital	Other	costs	Bonou	ment of the cr	Payments			Cash	flows	Illustrative -	scenarios -
	Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed		Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
	0	3000.00				3000.00			60.00					60.00	60.00	2940.00	2940.00		
	1		3000.00	3000.00	3132.09	0.00	9.00%	132.09			3000.00	132.09	3132.09	0.00	3132.09	-3132.09	-2940.00		
	iums																		
1	'ear 1	3000.00						132.09	60.00	0.00	3000.00	132.09	3132.09	60.00	3192.09	-192.09	0.00		
- 1	otal	3000.00						132.09	60.00	0.00	3000.00	132.09	3132.09	60.00	3192.09	-192.09	0.00		

Click on the button *Reset* and then enter the information highlighted in red.

Although there is only a single repayment at the end of the agreement (in 6 months), keep the *Frequency of repayments* as *monthly* as this is the frequency used for charging interest. Coherently, keep the *Duration of the credit agreement* as 6 monthly periods.

Description of the credit product	
MAIN FEATURES OF THE CREDIT PRODUCT	
A) Total amount of the credit	
Tick the box for an illustrative scenario if the credit is in a foreign currency	
Amount The Amount	
8) Conditions governing drawdowns	
Solid Immediately and in full 💌	
C) Conditions governing repayments (D YN AM IC)	
Proquency of repayments months NOTE: This will determine the length of regular periods shown in the table as: MONTHS	
Amount Interest plus applaist the and	
Special Payments (*)	
Advance payment* Nof the cred link 💌	
_final Payment* Rad anout 💌	
_ The long \$1 of the first period of repayment is different	
D) Duration of the credit agreement	
Duradian Pred of pariods	
COSTS OF THE CREDIT	
A) Borrowing rate	
Level Same level for the anthe credit allows variations in the borrowing rate	
Percentage X34	
B)Other cost included in the Total Cost of the Credit	
Civen as Amounter % Financed Date of charge	
Cost1 % of the credit linit Cost2 % of the credit linit Cost2 % of the credit linit Cost3 % of the drawdowns in each period No* No* No*	
Cost3 % of the drawdowns in each particid 💌 No* 💌	
Cost4 % of the balance outdanding (apta) - inteact) in each partod 💌 No* 💌	
Cost3 Si of the balance outdanding (only capital) in each parted 💌 No* 💌	
Cost6 % of the credit not used at the beginning of each period 💌 No* 💌	
Examples Obs(*) Obs(*)	
L Shared equity credit	

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Main results Final balance in the last period 0.00 Amount of the first repayment Recalculate Duration of the credit 6 MONTHS Present value of the cash flows 0.00 Annual Percentage Rate of Charge 12.2% DYNAMIC Recalculate Total cost of the credit 11618.17 200000.00 Total amount of credit Total amount payable 211618.17 Balance Interest on capital Other costs Payments Il ustrative scenario Repayment of the credit Payments if Payments it highest Outstanding Outstanding highest Period Drawdown Borrowing Interest Value at Financed Initial (only (capital plus Final lot financed Capital Total borrowing kchange rat rate (%) charges Interest Total capital) interest) mortisation rate (credit (domestic currencv currency) 0 200000.00 200000.00 4000.00 4000.00 4000.00 196000.00 196000.00 1 200000.00 200000.00 201250.00 201250.00 7.50% 1250.00 -1250.00 1250.00 0.00 0.00 0.00 0.00 0.00 2 201250.00 201250.00 202507.81 202507.81 7.50% 1257.81 -1257.81 1257.81 0.00 0.00 0.00 0.00 0.00 0.00 3 202507.81 202507.81 203773.49 203773.49 7.50% 1265.67 -1265.67 1265.67 0.00 0.00 0.00 0.00 203773.49 203773.49 205047.07 205047.07 1273.58 -1273.58 1273.58 0.00 0.00 0.00 0.00 0.00 4 7.50% 5 205047.07 205047.07 206328.61 206328.61 7.50% 1281.54 -1281.54 1281.54 0.00 0.00 0.00 0.00 0.00 6 206328.61 206328.61 207618.17 0.00 7.50% 1289.55 206328.61 1289.55 207618.17 0.00 207618.17 -207618.17 -196000.00 Sums Year 1 200000.00 7618.17 4000.00 0.00 200000.00 7618.17 207618.17 4000.00 211618.17 -11618.17 0.00 200000.00 7618.17 4000.00 0.00 200000.00 7618.17 207618.17 4000.00 211618.17 -11618.17 0.00 Total

Click on the button *Reset* and then enter the information highlighted in red.

The scheme of retained interest is not foreseen in the simulator. However, it is equivalent to credit with an initial cost given as the amount of retained interest and no other interest charges. The amount of retained interest in this example can be obtained by multiplying the amount of credit by the monthly interest rate by the number of monthly periods (i.e. 200000 x 0.075/12 x 6 = \notin 7500). This amount is entered as a cost of Fixed payable at the amount conclusion of the agreement and the lack of further interest charges is ensured by entering a borrowing rate of 0.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) To tal amount of the credit
Amount
B) Conditions governing drawd owns
Solicit Immediate) and Inful 💌
C) Conditions governing repayments (DYN AM IC)
Frequency of repsyments menthy NOTE: This will determine the length of regular periods shown in the table as: <u>NONTHS</u>
Amount Different regularly and repayment of capital at the end
Special Payments (*)
Advance payment" Not the red int m
final Paymont* Read amount x
The long B of the 1nd period of repayment is different
D) Duration of the credit agreement
Duration Fixed e of Epcricds
COSTS OF THE CREDIT
A) Sorrowing rate
Level Same lavel for the antiba credit allows variations in the borrowing rate Percentage audit
B) Other cost included in the Total Cost of the Credit
Given as Amountar & Financed Date of charge
Cont1 % of the credit lint
Cost2 Field smouth 💌 ym No" 💌 At concluton 💌
Costs w provide match parco
L Cosl4 % of the balance cutatending (aptial + interest) in each parted 💌 No* 💌
Costs & offensione excetanding (priv apta) in each parted 💌 Ne* 💌
CostS Northe credit not used at the beginning of each period 💌 Nor 💌
Examples Obs (*) Obs (*)
Shand equity codit

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Main results Final balance in the last period 0.00 Amount of the first repayment Recalculate Duration of the credit 6 MONTHS Present value of the cash flows 0.00 Annual Percentage Rate of Charge 12.6% DYNAMIC Recalculate Total cost of the credit 11500.00 200000.00 Total amount of credit Total amount payable 211500.00 Balance Interest on capital Other costs Payments Il ustrative scenario Repayment of the credit ayments if Payments it highest utstanding Outstanding highest Period rawdowr Borrowing Interest Value at Financed Initial (only (capital plus Final ot financed Capital Total borrowing kchange rat rate (%) charges Interest Total capital) interest) mortisation rate (credit (domestic currencv currency) 0 200000.00 200000.00 11500.00 11500.00 11500.00 188500.00 188500.00 1 20000.00 20000.00 20000.00 20000.00 0.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 2 20000.00 20000.00 20000.00 20000.00 0.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 3 20000.00 20000.00 20000.00 20000.00 0.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 20000.00 20000.00 20000.00 20000.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 4 0.00% 5 20000.00 20000.00 20000.00 20000.00 0.00% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 200000.00 200000.00 200000.00 6 0.00 0.00% 0.00 200000.00 0.00 200000.00 0.00 200000.00 -200000.00 -188500.00 Sums Year 1 200000.00 0.00 11500.00 0.00 200000.00 0.00 200000.00 11500.00 211500.00 -11500.00 0.00 200000.00 0.00 11500.00 0.00 200000.00 0.00 200000.00 11500.00 211500.00 -11500.00 0.00 Total

Click on the button *Reset* and then enter the information highlighted in red.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit
Amount Amount
8) Con ditions governing drawdowns
Solici Immedately and Inful 💌
C) Conditions governing repayments (D YN AM IC)
Productory of repayments monthly NOTE: This will determine the length of regular periods shown in the table as: <u>NONTHS</u>
Amount Interest regularly and repayment of coptal at the end
Special Payments (*)
Advance payment* Not the crede link 💌
Linal Paymont* Riad amount
The long B of the 1nd period of repayment is different
D) Duration of the credit agreement
Duraibon Bridging kan with uninciwn duraiton 📼 Assumed: 12 periods
COSTS OF THE CREDIT
A) Borrowing rate
Level Same level for the anthe credit allows variations in the borrowing rate Percentage 7.34
8)Other cost included in the Total Cost of the Credit
Given as Amounter N Financed Date of charge
Cost1 % of the credit int Cost2 % of the credit int No* ▼ No* ▼ At carclusion V
Cost1 % of the credit linit Image: Second s
Cost4 No of the balance southanding (aptal = Interest) in each parted 💌 No" 💌
CostS % of the balance outdancing (m) aptial (in each parted) No" x
📙 Cost6 🕏 of the credit not used at the beginning of mich particle 🗮 💌 Not 💌
Cost7 % of the final balance in each particip
Examples Obs (*) Obs (*)
L Shared equity credit

Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

Main results Final balance in the last period 0.00 Amount of the first repayment Recalculate 12 MONTHS Duration of the credit Present value of the cash flows 0.00 Annual Percentage Rate of Charge 10.0% DYNAMIC Recalculate Total cost of the credit 19000.00 Total amount of credit 200000.00 Total amount payable 219000.00 Balance Interest on capital Other costs Payments Illustrative scenario: Repayment of the credit 'avments i Payments i Dutstanding Outstanding highest highest Period Drawdowns Borrowing Interest Value at Initial (only capital plus Final ot finance Financed Capital Total esent val borrowing kchange rat rate (%) charges Interest capital) interest) rate (credit (domestic amortisation urrency currency 0 200000.00 4000.00 4000.00 196000.00 200000.00 4000.00 196000.00 200000.00 200000.00 201250.00 200000.00 7.50% 1250.00 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1240.07 1 20000.00 20000.00 201250.00 200000.00 7.50% 1250.00 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1230.23 2 20000.00 20000.00 201250.00 200000.00 7.50% 1250.00 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1220.46 20000.00 20000.00 201250.00 200000.00 7.50% 1250.00 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1210.77 4 5 20000.00 20000.00 201250.00 200000.00 7.50% 1250.00 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1201.15 6 20000.00 20000.00 201250.00 200000.00 7.50% 1250.00 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1191.61 7 20000.00 20000.00 201250.00 20000.00 7.50% 1250.00 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1182.15 20000.00 20000.00 201250.00 200000.00 7.50% 1250.00 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1172.76 8 9 20000.00 20000.00 201250.00 200000.00 7.50% 1250.00 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1163.45 10 200000.00 200000.00 201250.00 200000.00 7.50% 1250.00 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1154.21 1250.00 11 200000.00 200000.00 201250.00 200000.00 7.50% 0.00 1250.00 1250.00 0.00 1250.00 -1250.00 -1145.04 12 200000.00 200000.00 201250.00 0.00 7.50% 1250.00 200000.00 1250.00 201250.00 0.00 201250.00 -201250.00 -182888.10 Sums 200000.00 15000.00 4000.00 0.00 200000.00 15000.00 215000.00 4000.00 219000.00 -19000.00 0.00 Year 1 Total 200000.00 15000.00 4000.00 0.00 200000.00 15000.00 215000.00 4000.00 219000.00 -19000.00 0.00

Click on the button *Reset* and then enter the information highlighted in red.

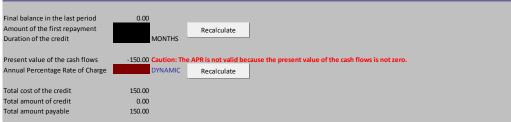
As explained in the note in blue font which appears after selecting *Other* in the *Conditions governing drawdowns*, this choice implies that drawdowns should be entered manually in the amortisation table once the button *Generate* is clicked on.

For the duration of the credit specify the duration as fixed and equal to 120+12=132 periods in order to take into account the year (12 months) elapsed between the conclusion of the agreement and the drawdown of the total amount of credit and the following 120 months of repayment of the credit.

Description of the credit product
MAIN FEATURES OF THE CREDIT PRODUCT
A) To tal amount of the credit
Tick the box for an illustrative seconario if the credit is in a foreign currency
Amouni see
B) Con ditions governing drawdowns
Select Other NOTE: Fill in the amortization table after dicking on the button Generate below.
C) Conditions governing repayments (D YN AM IC)
Frequency of repsymental monthly 🔹 NOTE: This will determine the length of regular periods shown in the table as: <u>NONTHS</u>
Amount Equal Instalments (to be calculated)
Special Payments(*)
Advance payment* Nof the crede line 💌
Kinal Paymont* Russ amount 💌
the long T of the lond period of repayment is different
D) Duration of the credit agreement
Duration Fixed a of III poriods
COSTS OF THE CREDIT
A) Borrowing rate
Level Same level for the anthe credit allow a variations in the Borrowing rate
Percentage 7.5ml
B) Other cost in duded in the Total Cost of the Credit Given as Amountor N Financed Date of charge
Cost1 % of the cred link 💌 💷 No" 💌 At conclusion 💌
Cost5 K of the drawdowns in each particid 💌 16" =
Cost4 % of the balance outdancing (apta) = Interact) in each parked v No* v No* v
L CostS N of the balance outdanding (only capital) in each pariod 💌 No* 💌 L CostS N of the credit not used at the baginning of exchanged 💌 No* 💌
Examples Obs(*) Obs(*)
L Shand equity credit

Main results

Click on the button Generate to obtain this incomplete amortisation table.



			Bala	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrativ	e scenarios
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Repay Capital amortisation	ment of the c	redit Total	Costs not financed	Total	Value at each period	Present value	Payments if highest borrowing rate (credit currency)	Payments if highest exchange rate (domestic currency)
()				0.00			150.00					150.00	150.00	-150.00	-150.00		
1	L	0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00		0.00	0.00	0.00	0.00		
2	2	0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00		0.00	0.00	0.00	0.00		
3	3	0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00		0.00	0.00	0.00	0.00		
4	1	0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00		0.00	0.00	0.00	0.00		
5		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00		0.00	0.00	0.00			
6		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
7	7	0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00		0.00	0.00	0.00	0.00		
8	3	0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00		0.00	0.00	0.00	0.00		
9		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
10		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
11		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
12		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
13		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
14		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
15		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
16		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
17		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
18		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
19		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
20		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
21		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
22		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
23		0.00			0.00	7.50%	0.00			0.00			0.00	0.00				
24	1	0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00		0.00	0.00	0.00	0.00		

Main results

Total co Total a Total a



Recalculate



ost of the credit	-29400.00	
mount of credit	30000.00	
mount payable	600.00	

Balance Interest on capital Other costs Payments Ilustrative scenario: Repayment of the credit yments Payments utstanding Outstanding highest highest Period rawdowr Interest Borrowing Initial (only (capital plus Final t finance Financed Capital Total orrowing kchange rat rate (%) charges Interest ach perio capital) interest) rate (credit (domestic mortisatio 150.00 150.00 150.00 -150.00 -150.00 0.00 0 0.00 0.00 0.00 0.00 7.50% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.50% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.50% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.50% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.50% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.50% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.50% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.50% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7.50% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 10 0.00 0.00 0.00 0.00 7.50% 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 7 50% 0.00 0.00 0.00 0.00 0.00 0.00 11 0.00 12 30000.00 0.00 30000.00 30000.00 30000.00 7.50% 0.00 450.00 0.00 0.00 450.00 450.00 29550.00 29550.00 30000.00 30000.00 30187.50 30187.50 7.50% 187.50 -187.50 187.50 0.00 0.00 0.00 0.00 13 14 30187.50 30187.50 30376.17 30376.17 7.50% 188.67 -188.67 188.67 0.00 0.00 0.00 0.00 -189.85 189.85 15 30376.17 30376.17 30566.02 30566.02 7.50% 189.85 0.00 0.00 0.00 0.00 16 30566.02 30566.02 30757.06 30757.06 7.50% 191.04 -191.04 191.04 0.00 0.00 0.00 0.00 17 30757.06 30757.06 30949.29 30949.29 192.23 -192.23 192.23 0.00 0.00 0.00 0.00 7.50% 18 30949.29 30949.29 31142.73 31142.73 7.50% 193.43 -193.43 193.43 0.00 0.00 0.00 0.00 19 31142.73 31142.73 31337.37 31337.37 194.64 -194.64 194.64 0.00 0.00 0.00 0.00 7.50% 20 31337.37 31337.37 31533.23 7.50% 195.86 -195.86 195.86 0.00 0.00 0.00 0.00 31533.23 21 31533.23 31533.23 31730.31 31730.31 7.50% 197.08 -197.08 197.08 0.00 0.00 0.00 0.00 31730.31 198.31 22 31730.31 31928.62 31928.62 7.50% 198.31 -198.31 0.00 0.00 0.00 0.00 23 31928.62 31928.62 32128.18 32128.18 7.50% 199.55 -199.55 199.55 0.00 0.00 0.00 0.00 24 32128.18 32128.18 32328.98 32328.98 7.50% 200.80 -200.80 200.80 0.00 0.00 0.00 0.00

Then enter the drawdown and the cost related to it for the 12th in the columns month Drawdowns and Other costs not financed, as shown.

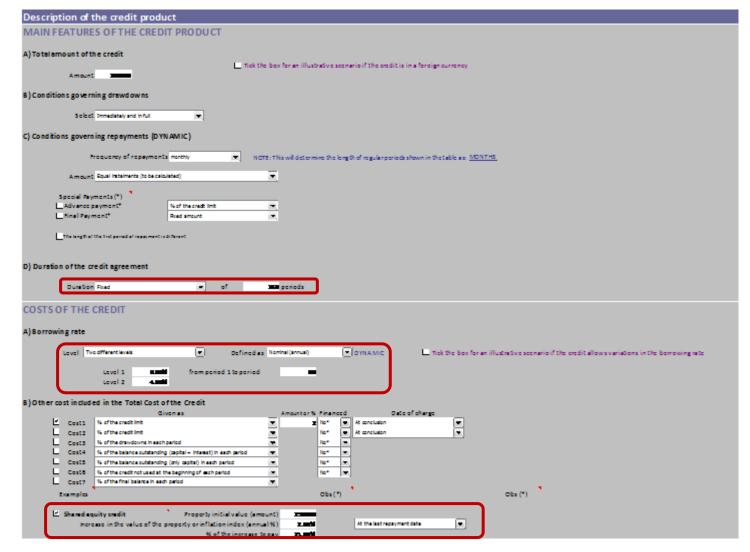
Finally, click on the button *Calculate* to obtain the repayments and the APR of the credit.

N/a:-----

Iviain re	esuits																	
	ce in the last the first repa the credit	•	0.00 0.00 132		Recalcu	late												
	ue of the cas centage Rate		0.00	DYNAMIC	Recalcu	late												
Total cost o Total amou Total amou	nt of credit		13333.20 30000.00 43333.20	I.														
			Bala	ance	1	Interest o	on capital	Other	costs			Payments			Cash	flows		scenarios
										Repay	ment of the c	redit					Payments if	Payments if
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)		Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)

Period	Drawdowns	Initial	(only	(capital plus	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital	Interest	Total	Costs not financed	Total	Value at each period	Present value	borrowing	exchange rate
			capital)	interest)						amortisation	interest	Total					rate (credit currency)	(domestic currency)
0					0.00			150.00					150.00	150.00	-150.00	-150.00		,,
1		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
3		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
4		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
5		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
6		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
7		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
8		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
9		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
10		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00	0.00		
11		0.00	0.00	0.00	0.00	7.50%	0.00			0.00	0.00	0.00	0.00	0.00	0.00			
12	30000.00	0.00	30000.00	30000.00	30000.00	7.50%	0.00	450.00		0.00	0.00	0.00	450.00	450.00	29550.00	27293.06		
13		30000.00	30000.00	30187.50	29831.39	7.50%	187.50			168.61	187.50	356.11	0.00	356.11	-356.11	-326.74		
14		29831.39	29831.39	30017.84	29661.74	7.50%	186.45			169.66	186.45	356.11	0.00	356.11	-356.11	-324.58		
Sums																		
Year 1	30000.00						0.00	600.00	0.00	0.00	0.00	0.00	600.00	600.00	29400.00	27143.06		
Year 2	0.00						2178.98			2094.28	2178.98	4273.26	0.00	4273.32	-4273.32	-3781.67		
Year 3	0.00						2016.40	0.00	0.00	2256.87	2016.40	4273.26	0.00	4273.32	-4273.32	-3492.83		
Year 4	0.00						1841.19	0.00	0.00	2432.07	1841.19	4273.26	0.00	4273.32	-4273.32	-3226.06		
Year 5	0.00						1652.38	0.00	0.00		1652.38	4273.26	0.00	4273.32	-4273.32	-2979.67		
Year 6	0.00						1448.92				1448.92	4273.26	0.00	4273.32	-4273.32	-2752.09		
Year 7	0.00						1229.65				1229.65	4273.26	0.00	4273.32	-4273.32	-2541.89		
Year 8	0.00						993.37				993.37	4273.26	0.00	4273.32	-4273.32	-2347.75		
Year 9	0.00						738.74				738.74	4273.26	0.00	4273.32	-4273.32	-2168.44		
Year 10	0.00						464.35				464.35	4273.26	0.00	4273.32	-4273.32	-2002.82		
Year 11	0.00						168.65				168.65	4273.26	0.00	4273.32	-4273.32	-1849.85		
Total	30000.00						12732.64	600.00	0.00	30000.00	12732.64	42732.64	600.00	43333.20	-13333.20	0.00		

Click on the button *Reset* and then enter the information highlighted in red.



Click on the buttons *Generate* and then *Calculate* to obtain the main results and the amortisation table.

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3. EXCEL SIMULATOR FOR THE CALCULATION OF THE APR

This section provides the instructions of the Excel simulator for the calculation of the APR, tailored to Directives 2008/48/EC ('Consumer Credit Directive, or CCD) and Directive 2014/17/EU ('Mortgage Credit Directive', or MCD). The first version of the simulator was prepared in the framework of the 'Study on the calculation of the Annual Percentage Rate of Charge for consumer credit agreements' in 2010, and further elaborated on the basis of Directive 2008/48/EC, and which provided a set of examples for the calculation of the APR in consumer credits. Subsequent amendment of this Directive by Directive 2011/90/EU, which introduced significant changes in the assumptions for the calculation of the APR, and the publication of the Guidelines on the application of Directive 2008/48/EC as amended by Directive 2011/90/EU, which clarified the application of both Directives, motivated an update of the Study, the examples and the Excel simulator. Finally, the approval of Directives in a separated but coherent way, and the creation of a new set of examples for the calculation of the APR that illustrate the application of this Directive. The version of the simulator presented in this section is the one resulting from such an adaptation.

The simulator shows the amortisation table of a credit agreement according to the characteristics entered by the user and calculates the APR of the credit. The simulator can deal with a large variety of credit agreements both in the consumer and the mortgage area, although not with all type of agreements or features. This is because it is aimed to be a user-friendly tool which accompanies the examples for the calculation of the APR tailored to each Directive, making it possible to replicate the examples, obtain new examples and analyse the effect of different variables and parameters of the credit on the APR; therefore, there might be practices not covered by the simulator. The simulator is not aimed at providing creditors with a tool for their commercial activities as a substitute of their own internal systems. The simulator is not cover adequate tools (among others, IT) to comply with the requirements of the EU legislation in the field of consumer credit.

3.1. SOFTWARE REQUIREMENTS

- Excel XP or higher version. Many popular spreadsheet programs are able of reading Microsoft Excel files. However, Microsoft Excel is required to run the simulator.
- You must Enable Macros when the Excel file is open.

3.2. MAIN FEATURES

The main features of the simulator are:

 Directives compliance: The input area is organised into several sections and ensures that the characteristics of the credit agreement conforms to the relevant Directive (Directive 2008/48/EC - CCD or Directive 2014/17/EU - MCD). Where assumptions for the calculation of the APR may apply, this is indicated by 'balloon' messages in cells with the text Assumptions applicable. It should be highlighted that the user is deemed to follow these indications to obtain the APR. Whenever feasible, the simulator informs as to discrepancies with those assumptions. Internally, the APR calculated by the simulator uses the rules and conventions established by the Directives.

- Consistent layout: The Directive to be applied is chosen by the user, and this have an
 effect on several aspects of the simulator, including some texts, balloon messages,
 inputs, lists, product characteristics or the provision of certain analysis. Despite this
 tailoring to the specific Directive which is relevant for the credit, the general layout of
 the simulator is the same, which contributes to easier handling and a better
 understanding of its features and capabilities.
- *Ample coverage*: Given the large number of characteristics and options available to the user, the simulator is able to cover a wide variety of credit agreements, with few limitations.
- *Simplicity*: The characteristics of the credit are entered by the user through simple menus and by entering numbers in specific cells. Consequently, no special training or financial knowledge is required to use the simulator. Some sections also include *Notes* with relevant explanations and a box with brief instructions is provided. Finally, once the data is entered, the simulator identifies possible errors and inconsistencies.
- *Flexibility*: When the menus and cells are insufficient to describe the credit agreement, the user can, in most cases, enter their own data into the amortisation table. The user can complete, change or replace the formulas in the amortisation table. However, in this case, the user should exercise caution with regards the accuracy of the result.
- Interactivity: Given that the amortisation table includes formulas instead of values, the user can see the relationships between most of the variables. Also, the user can change some characteristics of the credit and see immediately the effects of these changes on the amortisation table without creating a new table. The sections, characteristics and cells with this feature are marked by the word "DYNAMIC".
- *Multilingual usage*: The user can select the desired language from a list which includes all the official languages of the European Union.

3.3. INSTRUCTIONS

The use of the simulator starts by selecting the desired language and the relevant Directive from the two lists situated at the upper-right corner of the sheet of the simulator. Once this choice is made, obtaining the amortisation table and the APR of a credit agreement consists of three stages, shown in Figure 1.

In the **first stage** the user is required to enter the characteristics of the credit product in the area 'Description of the credit product'. In the **second stage**, clicking on the button *Generate* in the area 'Generate amortisation table' generates a preliminary amortisation table from the information provided in the first stage. Some of the fields of the amortisation table can be changed by the user, thus providing additional flexibility in the treatment of characteristics of

the credit agreement. Finally, in the **third stage**, clicking on the button *Calculate* in the area 'Calculate repayments and APR' returns the final amortisation table and the APR of the credit. These three stages are explained in more detail below.

Figure 1. Stages of the simulator

APR Simulator		
This simulator thous the amortization table of a credit agreement. The characteristics are entered by the user and the APR of the credit is calculated	. Selectionguage: IN Mybrid Selecting a of credit: Mybrid web	(MCQ, Density and M(A 1) Ray)
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MAIN FEATURES OF THE CREDIT PRODUCT		
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A) Sorrowing rate		
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Percentage Autom		
5) Other cost included in the Total Cost of the Credit Note:Cost which cannot be de fined using pre-specified parameters shown here should be entered in the amortization table manually. Assumptions applicable		
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Once the preliminary emotivation table has been generate	in yellow.	
Calculate repayments and APR Finally, closer the automoto abain the comparisation The and a tanget. Durage the abate in the final		
Third stage: Press to obtain the final amortisation table and the APR of the credit		
Main results		
Caution: This information might not be valid if changes have been made after dicking on the button "Calculate" and, as a result, the Fin al balance at the many how in if this happens. Use the button if Acalicalists to solve these advations. However, note that the results of the llustrative spin after are on the source of the llustrative spin after are on the source of the sou		h flows are not sero. Cautionary notes
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FIRST STAGE

In the first stage the user is required to enter the characteristics of the credit product in the area 'Description of the credit product'. As shown in Figure 1, at the top, the button 'Reset' allows to initialize the simulator, which automatically resets to the default example of the set of examples for the calculation of the APR of each Directive (example 3 for the CCD and example 1 for the MCD). The user can use this button to obtain such an example or when the simulator is not working properly, as a bad functioning might be due to wrong data introduced previously. Other examples of the sets are available from the list at the right, by selecting the number of the desired example²¹. Once the selection is made, the simulator replaces any information by that corresponding to the example and also provides the amortisation table of the example.

Below the button and the list, the area to enter information by the user is displayed. This area is comprised of two parts: 'Main features of the credit product' and 'Costs of the credit'. The first part includes the total amount of the credit (section A), the conditions governing the drawdowns (section B), the conditions governing repayments (section C; all the data in this section is dynamic), and the duration of the credit agreement (section D). The second part is devoted to costs, and includes the borrowing rate (section A, where the definition of the borrowing rate allows interactivity) and other costs included in the total cost of the credit (section B).

It is advisable to fill these areas and sections in order. In this case, the user would start from the area 'Main features of the credit product' and then:

- Specify the amount of the credit as a number. In the case of the MCD, a box at the right allows selecting the calculation and display of an illustrative scenario if the credit is in a foreign currency, based on the initial level of the exchange rate, its highest depreciation in accordance with the provisions of the MCD and the earliest period when such depreciation could occur.
- Select the conditions governing drawdowns among the options 'Immediately and in full' and 'Other'. In the later case, the user will have to fill manually the column of drawdowns in the amortisation table in the second stage.
- Define the conditions governing repayments. These include:
 - The frequency of repayments, which can be specified as weekly, monthly, quarterly, half-yearly or yearly. Note that this frequency determines the length of the periods shown in the amortisation table.

²¹ The simulator includes all the examples for the calculation of the APR provided for both Directives. These examples illustrate the use of the assumptions and some particulars of use of the simulator. For step-by-step explanations on how to obtain the solutions of these examples using the simulator see the section 'Credit information and amortisation tables'.

- \circ The amount of the repayments. This amount refers to the amount devoted to interest charges and capital amortisation. The options are²²:
 - Equal instalments (to be calculated).
 - Increasing or decreasing instalments.
 - % of outstanding balance (capital + interest).
 - Interest plus a % of outstanding balance (only capital).
 - Constant amount known in advance.
 - Interest plus constant amount known in advance.
 - Interest regularly and repayment of capital at the end.
 - Interest plus capital at the end.
 - Interest plus equal repayments of capital regularly.
 - Successive drawdowns and repayment in full each period.
 - Interest-only credit²³.
- Special payments, that is, payments which are different from the regular payments specified before. These include:
 - An advance payment, which is a sum payable when the agreement is signed. Note that this payment is not a part of the financing operation and hence will be deducted from the amount of credit specified above to obtain the amount of credit shown in the area 'Main results' and the amortisation table. This type of payment has been included in the simulator for completeness.
 - A final payment, which is a sum payable at the last period and in substitution of any regular repayment. Note that a final payment is not allowed under certain schemes of repayment (e.g. when the capital is repaid only in full or in equal payments).
- There is also the option to specify a first payment period of a length different to that of the regular payment periods. To this end, the user should tick the box 'The length of the first period of repayment is different' and specify that first payment period as a number of regular periods in combination with a number of days. An auxiliary period

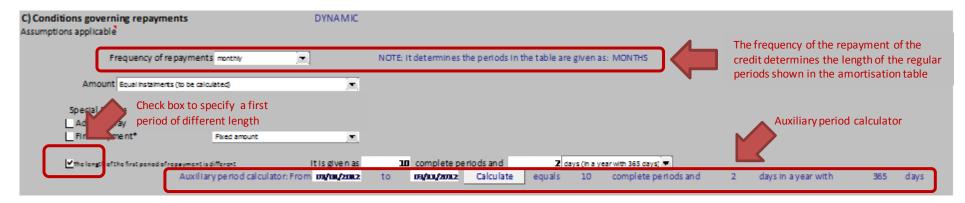
²² The examples for the calculation of the APR cover all these schemes of repayment.

²³ When this scheme is selected, the user is warned to change to a scheme of repayments where the capital is repaid at the end of the credit term because although in interest-only credits the capital is still owed at that time, the calculation of the APR requires such repayment.

calculator allows the user to obtain these numbers from calendar days²⁴. For example, using regular periods of one month, Figure 2 shows that the period from January 1 2012 to November 3 2012 is comprised of 10 months and 2 days in a year with 365 days. These numbers can be entered by the user in the previous row to define the length of the first period of repayment; the following periods would be of regular length.

²⁴ The measurement of time intervals follows the rules provided in the Guidelines on the Application of Directive 2008/48/EC in the case of the CCD and remark (c) of Annex I of the Directive 2014/17/EU in the case of the MCD.

Figure 2. Specifying a first payment period of different length



Specify the duration of the credit agreement. This duration can be defined as 'Fixed', in which case the user must enter the number of periods until full repayment, or is entered automatically by the simulator in the other cases, which corresponds to credits whose duration is specifically regulated by assumptions of the Directives²⁵. For example, the choice of an 'Open-end credit other than overdraft' for the CCD (or Other open ended credits' for the MCD) implies that the duration is assumed to be 12 periods (or 12 periods or 240 periods under the MCD). This derives from assumption (e) of Directive 2011/30/EU for the CCD (or assumption (k) for the MCD). These assumptions also forces monthly repayments and are compatible only with two schemes of repayments: 'Interest plus equal repayments of capital regularly' and 'Successive drawdowns and repayments in full each period'. The choice of any other frequency or other scheme of repayments will lead to an error message. On the other hand, when an 'Overdraft with unknown duration' is chosen for any Directive, the simulator assumes that the duration is 3 months. This derives from assumption (d) of the CCD and assumption (i) of the MCD. These assumptions also imply that the entire capital should be repaid at the end of the agreement, for which reason this choice is compatible with two schemes of repayments only: 'Interest regularly and repayment of capital at the end' and 'Interest plus capital at the end'. The choice of frequencies of repayment not coherent with the assumed duration of 3 months (e.g. half-yearly or yearly) or other scheme of repayments will lead to an error message. Finally, when the duration is defined as 'Fixed', the user must enter the number of periods until full repayment of the credit (e.g., for a credit for a period of 1 year and monthly repayments, the number of periods is 12). This duration will be respected by the simulator, except for those credits whose repayments are given as a percentage of the balance outstanding or as a constant amount known in advance. This is because for these credits, the real duration is given implicitly by the drawdowns, costs and repayments (e.g., if a credit for a total amount of €1000 should be repaid in monthly repayments of €500 plus interest charges, the duration will be 2 months necessarily, as this is the period until full repayment). For these credits, the user should enter, as duration of the credit agreement, an estimation of the real duration. This estimated duration will determine the number of periods to display in the preliminary amortisation table in the second stage and will be replaced by the real duration in the third stage, once the simulator obtains the final amortisation table. If the user plans to make manual changes in the preliminary amortisation table in the second stage, the estimated duration should be large enough to ensure that the table will not be extended by the simulator to further periods in the third stage. This is because if the table needs to be extended in the third stage to ensure full repayment of the credit at the last period, the variables in the new periods are obtained from the characteristics of the credit entered in the first stage only.

²⁵ These other cases include 'Overdraft with unknown duration' and 'Open-end credit other than overdraft' for the CCD, and 'Overdraft with unknown duration', 'Bridging loan with unknown duration' and 'Other open ended credits' for the MCD.

- Specify the level and type of the borrowing rate. If the level is specified as 'Fixed for the entire duration of the credit' the user will be required to enter such a value in terms of an annual percentage; if it is specified as 'Two different levels' the user will be required to enter two percentages and also the last period where the first borrowing rate is applied; the third option 'Other' requires the user to fill manually the column 'Borrowing rate (%)' with the individual rates for each period in the preliminary amortisation table in the second stage. As to the definition of the borrowing rate, it can be expressed as a 'Nominal (annual)' or an 'Effective (annual)' rate. Nominal rates are charged periodically using a proportional conversion method and effective rates are charged periodically using the corresponding compounding frequency (e.g. a nominal rate of 9% implies monthly interest charges of 9/12=0.750% on capital, and an effective rate of 12% implies monthly interest charges of (1+0.12)^(1/12)-1=0.949% on capital). In the case of the MCD, a box at the right allows selecting the calculation and display of an illustrative scenario if the credit allows for variations in the borrowing rate in accordance with the provisions of the MCD, based on a specific level of the borrowing rate and the earliest period when the relevant event (negotiation on a new fixed rate or the reach of that level) could occur.
- Enter other costs included in the total cost of the credit. For each cost, tick the box at the right, then choose the option which describes it among the following options and specify the amount in euros or the percentage:
 - Fixed amount.
 - % of the credit limit.
 - % of the drawdowns in each period.
 - % of the balance outstanding (capital + interest) in each period.
 - % of the balance outstanding (only capital) in each period.
 - % of the credit not used at the beginning of each period.
 - % of the final balance in each period.

Then, indicate whether the cost is financed with the credit or not:

- If a cost is not financed, it is paid when it is charged.
- If a cost is financed, it is not paid when it is charged but, instead, it is added to the amount owed, thus generating interest and being repaid within the repayments of the credit over the duration of the agreement.

Finally, choose the dates of charge, being the options:

- At conclusion, that is, when the agreement is signed (period 0).
- At the last repayment date, that is, when the credit is fully repaid.

- Each time a drawdown takes place.
- Each time a repayment takes place.
- Other frequency (num. of periods). In this case, the number of periods between payments should be specified, and also if the cost is paid in arrears (at the end of each time interval) or in advance (at the beginning of each time interval, assuming that the first payment coincides with the first repayment of the credit)²⁶.

The combination of these features allows a huge variety of costs. For example, a single sum (lump sum) cost of $\notin 60$ payable at the conclusion of the agreement is specified as a cost of *fixed amount* of $\notin 60$, *not financed* and with a date of charge given as *at conclusion*, as seen in Figure 3:

				Figure 3. Single	sum cost				Figure 3. Single sum cost								
			Given as		Amount or %	Financed		Date of charge									
⊵	Cost 1	fixed amount			[] 🖷	No* =	At conclusion										

As an example of a regular cost, administrative charges of $\notin 60$ in total spread over 24 monthly repayments of a credit are specified as costs of *fixed amount* of $60/24=\notin 2.5$, *not financed* and with a date of charge given as *each time a repayment takes place*, as seen in Figure 4:

Figure 4. Regular costs

		Given as	Amount or %	Financed	Date of charge	
⊻ (Cost 1 fixed am	aunt	25	Not	Each time a repayment takes place	

The combination of the preceding single sum cost of ≤ 60 payable at the conclusion of the agreement and a cost of 5% of the total amount of credit which is financed with the credit is entered as shown:

Figure 5.	Combination	of costs
-----------	-------------	----------

		Given as		Amount or %	F	inance	ed -	Date of charge	
Ľ	Cost 1	fixed amount			1	10 ⁴		At conclusion	
Ľ	Cost 2	% of the credition:	•	3	Ŀ	te aff	•	At conclusion	.

And an annual charge of a credit card of $\notin 25$ payable at the beginning of each year is specified a cost of *fixed amount* of $\notin 25$, *not financed*, with a date of charge given as *other frequency* with a number of 12 periods (of one month) and payable *in advance*, as below:

Figure 6. Cost of a credit card

	Given as	Amount or %	Rnance	d Date of	charge		
🗠 Cost 1 fixed amount	Ξ.	8	No*	 Other frequency (num. of 	porioda) * 🖉 🔻	12 in advan	ee*

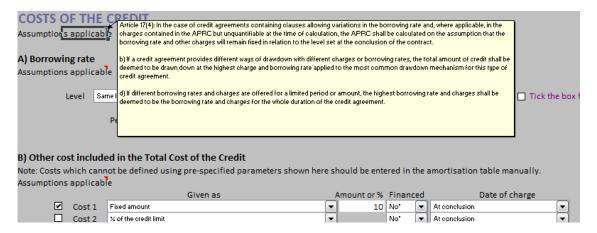
²⁶ If payment periods are expressed in months, and a cost is payable every month, there is no distinction between payment in advance and in arrears.

If the cost cannot be defined using these pre-specified parameters, then it should be entered manually in the preliminary amortisation table in the second stage.

In addition, for the MCD the user can specify the costs of a shared equity credit, that is, a credit where the payments include a contractually set percentage of the value (or the increase of value) of the immovable property, by ticking the box 'Shared equity credit' and entering the required data. It includes the initial value of the property, the assumed increase of price according to assumption (m) of the MCD, and the percentage of the increase to pay. As usual, the assumptions and other clarification notes are displayed in the simulator.

Indeed, throughout the process of introduction of all the previous data, the user should read the explanatory notes and the assumptions applicable displayed in balloon messages, and provide information consistent with them in order to obtain the APR at the third stage. The simulator is able to detect some of these inconsistencies and will inform the user accordingly, but there are cases where this is not feasible.

Figure 7. Balloon messa	age
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Finally, if the data entered is wrong, in the sense that it might imply an expected break down of the simulator, the user is also informed. The inconsistencies and errors are displayed in message boxes and error messages next to the cells affected by the errors or inconsistencies. They should be solved before proceeding.

Figure 8. Error message

MAIN FEATURES OF THE CREDIT PRODUCT
A) Total amount of the credit Note: the total amount of the credit is the ceiling or the total sums available under th Assumptions applicable
Amount -6000 Error: Wrong number

By way of illustration of this stage, let's consider a credit agreement for a total amount of credit of €1000 to be draw down immediately and in full at the conclusion of the agreement. The credit agreement provides for payment of interest every month plus a monthly payment

of 20% of the outstanding balance of capital with a minimum of ≤ 20 . The borrowing rate (nominal rate) is quarterly adjusted according to the 1-year Euribor rate plus a spread of 3%. The 1-year Euribor rate is 4% at the time of calculating the APR, which implies that the APR will be calculated on the basis of a borrowing rate of 3+4=7%. There is a single sum (lump sum) cost of ≤ 10 payable at the conclusion of the agreement.

In our example the agreement is a secured credit that falls within the scope of the MCD and according to the Directive, the results of an illustrative scenario based on the highest value of the borrowing rate in at least the last 20 years should be provided. For this highest rate we consider a value of 9% which might be applied to the credit from the beginning of the fourth month, as the borrowing rate is quarterly adjusted.

Enter the data as shown in Figure 9. The duration of the credit of 30 periods entered is an estimation of the real duration, which will be obtained by the simulator on the basis of the amounts of repayment in the third stage. This estimated duration is considered to be large enough to ensure that the preliminary amortisation table which will be obtained in the second stage will include all the periods of repayment.

MAIN FEATURES OF THE CREDIT PRODUCT	
A) Total amount of the credit Note: the total amount of the credit is the coiling or the total sums Assumptions applicable	eveleble under the predit agreement. It does not indude these amounts devoted to the payment of diarges as these amounts are costs of the predit.
Amount	Tick the box for an illustrative scenario if the credit is in a foreign currency
B) Conditions governing drawdowns	Enter the data
Assumptions applicable	
Scient Immediately and Iniful 💌	
C) Conditions governing repayments (DYN AMIC) Assumptions applicable	
Producing of repayments menthly	NOTE: This will determine the long th of regular periods above in the table as: NONTHS
Amount Interest plus a % of outstanding balance (on) capital	💌 Kof 🏧 with 🏧 as aminimum amount
Soccial Payments (*)	
Advance payment* % of the credt lint	
Final Paymont* Red amount	
the long B of the trad period of repayment is different	
D) Duration of the credit agreement	
	ven as a percentage of the balance outstanding or as a constant amountknown in advance is calculated implicitly by the drawdow ray costs, and repayments.
	to determine the number of periods to show in the preliminary amortisation table. After clicking on the button Calculate this duration will be replaced by
the real duration. Assumptions applicable	
Assumptions application	
Duration Fixed 💌 o	f SE poniods
COSTS OF THE CREDIT	
Assumptions applicable	
A)Borrowing rate Assumptions applicable	
Lovel Same level for the antire credit term	Ocfined as Nonhal(anna) 💽 DYNAMIC 🗵 Tick the bex for an illustrative scenario if the credit allows variations in the borrowing rate
Personing a Xumbi	 Orabits of Acticle 17(8) of the MCD1.9 year or mark fixed fieldword by regrotation on new fixed Mingless berrwing rate in K(in at least the last of board soft last of last
B) O ther cost included in the Total Cost of the Credit	
	rsshown here should be entered in the amortization table manually.
Assumptions applicable Given as	Amountor's Financed Date of charge
Cost1 Fredemount	
Cost2 % of the credit limit	Image: Second
Cost3 % of the drawdowns in each period	x 16* x
Cost4 % of the balance outdanding (capital + interest) in ea	eh parled 💌 Ne* 💌
Cost5 % of the balance outstanding (only capital) in each pe	red 💌 Ne* 📼
Costs % of the credit not used at the beginning of each per	rad v ad v v
Cost7 % of the final balance in each period	
Examples .	Obs (*) Obs (*)
L Shand equity credit	

Figure 9. First stage: An example

SECOND STAGE

In the second stage the user obtains the preliminary amortisation table of the credit agreement specified in the first stage by clicking on the *Generate* button in the area 'Generate amortisation table', as shown in Figure 10.

Figure 10. Second stage: Button Generate



The internal procedures set off by this button first check that the data introduced in the first stage is error free and if errors are detected, the procedure is aborted. Otherwise the preliminary amortisation table is generated.

Figure 11 shows the preliminary amortisation of the example where, as mentioned above, an estimated duration of 30 periods is used. Note that the table is not completed; the column with the *Total* of *Repayment of the credit* is empty, revealing that the repayments have not been calculated yet. Note that the column of the *illustrative scenario* with the *Payments if highest borrowing rate* is empty. Both columns will be calculated in the third stage. Also note that the characteristics of the credit entered in the first stage are reproduced in the table. For example, the amount of credit of €1000 appears as a drawdown in period 0 (i.e. at the conclusion of the agreement), the borrowing rate is always 7%, and the cost of €25 appears as a cost not financed and due on period 0.

			Bala	ance		Interest on capital		Other costs		Payments				Cash flows		Illustrative scenarios		
										Repayment of the credit					<u> </u>	Payments if Payments if		
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
0	1000.00				1000.00			10.00					10.00	10.00	990.00	990.00		
1		1000.00	1000.00	1005.83	1005.83	7.00%	5.83			-5.83	5.83		0.00	0.00	0.00	0.00		
2		1005.83	1005.83	1011.70	1011.70	7.00%	5.87			-5.87	5.87		0.00	0.00	0.00	0.00		
3		1011.70	1011.70	1017.60	1017.60	7.00%	5.90			-5.90	5.90		0.00	0.00	0.00	0.00		
4		1017.60	1017.60	1023.54	1023.54	7.00%	5.94			-5.94	5.94		0.00	0.00	0.00	0.00		
5		1023.54	1023.54	1029.51	1029.51	7.00%	5.97			-5.97	5.97		0.00	0.00	0.00	0.00		
6		1029.51	1029.51	1035.51	1035.51	7.00%	6.01			-6.01	6.01		0.00	0.00	0.00	0.00		
7		1035.51	1035.51	1041.55	1041.55	7.00%	6.04			-6.04	6.04		0.00	0.00	0.00	0.00		
8		1041.55	1041.55	1047.63	1047.63	7.00%	6.08			-6.08	6.08		0.00	0.00	0.00	0.00		
9		1047.63	1047.63	1053.74	1053.74	7.00%	6.11			-6.11	6.11		0.00	0.00	0.00	0.00		
10		1053.74	1053.74	1059.89	1059.89	7.00%	6.15			-6.15	6.15		0.00	0.00	0.00	0.00		
11		1059.89	1059.89	1066.07	1066.07	7.00%	6.18			-6.18	6.18		0.00	0.00	0.00	0.00		
12		1066.07	1066.07	1072.29	1072.29	7.00%	6.22			-6.22	6.22		0.00	0.00	0.00	0.00		
13		1072.29	1072.29	1078.55	1078.55	7.00%	6.26			-6.26	6.26		0.00	0.00	0.00	0.00		
14		1078.55	1078.55	1084.84	1084.84	7.00%	6.29			-6.29	6.29		0.00	0.00	0.00	0.00		
15		1084.84	1084.84	1091.16	1091.16	7.00%	6.33			-6.33	6.33		0.00	0.00	0.00	0.00		
16		1091.16	1091.16	1097.53	1097.53	7.00%	6.37			-6.37	6.37		0.00	0.00	0.00	0.00		
17		1097.53	1097.53	1103.93	1103.93	7.00%	6.40			-6.40	6.40		0.00	0.00	0.00	0.00		
18		1103.93	1103.93	1110.37	1110.37	7.00%	6.44			-6.44	6.44		0.00	0.00	0.00	0.00		
19		1110.37	1110.37	1116.85	1116.85	7.00%	6.48			-6.48	6.48		0.00	0.00	0.00	0.00		
20		1116.85	1116.85	1123.36	1123.36	7.00%	6.51			-6.51	6.51		0.00	0.00	0.00	0.00		
21		1123.36	1123.36	1129.92	1129.92	7.00%	6.55			-6.55	6.55		0.00	0.00	0.00	0.00		
22		1129.92	1129.92	1136.51	1136.51	7.00%	6.59			-6.59	6.59		0.00	0.00	0.00	0.00		
23		1136.51	1136.51	1143.14	1143.14	7.00%	6.63			-6.63	6.63		0.00	0.00	0.00	0.00		
24		1143.14	1143.14		1149.81	7.00%	6.67			-6.67	6.67		0.00	0.00				
25		1149.81	1149.81	1156.51	1156.51	7.00%	6.71			-6.71	6.71		0.00	0.00				
26		1156.51	1156.51	1163.26	1163.26	7.00%	6.75			-6.75	6.75		0.00	0.00				
27		1163.26	1163.26	1170.05	1170.05	7.00%	6.79			-6.79	6.79		0.00	0.00	0.00	0.00		
28		1170.05	1170.05	1176.87	1176.87	7.00%	6.83			-6.83	6.83		0.00	0.00	0.00			
29		1176.87	1176.87	1183.74	1183.74	7.00%	6.87			-6.87	6.87		0.00	0.00	0.00	0.00		
30		1183.74	1183.74	1190.64	1190.64	7.00%	6.91			-6.91	6.91		0.00	0.00	0.00	0.00		

Figure 11.	Second stage	: An example
inguic II.	Decona stage	. / III Champie

Once the preliminary amortisation table has been obtained, the user can overwrite manually the values in the table for all those variables with a title shaded in yellow (drawdowns, borrowing rate and other costs). That is to say, the user can manually add, change or delete drawdowns at specific periods, change the borrowing rate, add new costs or replace or change existing costs. However, the rest of the variables should not be changed manually (i.e. period, balances, interest charges, payments, and cash flows) because the consistency of the table would be at risk and the simulator might provide incorrect information at this stage and at the third stage. In order to obtain the APR, the manual changes introduced by the user should still conform to the assumptions for the calculation of the APR indicated in the area 'Description of the credit product'.

By way of illustration, consider that a second drawdown of €500 is allowed at the end of the first year, and that a new cost of €10 is charged then. The changes needed in the amortisation table are highlighted in red in Figure 12.

			Bala	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrativ	e scenarios
										Repay	ment of the c	edit				1	Payments if	Payments if
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
C	1000.00				1000.00			10.00					10.00	10.00	990.00	990.00		
1		1000.00	1000.00	1005.83	1005.83	7.00%	5.83			-5.83	5.83		0.00	0.00	0.00	0.00		
2		1005.83	1005.83	1011.70	1011.70	7.00%	5.87			-5.87	5.87		0.00	0.00	0.00	0.00		
3		1011.70	1011.70	1017.60	1017.60	7.00%	5.90			-5.90	5.90		0.00	0.00	0.00	0.00		
4		1017.60	1017.60	1023.54	1023.54	7.00%	5.94			-5.94	5.94		0.00	0.00	0.00	0.00		
5		1023.54	1023.54	1029.51	1029.51	7.00%	5.97			-5.97	5.97		0.00	0.00	0.00	0.00		
6		1029.51	1029.51	1035.51	1035.51	7.00%	6.01			-6.01	6.01		0.00	0.00	0.00	0.00		
7		1035.51	1035.51	1041.55	1041.55	7.00%	6.04			-6.04	6.04		0.00	0.00	0.00	0.00		
8		1041.55	1041.55	1047.63	1047.63	7.00%	6.08			-6.08	6.08		0.00	0.00	0.00	0.00		
9		1047.63	1047.63	1053.74	1053.74	7.00%	6.11			-6.11	6.11		0.00	0.00	0.00	0.00		
10		1053.74	1053.74	1059.89	1059.89	7.00%	6.15			-6.15	6.15		0.00	0.00	0.00	0.00		
11		1059.89	1059.89	1066.07	1066.07	7.00%	6.18			-6.18	6.18		0.00	0.00	0.00	0.00		
12	500.00	1066.07	1566.07	1572.29	1572.29	7.00%	6.22	10.00		-6.22	6.22		10.00	10.00	490.00	490.00		
13	_	1572.29	1572.29	1581.46	1581.46	7.00%	9.17	-		-9.17	9.17		0.00	0.00	0.00	0.00		
14		1581.46	1581.46	1590.69	1590.69	7.00%	9.23			-9.23	9.23		0.00	0.00	0.00			
15		1590.69	1590.69	1599.97	1599.97	7.00%	9.28			-9.28	9.28		0.00	0.00	0.00	0.00		
16		1599.97	1599.97	1609.30	1609.30	7.00%	9.33			-9.33	9.33		0.00	0.00	0.00			
17		1609.30	1609.30	1618.69	1618.69	7.00%	9.39			-9.39	9.39		0.00	0.00	0.00	0.00		
18		1618.69	1618.69	1628.13	1628.13	7.00%	9.44			-9.44	9.44		0.00	0.00	0.00	0.00		
19		1628.13	1628.13	1637.63	1637.63	7.00%	9.50			-9.50	9.50		0.00	0.00	0.00	0.00		
20		1637.63	1637.63	1647.18	1647.18	7.00%	9.55			-9.55	9.55		0.00	0.00	0.00	0.00		
21		1647.18	1647.18	1656.79	1656.79	7.00%	9.61			-9.61	9.61		0.00	0.00	0.00	0.00		
22		1656.79	1656.79	1666.45	1666.45	7.00%	9.66			-9.66	9.66		0.00	0.00	0.00	0.00		
23		1666.45	1666.45	1676.17	1676.17	7.00%	9.72			-9.72	9.72		0.00	0.00	0.00	0.00		
24		1676.17	1676.17	1685.95	1685.95	7.00%	9.78			-9.78	9.78		0.00	0.00	0.00	0.00		
25		1685.95	1685.95	1695.79	1695.79	7.00%	9.83			-9.83	9.83		0.00	0.00	0.00	0.00		
26		1695.79	1695.79	1705.68	1705.68	7.00%	9.89			-9.89	9.89		0.00	0.00	0.00			
27		1705.68	1705.68	1715.63	1715.63	7.00%	9.95			-9.95	9.95		0.00	0.00	0.00	0.00		
28		1715.63	1715.63	1725.64	1725.64	7.00%	10.01			-10.01	10.01		0.00	0.00	0.00	0.00		
29		1725.64	1725.64	1735.70	1735.70	7.00%	10.07			-10.07	10.07		0.00	0.00	0.00	0.00		
30		1735.70	1735.70	1745.83	1745.83	7.00%	10.12			-10.12	10.12		0.00	0.00	0.00	0.00		

Figure 12. Second stage: An example with manual changes

As stated above, the new information entered by the user will be considered in the third stage as long as the periods covered in the preliminary amortisation table also appear in the final amortisation table. That is, in credit agreements with repayments given as a percentage of the balance outstanding or as a constant amount known in advance, new periods could be added in the third stage or existing periods could be removed in order to guarantee a full repayment of the credit in the last period. Obviously, the new periods will not include information other than that entered in the first stage, and the periods deleted will be removed together with the values entered by the user in the second stage in respect to these periods. In our example, the duration of 30 periods was considered large enough (longer than the real duration) and hence, we expect that some of these periods will be deleted.

This flexibility of the simulator is beneficial, not only for the user, who can enter specific data that would be difficult to contemplate using lists and menus, but also for internal procedures carried out by the simulator, such as the elaboration of the illustrative scenario required by the MCD for foreign currency loans and credits allowing for variations in the borrowing rate.

THIRD STAGE

In the third stage the internal procedures run by the simulator allow obtaining the final amortisation table of the credit, the APR, and in the case of the MCD the results of the illustrative scenario. These procedures are launched by clicking on the button *Calculate* in the area 'Calculate repayments and APR'.

Figure 13. Third stage: Button Calculate



As in the second stage, a check for errors in the information provided in the first stage is carried out at the beginning. If errors in this information are detected the procedures are aborted. However, the changes in the preliminary amortisation table entered by the user in the second stage are not checked for consistency because of the infinite number of potential variations.

The action following the errors check consists of:

- If the credit is repaid by constant, increasing or decreasing instalments, the duration of the credit entered by the user in the first stage is respected, and the simulator obtains the instalments which pay off the credit in the last period (i.e., the final balance of the credit in the last period is zero). The amortisation table is updated and the amount of the first repayment of the credit is shown in the area 'Main results' as *Amount of the first repayment*.
- For credit agreements with repayment given as a percentage of the balance outstanding or as a constant amount known in advance, the scheme and definition of repayments entered by the user in the first stage are respected, and the simulator increases or decreases the number of periods in order to ensure full repayment of the credit in the last period (i.e., the final balance of the credit in the last period is zero). If it requires reducing the amount of the last repayment (or the previous one if the credit agreement includes a given final payment), the simulator does it automatically. The amortisation table is updated and the duration of the credit is shown in the area 'Main results' as *Duration of the credit*; also, it is copied to the cell with the duration of the credit agreement in the area 'Description of the credit product', in order to facilitate the design of new credit agreements with similar characteristics. Note that for these credits the cell *Amount of the first repayment* is kept empty because this amount is not confirmed nor determined by the simulator.
- For other credit agreements, all the features of the credit entered by the user in the previous stages are respected, including the duration of the credit and, as in the previous case, the cell *Amount of the first repayment* is kept empty.

For all types of credit agreements the simulator calculates the APR and other relevant information of the credit, which is shown in the area 'Main results'. These other pieces of information include the total cost of the credit, the total amount of the credit and the total amount payable by the consumer (defined as the sum of these two last amounts), which are provided below the APR figure. And, at the right, if illustrative scenarios have been required under the MCD, some of their results; the rest are shown in the last two columns of the amortisation table, as they are the payments to be made by the consumer if the scenario occurs. Finally, below the amortisation table and for all types of credit agreements, the simulator provides annual subtotals and an overall total of the relevant amounts of the amortisation table.

Our example was that of a credit agreement with repayments given as a percentage of the balance outstanding. Hence, the simulator determines the number of periods and adapts the amortisation table accordingly. As expected, the final number of periods is lower than 30; specifically it is 24, as shown in Figure 14. Thus, periods 25 to 30 have been deleted, including any information that might have been introduced manually for these periods. However, the additional drawdown and cost entered manually at the end of the first year are kept. Also note that the last repayment determined by the simulator, amounting to ≤ 18.40 , is lower than the minimum payment of ≤ 20 because a lower amount is due.

The area of 'Main results' reveals that the APR of the credit is 11.1%, the total amount of credit is \leq 1500, and the total cost of the credit is \leq 59.67, which gives a total amount payable by the consumer of \leq 1559.67. The final rows with subtotals provide additional information in respect to costs and payments. For example, it can be seen that around two thirds of the capital is amortised during the first year (\leq 1031.28 out of \leq 1500) because the scheme of repayments implies higher payments in the earlier periods, and that interest charges of the credit amount to \leq 39.67 during the two years and other costs amount to \leq 20. Also, it can be confirmed that the total amount payable by the consumer is \leq 1559.67.

As to the results of the illustrative scenario, the area of 'Main result' shows that if the borrowing rate rises to its highest level (9%) at the earliest possible opportunity (the fourth month), the APR would increase to 12.5%. The payments to be made by the consumer in this case would be those shown in the last column but one of amortisation table. Given that these payments are higher than those of the original credit since the fourth month, the total amount that the consumer would have to pay in the illustrative scenario would be also higher, amounting to ≤ 1566.94 . The increases, however, are moderate (1.4% in the APR and ≤ 7.27 in the amount payable) because the increase of 2% in the borrowing rate applies when a significant part of the credit has been paid (in the first 3 months, the capital amortised amounts to ≤ 488).

aution: Thi	s information	n might not	be valid if ch	nanges have l	been made a	after clicking	on the butt	on 'Calculate	and, as a re	sult, the Fina	I balance at t	he last perio	od and/or the	Present va	alue of the ca	sh flows are i	not zero. Caut	cionary no
e shown i	f this happen	s. Use the b	outtons 'Reca	Iculate' to so	lve these sit	uations. How	vever, note	that the resu	ults of the ill	ustrative scen	arios are onl	y provided a	fter clicking	on the butt	on Calculate.			
													Illustrativo s	consists of c	hongo in the	borrowing rat		
nal balanc	e in the last p	period	0.00															
	he first repay		0.00		Recalcu	1										evel entered at shown in the la		
uration of		ment	24	MONTHS	Recalcu	late									APR would be			
and the first of	the create			monthis													12.5%	
resent valu	ue of the cash	flows	0.00															
nnual Pero	entage Rate	of Charge	11.1%	DYNAMIC	Recalcu	late												
otal cost of	the credit		59.67															
otal amour	nt of credit		1500.00															
otal amour	nt payable		1559.67															
			Bala	ince		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenario
			C. Harrison of	Output to						Repay	ment of the cre	edit					Payments if	Paymer
Period	Drawdowns	Initial	Outstanding (only	Outstanding (capital plus	Final	Borrowing	Interest	Not financed	Financed	Capital			Costs not	Total	Value at	Present value	highest borrowing	high exchang
			capital)	interest)		rate (%)	charges			amortisation	Interest	Total	financed		each period		rate (credit	(dome
																	currency)	curren
0	1000.00				1000.00			10.00					10.00	10.00		990.00	10.00	
1		1000.00		1005.83	800.00	7.00%	5.83			200.00	5.83	205.83	0.00	205.83		-204.03	205.83	
2		800.00		804.67	640.00	7.00%	4.67			160.00	4.67	164.67	0.00	164.67		-161.80	164.67	
3		640.00		643.73 514.99	512.00	7.00%	3.73			128.00	3.73	131.73	0.00	131.73		-128.30	131.73	
4		512.00		514.99	409.60	7.00%	2.99			102.40	2.99	105.39 84.31	0.00	105.39 84.31		-101.75	106.24 84.99	
6		327.68		329.59	262.14	7.00%	2.39			65.54	2.39	67.45	0.00	67.45		-80.69	67.99	
7		262.14		263.67	202.14	7.00%	1.51			52.43	1.51	53.96	0.00	53.96		-50.74	54.39	
, 8		202.14		210.94	167.77	7.00%	1.33			41.94	1.33	43.17	0.00	43.17		-40.24	43.52	
9		167.77		168.75	134.22	7.00%	0.98			33.55	0.98	34.53	0.00	34.53		-31.91	34.81	
10		134.22		135.00	107.37	7.00%	0.78			26.84	0.78	27.63	0.00	27.63		-25.31	27.85	
11		107.37		108.00	85.90	7.00%	0.63			21.47	0.63	22.10	0.00	22.10		-20.06	22.28	
12	500.00	85.90	585.90	586.40	468.72	7.00%	0.50	10.00		117.18	0.50	117.68	10.00	127.68	372.32	335.07	127.82	
13		468.72		471.45	374.98	7.00%	2.73			93.74	2.73	96.48	0.00	96.48	-96.48	-86.07	97.26	
14		374.98		377.16	299.98	7.00%	2.19			75.00	2.19	77.18	0.00	77.18		-68.25	77.81	
15		299.98		301.73	239.98	7.00%	1.75			60.00	1.75	61.75	0.00	61.75		-54.13	62.25	
16		239.98		241.38	191.99	7.00%	1.40			48.00	1.40	49.40	0.00	49.40		-42.92	49.80	
17		191.99		193.11	153.59	7.00%	1.12			38.40	1.12	39.52	0.00	39.52		-34.04	39.84	
18		153.59		154.49	122.87	7.00%	0.90			30.72	0.90	31.61	0.00	31.61		-26.99	31.87	
19 20		122.87 98.30		123.59 98.87	98.30 78.30	7.00%	0.72			24.57	0.72	25.29 20.57	0.00	25.29		-21.40	25.50 20.74	
20		98.30		98.87	58.30	7.00%	0.57			20.00	0.57	20.57	0.00	20.57		-17.26	20.74	
21		58.30		58.64	38.30	7.00%	0.40			20.00	0.40	20.46	0.00	20.40		-17.01	20.39	
23		38.30		38.52	18.30	7.00%	0.22			20.00	0.22	20.34	0.00	20.34		-16.52	20.44	
24		18.30		18.40	0.00	7.00%	0.11			18.30	0.11	18.40	0.00	18.40		-14.90	18.43	
ums																		
ear 1 ear 2	1500.00						27.16		0.00	1031.28	27.16	1058.44	20.00	1078.45		416.25	1082.12	
							12.50	0.00	0.00	468.72	12.50	481.22	0.00	481.22	-481.22	-416.25	484.82	

Figure 14. Third stage: An example with manual changes

Once the actions have been carried out, the user still has control over the characteristics of the credit and the amortisation table. That is, the user can still change the dynamic cells in the input area and the variables with a title shaded in yellow in the amortisation table, and so see the effect of these changes on the credit. In the area of 'Main results' the cell *Annual Percentage Rate of Charge* is, besides, a dynamic cell, meaning that the user can change the APR and see immediately the effects of this change on the present value of cash flows. Finally, the repayments of the credit obtained after clicking on the button *Calculate* can also be changed (column Payments/Repayment of the credit/Total; its title is in a blue font).

However, it should be noted that any change made after clicking on the button *Calculate* might mean that the credit is not fully repaid in the last period and/or the present value of cash flows is not zero and hence, neither the amortisation table nor the information shown in the area 'Main results' are valid any longer.

In order to report these situations and address them, in the area of 'Main results', the *Final balance in the last period* and the *Present value of cash flows* are shown and two additional buttons are provided. When the changes made after clicking on the button *Calculate* imply that the credit is not repaid exactly at the last period, an error message in red font appears next to the *Final balance in the last period*, which obviously becomes non zero. To solve this situation, the button *Recalculate* next to the cell with the *Amount of the first repayment* is able to provide a new value of the first repayment which makes the *Final balance in the last period* equal to zero (thus assuring a full repayment of the credit) in credits with constant, increasing or decreasing instalments (the types of credit for which this first repayment is reported). For

other credits the solution should be achieved manually. When the changes make the APR obtained no longer valid, then an error message in red font appears next to the *Present value of cash flows*, which does not become zero. The button *Recalculate* next to the cell with the *Annual Percentage Rate of Charge* allows a new valid APR to be obtained which makes the *Present value of cash flows* equal to zero in any type of credit. In both cases, the number of periods of the credit remains the same. However, it should be noted that the results of the illustrative scenarios will be deleted because they are not longer valid; they are only provided after clicking on the button *Calculate* in the area 'Calculate repayments and APR'.

As an illustration, Figure 15 shows the outcome of increasing the borrowing rate for periods 13 to 24 up to 8%. The final balance in the last period and the present value of the cash flows does not become zero, and the two error messages appear.

e snown										esult, the Fina ustrative scen							not zero. Caut	ionary no
al balan	ce in the last	period	0.02	Caution: The	cradit is no	t repaid in fu	ull because (he final bala	nco in the l	ast period is no			Erro	nr mass	age abo	out repay	ment	
	the first repa		0.02	caution. me	Recalcu	1	in because i		ince in the it	ist period is in				or mess	age abo	ut repay	ment	
ration of	the credit		24	MONTHS														
resent val	ue of the cas	h flows	-1 55	Caution: The	APR is not a	alid because	e the prese	t value of th	e cash flow	is not zero			Error me			00		
	centage Rate			DYNAMIC	Recalcu		e ute presei	it value of th	e cash now.	51511012010.			Error me	essage	about A	РК		
	f the credit nt of credit		61.45 1500.00															
	nt or credit nt payable		1500.00															
			Bala	ince		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrative	scenario
										Repay	ment of the cr						Payments if	Paymen
Period	Drawdowns	Initial	Outstanding (only capital)	Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highe: exchange (domes current
(1000.00				1000.00			10.00					10.00	10.00	990.00	990.00	10.00	
1		1000.00		1005.83	800.00	7.00%	5.83			200.00	5.83	205.83	0.00	205.83	-205.83		205.83	
2		800.00		804.67	640.00	7.00%	4.67			160.00	4.67	164.67	0.00	164.67	-164.67	-161.80	164.67	
		640.00								100.00			0.00					
		E12.00		643.73	512.00	7.00%	3.73			128.00	3.73	131.73	0.00	131.73	-131.73		131.73	
4		512.00	512.00	514.99	409.60	7.00%	2.99			102.40	2.99	105.39	0.00	105.39	-105.39	-101.75	131.73 106.24	
4		409.60	512.00 409.60	514.99 411.99	409.60 327.68	7.00% 7.00%	2.99 2.39			102.40 81.92	2.99 2.39	105.39 84.31	0.00	105.39 84.31	-105.39 -84.31	-101.75 -80.69	131.73 106.24 84.99	
4			512.00 409.60 327.68	514.99	409.60	7.00%	2.99			102.40	2.99	105.39	0.00	105.39	-105.39	-101.75 -80.69 -63.99	131.73 106.24	
5		409.60 327.68	512.00 409.60 327.68 262.14	514.99 411.99 329.59	409.60 327.68 262.14	7.00% 7.00% 7.00%	2.99 2.39 1.91			102.40 81.92 65.54	2.99 2.39 1.91	105.39 84.31 67.45	0.00 0.00 0.00	105.39 84.31 67.45	-105.39 -84.31 -67.45	-101.75 -80.69 -63.99 -50.74	131.73 106.24 84.99 67.99	
6		409.60 327.68 262.14	512.00 409.60 327.68 262.14 209.72	514.99 411.99 329.59 263.67	409.60 327.68 262.14 209.72	7.00% 7.00% 7.00% 7.00%	2.99 2.39 1.91 1.53			102.40 81.92 65.54 52.43	2.99 2.39 1.91 1.53	105.39 84.31 67.45 53.96	0.00 0.00 0.00 0.00	105.39 84.31 67.45 53.96	-105.39 -84.31 -67.45 -53.96	-101.75 -80.69 -63.99 -50.74 -40.24	131.73 106.24 84.99 67.99 54.39	
2 6 7 8 9 9 10		409.60 327.68 262.14 209.72 167.77 134.22	512.00 409.60 327.68 262.14 209.72 167.77 134.22	514.99 411.99 329.59 263.67 210.94 168.75 135.00	409.60 327.68 262.14 209.72 167.77 134.22 107.37	7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00%	2.99 2.39 1.91 1.53 1.22 0.98 0.78			102.40 81.92 65.54 52.43 41.94	2.99 2.39 1.91 1.53 1.22 0.98 0.78	105.39 84.31 67.45 53.96 43.17 34.53 27.63	0.00 0.00 0.00 0.00 0.00 0.00 0.00	105.39 84.31 67.45 53.96 43.17 34.53 27.63	-105.39 -84.31 -67.45 -53.96 -43.17 -34.53 -27.63	-101.75 -80.69 -63.99 -50.74 -40.24 -31.91 -25.31	131.73 106.24 84.99 67.99 54.39 43.52 34.81 27.85	
2 5 7 8 9 10 11		409.60 327.68 262.14 209.72 167.77 134.22 107.37	512.00 409.60 327.68 262.14 209.72 167.77 134.22 107.37	514.99 411.99 329.59 263.67 210.94 168.75 135.00 108.00	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90	7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00%	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63			102.40 81.92 65.54 52.43 41.94 33.55 26.84 21.47	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10	-105.39 -84.31 -67.45 -53.96 -43.17 -34.53 -27.63 -22.10	-101.75 -80.69 -63.99 -50.74 -40.24 -31.91 -25.31 -20.06	131.73 106.24 84.99 67.99 54.39 43.52 34.81 27.85 22.28	
	500.00	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90	512.00 409.60 327.68 262.14 209.72 167.77 134.22 107.37 585.90	514.99 411.99 329.59 263.67 210.94 168.75 135.00 108.00 586.40	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72	7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00%	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50	10.00		102.40 81.92 65.54 52.43 41.94 33.55 26.84 21.47 117.18	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10 117.68	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10 127.68	-105.39 -84.31 -67.45 -53.96 -43.17 -34.53 -27.63 -22.10 372.32	-101.75 -80.69 -63.99 -50.74 -40.24 -31.91 -25.31 -20.06 335.07	131.73 106.24 84.99 67.99 54.39 43.52 34.81 27.85 22.28 127.82	
4 5 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	500.00	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72	512.00 409.60 327.68 262.14 209.72 167.77 134.22 107.37 585.90 468.72	514.99 411.99 329.59 263.67 210.94 168.75 135.00 108.00 586.40 471.84	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98	7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 8.00%	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50 3.12	10.00		102.40 81.92 65.54 52.43 41.94 33.55 26.84 21.47 117.18 93.74	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50 3.12	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10 117.68 96.87	0.00 0.00 0.00 0.00 0.00 0.00 0.00 10.00 0.00	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10 127.68 96.87	-105.39 -84.31 -67.45 -53.96 -43.17 -34.53 -27.63 -22.10 372.32 -96.87	-101.75 -80.69 -63.99 -50.74 -40.24 -31.91 -25.31 -20.06 335.07 -86.42	131.73 106.24 84.99 67.99 54.39 43.52 34.81 27.85 22.28 127.82 22.28 127.82	
4 5 6 7 8 8 9 9 10 11 11 11 11 11 11 11 11 11	500.00	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98	512.00 409.60 327.68 262.14 209.72 167.77 134.22 107.37 585.90 468.72 374.98	514.99 411.99 329.59 263.67 210.94 168.75 135.00 108.00 586.40 471.84 377.48	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98 299.98	7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 8.00% 8.00%	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50 3.12 2.50	10.00		102.40 81.92 65.54 52.43 41.94 33.55 26.84 21.47 117.18 93.74 75.00	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50 3.12 2.50	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10 117.68 96.87 77.49	0.00 0.00 0.00 0.00 0.00 0.00 0.00 10.00 0.00 0.00	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10 127.68 96.87 77.49	-105.39 -84.31 -67.45 -53.96 -43.17 -34.53 -27.63 -22.10 372.32 -96.87 -77.49	-101.75 -80.69 -63.99 -50.74 -40.24 -31.91 -25.31 -20.06 -335.07 -86.42 -68.52	131.73 106.24 84.99 67.99 54.39 43.52 34.81 27.85 22.28 127.82 97.26 77.81	
2 6 7 7 8 8 9 9 10 11 11 12 12 12 14 15	500.00	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98 299.98	512.00 409.60 327.68 262.14 209.72 167.77 134.22 107.37 585.90 468.72 374.98 299.98	514.99 411.99 329.59 263.67 210.94 168.75 135.00 108.00 586.40 471.84 377.48 301.98	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98 299.98 239.98	7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 8.00% 8.00% 8.00%	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50 3.12 2.50 2.00	10.00		102.40 81.92 65.54 52.43 41.94 33.55 26.84 21.47 117.18 93.74 75.00 60.00	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50 3.12 2.50 2.00	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10 117.68 96.87 77.49 62.00	0.00 0.00 0.00 0.00 0.00 0.00 0.00 10.00 0.00 0.00 0.00	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10 127.68 96.87 77.49 62.00	-105.39 -84.31 -67.45 -53.96 -43.17 -34.53 -22.10 372.32 -96.87 -77.49 -62.00	-101.75 -80.69 -63.99 -50.74 -40.24 -31.91 -25.31 -20.06 335.07 -86.42 -68.52 -54.35	131.73 106.24 84.99 67.99 54.39 43.52 34.81 27.85 22.28 127.82 97.26 77.81 62.25	
2 6 7 7 8 8 9 9 10 11 11 12 12 12 14 15 16	500.00	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98 299.98 239.98	512.00 409.60 327.68 262.14 209.72 167.77 134.22 107.37 585.90 468.72 374.98 299.98 239.98	514.99 411.99 329.59 263.67 210.94 168.75 135.00 108.00 586.40 471.84 377.48 301.98 241.58	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98 299.98 239.98 239.98 191.99	7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 8.00% 8.00% 8.00% 8.00%	2.99 2.39 1.91 1.53 1.22 0.98 0.63 0.50 3.12 2.50 2.00 1.60	10.00		102.40 81.92 65.54 52.43 33.55 26.84 21.47 117.18 93.74 75.00 60.00 48.00	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50 3.12 2.50 2.00 1.60	105.39 84.31 67.45 53.96 43.17 34.53 22.10 117.68 96.87 77.49 62.00 49.60	0.00 0.00 0.00 0.00 0.00 0.00 10.00 0.00 0.00 0.00 0.00 0.00	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10 127.68 96.87 77.49 62.00 49.60	-105.39 -84.31 -67.45 -53.96 -43.17 -34.53 -27.63 -22.10 372.32 -96.87 -77.49 -62.00 -49.60	-101.75 -80.69 -63.99 -50.74 -40.24 -40.24 -31.91 -25.31 -20.06 -335.07 -86.42 -68.52 -68.52 -54.35 -43.10	131.73 106.24 84.99 67.99 54.39 43.52 34.81 27.85 22.28 127.82 97.26 77.81 62.25 49.80	
2 5 6 7 8 8 9 9 9 10 11 11 12 12 14 15 16 17	500.00	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98 299.98 239.98 239.98	512.00 409.60 327.68 262.14 209.72 167.77 134.22 107.37 585.90 468.72 374.98 299.98 239.98 191.99	514.99 411.99 329.59 263.67 210.94 168.75 135.00 108.00 586.40 471.84 377.48 301.98 241.58 193.27	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98 239.98 239.98 191.99 153.59	7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 8.00% 8.00% 8.00% 8.00% 8.00%	2.99 2.39 1.91 1.53 1.22 0.88 0.78 0.63 0.50 3.12 2.50 2.00 1.60 1.28	10.00		102.40 81.92 65.54 33.55 26.84 21.47 117.18 93.74 75.00 60.00 48.00 38.40	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50 3.12 2.50 2.00 1.60 1.28	105.39 84.31 67.45 53.96 43.17 34.53 27.63 22.10 117.68 96.87 77.49 6.20 49.60 39.68	0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	105.39 84.31 67.45 53.96 43.17 34.53 22.10 127.68 96.87 77.49 6.20 49.60 39.68	-105.39 -84.31 -67.45 -53.96 -43.17 -34.53 -27.63 -22.10 372.32 -96.87 -77.49 -62.00 -49.60 -39.68	-101.75 -80.69 -63.99 -50.74 -40.24 -31.91 -25.31 -20.06 -335.07 -86.42 -68.52 -54.35 -43.10 -34.18	131.73 106.24 84.99 67.99 54.39 43.52 34.81 27.85 22.28 127.82 97.26 77.81 62.25 49.80 39.84	
2 5 6 7 8 8 9 9 9 10 11 11 12 13 14 15 16 17 18	500.00	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98 239.98 239.98 239.98 191.99 153.59	512.00 409.60 327.68 262.14 209.72 167.77 134.22 107.37 585.90 468.72 374.98 299.98 299.98 239.98 191.99	514.99 411.99 329.59 263.67 210.94 168.75 135.00 108.00 586.40 471.84 377.48 301.98 241.58 193.27 154.61	409.60 327.68 262.14 209.72 167.77 134.22 107.37 85.90 468.72 374.98 299.98 299.98 299.98 299.98 191.99 153.59 122.87	7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 7.00% 8.00% 8.00% 8.00% 8.00% 8.00%	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50 3.12 2.50 2.00 1.60 1.28 1.02	10.00		102.40 81.92 65.54 341.94 33.55 26.84 21.47 117.18 93.74 75.00 60.00 48.00 38.40 30.72	2.99 2.39 1.91 1.53 1.22 0.98 0.78 0.63 0.50 3.12 2.50 2.00 1.60 0.128	105.39 84.31 67.45 53.96 43.17 34.53 22.10 117.68 96.87 77.49 62.00 339.68 31.74	0.00 0.00 0.00 0.00 0.00 0.00 10.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	105.39 84.31 67.45 53.96 43.17 34.53 22.10 127.68 96.87 77.49 62.00 339.68 31.74	-105.39 -84.31 -67.45 -53.96 -43.17 -34.53 -27.63 -22.10 372.32 -96.87 -77.49 -62.00 -49.60 -39.68 -31.74	-101.75 -80.69 -63.99 -50.74 -40.24 -31.91 -25.31 -20.06 335.07 -86.42 -68.52 -54.35 -43.10 -341.8 -27.10	131.73 106.24 84.99 67.99 54.39 43.52 34.81 27.85 22.28 127.85 22.28 127.85 77.81 62.25 49.80 39.84 31.87	
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Figure 15. Third stage: Changes after clicking on the button Calculate (I)

To solve the errors, first change the amount of the last repayment manually, as shown in Figure 16. To provide full repayment of the credit in the last period, for this period substitute the amount of the last payment in the column with the *Total* of *Repayment of the credit* (its title is in a blue font and their values can be changed after clicking on the button *Calculate*, as stated before) by the reference to the cell where the amount of €18.42 of *Balance Outstanding (capital plus interest)* appears. That is, enter the formula =E132 in cell M132. As a result, the last payment coincides with the amount which is due and hence the *Final Balance* becomes 0, meaning that the credit is repaid exactly, and the first error message disappears.

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	6		157.77		168.75	154 11	1.00%	0.74			50.55	0.76	34.55	0.00	34.55	34.55	-41.91	34.81	
	1.0	t	184 22		114.02	107.83		0.74			26.94	414	47 60	DOD	22 4.5	17.64	-13.81	27.65	
	11		107.87		108.00	61.50		0.41			21.47	0.63	22.29	8.00	1110	21.30	30.06	17.78	
	ü		10.00		565.40	468.75	1.00%	0.50			117,18	0.52	167.66	10.00	127.68	122.11	10.665	127.82	
	19		685.71	-148.12	471.84	174.58	6.00%	8.11			35.74	8.72	98.81	0.00	95.87	19.00	(85.40)	97.29	
	14		27438	174-98	\$17 H	295.68	8.00%	1.50			25.00	232	71.40	0.00	77.40	37,40	68.72	15.61	
	11		111 34	191 15	1000 944	279 16	8:00%	100			ALL CIT-	2.00	44.00	10.00	40,10	-61 001	-54.81	82.25	
	28	1	139.96	133.20	341.98	191.99	6.00%	1.80			48.00	LHD	48.60	0.00	411-00	-48.00	-43.30	48.80	
	17	r .	101.98	151.00	160-27	153.89	8.00%	1.24			58-m0.	1.14	10.62	0.00	31.48	-01.68	-91.18	38.84	
	18	1	153.33	131.50	154.61	122.87	8.00%	1.00			30.77	1.07	\$3.TA	0.00	25.74	05.28	-27.10	\$1.87	
	.18	1	122.87	122.47.	115.68	94.50	8.00%	0.82			24.37	0.83	25.30	0.02	25.20	-23.39	21.40	35.60	
	.20	1	49.30	44.303	10.111	104,807	8 (37%)	0.48			20.02	13.84	30.86	61.00	22.66	22.66	-17.88	30,24	
			78.95	78.50	78.82	58.50	8.00%	0.51			20.00	6.52	30.52	0.00	20.52	-20.53	:17.08	28.55	
	11	5-	1.00.000																
	11 (1		54.30		54.04	38.30	8.00%	0.09			10.01	0.19	20.69	0.00	20.89	-22.88	196.85	22.46	
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Figure 16. Third stage: Changes after clicking on the button Calculate (II)

Afterwards, to obtain the correct APR, click on the button *Recalculate* next to the cell showing the *Annual Percentage Rate of Charge*. A new APR of 11.4% is obtained and the second error message disappears, as shown in Figure 17. Now the amortisation table is coherent.

		n might not	he valid if ch	aanges have l	an made :	ofter clicking	on the butt	on 'Calculate	and as a n	esult, the Fina	l halance at t	he last neri	and/or the	Present va	lue of the ca	sch flows are r	ot zero. Cau	tionany not
										lustrative scer							Jot zero. Cau	tionary no
			Litter of Need				, note				and are on	,		June Dutte				
													Illustrative s	enario of cl	hange in the	borrowing rat	e	
nal balan	ce in the last	period	0.00										If the borrowin	ig rate rises t	o the highest l	level entered at	ove at the ear	liest possi
mount of	the first repa	yment			Recalcu	late										shown in the la	st column but	one of
uration of	the credit		24	MONTHS									amortisation t	able and the	APR would be			
	ue of the cas		0.00			1												
nnual Per	centage Rate	of Charge	11.4%	DYNAMIC	Recalcu	late												
	e							_										
	f the credit		61.47															
	nt of credit		1500.00 1561.47															
stal amou	nt payable		1561.47															
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			Bala	ance		Interest o	n capital	Other	costs			Payments			Cash	flows	Illustrativ	e scenarios
										Repay	ment of the cre	edit					Payments if	Payment
Period	Drawdowns	Initial	Outstanding (only	Outstanding (capital plus	Final	Borrowing	Interest	Not financed	Financed				Costs not	Total	Value at	Present value	highest borrowing	highes exchange
		initial	(only capital)	(capital plus interest)	Final	rate (%)	charges	Not financed	Financed	Capital amortisation	Interest	Total	financed	Total	each period	Present value	rate (credit	(domest
			cu pricir)	marcary						amortisation							currency)	currency
C	1000.00				1000.00			10.00					10.00	10.00	990.00	990.00		
1		1000.00	1000.00	1005.83	800.00	7.00%	5.83			200.00	5.83	205.83	0.00	205.83	-205.83	-203.98		
2		800.00	800.00		640.00	7.00%	4.67			160.00		164.67	0.00	164.67	-164.67			
3		640.00		643.73	512.00	7.00%	3.73			128.00		131.73	0.00	131.73	-131.73			
4		512.00			409.60	7.00%	2.99			102.40		105.39	0.00	105.39	-105.39			
5		409.60			327.68	7.00%	2.39			81.92		84.31	0.00	84.31	-84.31			
6		327.68			262.14	7.00%	1.91			65.54		67.45	0.00	67.45	-67.45			
8		262.14 209.72			209.72	7.00%	1.53			52.43 41.94	1.53	53.96 43.17	0.00	53.96 43.17	-53.96			-
8 9		209.72			167.77	7.00%	0.98			33.55		43.17	0.00	43.17	-43.17			
10		134.22			107.37	7.00%	0.58			26.84	0.58	27.63	0.00	27.63	- 27.63			-
11		107.37			85.90	7.00%	0.63			20.04		22.10	0.00	22.10	-27.03			
12		85.90			468.72	7.00%	0.50			117.18		117.68	10.00	127.68	372.32			-
13		468.72	468.72	471.84	374.98	8.00%	3.12			93.74	3.12	96.87	0.00	96.87	-96.87	-86.14		
14		374.98	374.98	377.48	299.98	8.00%	2.50			75.00	2.50	77.49	0.00	77.49	-77.49	-68.29		
15		299.98	299.98	301.98	239.98	8.00%	2.00			60.00	2.00	62.00	0.00	62.00	-62.00			
16		239.98	239.98	241.58	191.99	8.00%	1.60			48.00	1.60	49.60	0.00	49.60	-49.60	-42.93		
17		191.99	191.99	193.27	153.59	8.00%	1.28			38.40	1.28	39.68	0.00	39.68	-39.68	-34.03		
18		153.59	153.59	154.61	122.87	8.00%	1.02			30.72	1.02	31.74	0.00	31.74	-31.74	-26.98		
19		122.87	122.87	123.69	98.30	8.00%	0.82			24.57	0.82	25.39	0.00	25.39	-25.39	-21.39		
20		98.30	98.30	98.95	78.30	8.00%	0.66			20.00	0.66	20.66	0.00	20.66	-20.66	-17.25		
21		78.30	78.30	78.82	58.30	8.00%	0.52			20.00	0.52	20.52	0.00	20.52	-20.52	-16.98		
			50.00	58.69	38.30	8.00%	0.39			20.00	0.39	20.39	0.00	20.39	-20.39	-16.72		
22		58.30											0.00					
22 23 24		58.30 38.30 18.30	38.30	38.55	18.30	8.00%	0.26			20.00	0.26	20.35	0.00	20.35	-20.26	-16.46		

Figure 17. Third stage: Changes after clicking on the button Calculate (III)

As another functionality of the simulator, the user might only want to obtain the APR from the value of drawdowns and the value of repayments and payments of charges. In this case, the user should follow the three stages (this is necessary to define the repayment periods and the number of periods shown in the amortisation table) and then delete all the columns of the amortisation table except for those columns whose titles are in red font; then the user enters his or her own data at least in the columns whose titles are in blue font; finally he clicks on the button *Recalculate* next to the cell with the value of the APR to obtain a valid APR which equates the present value of drawdowns to the present value of repayments and payments of charges. This is illustrated in Figure 18, which shows the step-by-step explanations to obtain the APR of a credit agreement for a total amount of credit of ≤ 10000 repayable in two instalments of ≤ 5000 after one year and ≤ 7000 after two years. The total amount of the credit is drawn down immediately and in full at the conclusion of the agreement.

	ount of the credit is the colling or the total sums available under the credit agreement. It does not include these amounts devoted to the payment of charges as these amounts are costs of the credit.
Note: the Lota	el emount of the credit is the colling or the total sums evel able under the orditing reamont. It does not include these amounts devoted to the payment of charges as these amounts are costs of the credit.
Assumptions.	
	Tick the bex for an illustrative scenario if the predicts in a foreign euroney
	Amount -
el Contifica	is governing drawdowns
Assumptions	
	Solit of Immediately and Inful
	is governing repayments (DYNAMIC)
Assumptions	
	Frequency of reprint Dia yearly 🔄 NOTE: T a will determine the length of regular periods shown in the table as: YEARS
	Amount Equilidation to be addeted
	sc dal Paymonta (*)
L	Advance payment * Nofthe methint 💌
L	Final Payment* Russiancust 💌
	The larg T of The First Amplement is A Devent
D) Duration	of the credit agreement
	ation of acreditagroomentwhere repayments are given as a percentage of the balance outstanding or as a constant amount known in advance is calculated implicitly by the drawdowns, costs, and repayment
	nonly the purpose for entering the duration here is to determine the number of periods to show in the preliminary amortisation table. After eleking on the button Calculate this duration will be replaced
the real duration	
Assumptions	appinaab bi
	Duration Final of Epsriods
	F THE CREDIT
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Assumptions A) Borrowin Assumptions B) O ther cos	F THE CREDIT applicable applicable lavel "amakaalforthe ethe patitam" (*) Defined as Northal (****) (******************************
Assumptions A) Borrowin Assumptions B) O ther cos	F THE CREDIT applicable applicable tevel ana seaforthe acts centram Defined as Terms (anal) Distance Percentage Estimated in the Total Cost of the Credit hick cannot be defined using pro-specified parameters shown here should be entered in the americation table manually. espirable
Assumptions A) Borrowin Assumptions B) O ther co- Note: Costs w Assumptions	FTHE CREDIT splicable splicable splicable stinduded in the Total Cost of the Credit high samptibe defined using pro-specified parameters should be entered in the amortisation table manually. splicable Given as Amounter to financid Date of sharp Date o
Assumptions A) Borrowin Assumptions B) O ther co: Note: Costs w Assumptions L	FTHECREDIT splicable g rate splicable tevel ansissiferths etis petitam Defined as Tenta (mai) District (mai) Percentage Technol (and provide a tenta (mai)) Percentage Amount of the credit allows veriations in the borrowin Percentage Amount of the credit allows to the mortisation table manually. splicable Given as Amount of the finance Date of the ge Coil Restareut
Assumptions A) Borrowin Assumptions B) O ther co: Note: Costs w Assumptions	FTHE CREDIT applicable g rate applicable level analysis and the Total Cost of the Credit hick cannot be defined using pro-specified parameters shown here should be entered in the emerication table manually. applicable Cost of the credit in the Credit hick cannot be defined using pro-specified parameters shown here should be entered in the emerication table manually. applicable Cost of the credit in the Credit in the Credit in the emerication table manually. Applicable Cost of the desired had a price in the interest of the emerication table manually. Applicable interest into the interest into the emerication table manually. Applicable into the credit into the interest into the emerication table manually. Applicable into the interest into the interest into the interest into the emerication into the emerication table manually. Applicable into the interest into the interest into the interest into the emerication intot the emerication into the emerication int
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Assumptions A) Borno win Assumptions B) O ther cor Note: Costa w Assumptions L L L	FTHE CREDIT splicable g rate splicable Level Amakalfortheletie outliam Defined as Konta (smal) Percentage Stincluded in the Total Cost of the Credit Hick campatible defined using pro-specified parameters shown here should be entered in the americation table manually. splicable Cost Amakana Amakana Konta

Figure 18. Obtaining the APR from the value of drawdowns and the value of repayments and payments of charges

As a first step, click on the button *Reset* and then enter the information highlighted in red.

Do not specify the *Amount* of the repayments, as they will be entered manually in the amortisation table.

Main results

Caution: This information might not be valid if changes have been made after clicking on the button 'Calculate' and, as a result, the Final balance at the last period and/or the Present value of the cash flows are not zero. Cautionary notes are shown if this happens. Use the buttons 'Recalculate' to solve these situations. However, note that the results of the illustrative scenarios are only provided after clicking on the button Calculate.

Click on the buttons *Generate* and then *Calculate* to obtain the preliminary results and amortisation table.

				Outstanding													highest
										Repay	ment of the c	redit				Payments if highest	Payments if
			Bala	ince		Interest o	n capital	Other	costs			Payments		Cash	flows	Illustrative	e scenarios
fotal amou	nt payable		10908.74														
Total amou	nt of credit		10000.00														
Total cost o	of the credit		908.74														
Annual Per	centage Rate	of Charge	6.0%	DYNAMIC	Recalcu	late											
	ue of the cas		0.00														
Duration of	the credit		2	YEARS													
	the first repa	yment	5454.37		Recalcu	late											

Main results

0 10000.00

Caution: This information might not be valid if changes have been made after clicking on the button 'Calculate' and, as a result, the Final balance at the last period and/or the Present value of the cash flows are not zero. Cautionary notes are shown if this happens. Use the buttons 'Recalculate' to solve these situations. However, note that the results of the illustrative scenarios are only provided after clicking on the button Calculate.

Interest

600.00

308.74

5454.37

5454.37

0.00

0.00

0.00

0.00

5454.37

5454.37

10000.00

-5454.37

-5454.37

mortisatio

4854.37

5145.63

ete Be	Final balance in the last period Amount of the first repayment Duration of the credit	0.00 5454.37 2 YEARS	Recalculate
ells	Present value of the cash flows Annual Percentage Rate of Charge	0.00 6.0% DYNAMIC	Recalculate
tal,	Total cost of the credit Total amount of credit	908.74 10000.00	
a a la	Total amount navable	10908 74	

capital)

10000.00

5145.63

10000.00

5145.63

interest)

10600.00

5454.37

rate (%)

6.00%

6.00%

10000.00

5145.63

0.00

charges

600.00

308.74

			Bali	ance		Interest o	n canital	Othe	r costs			Payments			Cash	flows	Illustrativ	e scenarios
			bun			meresto	in cupitur	ouic		Repay	ment of the c	.,						Payments if
Period	Drawdowns	Initial		Outstanding (capital plus interest)		Borrowing rate (%)	Interest charges	Not finance	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
0	10000.00				10000.00								0.00	0.00	10000.00	10000.00		
1		10000.00	10000.00	10600.00	5145.63	6.00%	600.00			4854.37	600.00	5454.37	0.00	5454.37	-5454.37	-5145.63		
2		5145.63	5145.63	5454.37	0.00	6.00%	308.74			5145.63	308.74	5454.37	0.00	5454.37	-5454.37	-4854.37		

In the amortisation table, delete the cells highlighted in red. Be aware of not deleting the cells under variables titled in red font (*Period, Costs not financed, Total,* and the two columns of *Cash flows*), as these cells cannot be changed under any circumstance. rate (credit

10000.00

-5145.63

-4854.37

(domestic

Main results

Final balance in the last period

0.00

Caution: This information might not be valid if changes have been made after clicking on the button 'Calculate' and, as a result, the Final balance at the last period and/or the Present value of the cash flows are not zero. Cautionary notes are shown if this happens. Use the buttons 'Recalculate' to solve these situations. However, note that the results of the illustrative scenarios are only provided after clicking on the button Calculate.

Now enter the two repayments of €5000 and €7000 in the rows corresponding to periods 1 and 2 of the amortisation table.

Note that due to these changes, the area of *Main results* reports the error that *the APR is not valid because the present value of the cash flows is not zero*.

Duration of t		lyment	2	YEARS	Recalcu	late												
Present valu Annual Perc				Caution: The DYNAMIC	e APR is not Recalcu		e the preser	nt value of th	e cash flows	s is not zero.								
Total cost of Total amoun Total amoun	nt of credit		2000.00 10000.00 12000.00															
			0-1			Interest o	a analtal	Other				Devene esta			Crat	flows	111 contraction	
			Bala	ance		Interest d	on capital	Other	costs	Renau	ment of the c	Payments			Cash	nows	Payments if	e scenarios Payments if
Period	Drawdowns	Initial		Outstanding (capital plus interest)		Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
0	10000.00												0.00	0.00	10000.00	10000.00		
1												5000.00	0.00	5000.00	-5000.00	-4716.98		
2												7000.00	0.00	7000.00	-7000.00	-6229.97		

Main results

Caution: This information might not be valid if changes have been made after clicking on the button 'Calculate' and, as a result, the Final balance at the last period and/or the Present value of the cash flows are not zero. Cautionary notes are shown if this happens. Use the buttons 'Recalculate' to solve these situations. However, note that the results of the illustrative scenarios are only provided after clicking on the button Calculate.



			Bala	ance	Interest o	on capital	Other	costs			Payments			Cash	flows	Illustrativ	e scenarios
									Repay	ment of the cr	redit					Payments if	Payments if
Period	Drawdowns	Initial		Outstanding (capital plus interest)	Borrowing rate (%)	Interest charges	Not financed		Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value	highest borrowing rate (credit currency)	highest exchange rate (domestic currency)
0	10000.00											0.00	0.00	10000.00	10000.00		
1											5000.00	0.00	5000.00	-5000.00	-4451.52		
2											7000.00	0.00	7000.00	-7000.00	-5548.48		

To obtain the correct APR, click on the button *Recalculate* next to the cell showing the *Annual Percentage Rate of Charge*. A new APR of 12.3% is obtained and the error message disappears. Finally, the simulator allows for other possibilities through the Excel tool Goal Seek. This tool varies the value in one specific cell until a formula that's dependent on that cell returns the result the user requires.

For example, the amount of the last repayment of the credit with the borrowing rates of 8% for periods 13 to 24 could be obtained using this tool as shown in Figure 19. Run Goal Seek with *Set cell*=Final balance in the last period cell (cell F132), *To value* = 0, and *By changing cell* = cell with the last repayment (cell M132). A final repayment of 18.42 will be obtained, as previously.

100	A		1.0	-0	t	F	G		1 1 1	1	4	L.	M	11	0	*	0
103				CL.			by event to	ktquan	Oters	aits	A DECIMAL OF THE OWNER.		Payments	-		Gaibi	
100					Concert I			-		-	Basie	meni it ihe bie	de l				
		David-of	Inizat	Outranding Indy transit	Dustandru (capitalplus interest	that.	Basowing sale DSI	braner: -françes	Normanied	Transet	Capital	Warm	-	Convert .	-TIM	Anne a surf	1
107				1000	and the second second								- · ·				-
108	-0	20,000,002				1000.00			10,00					30,00	30,00	990,00	990,00
109	1		1000.00	1000.00	1005,83	300,008	1,00%	2,83			300,00	- 5,83	205,82	0.00	205,815	205,81	-304,81
110	2		800,008	800.00	304.67	640,000	7,07%	4,67			1,60,00	8,67	睡眠	0.00	164,67	164,67	-161.80
111			640,00	840,00	843,75	\$12.00	1,00%	3,73	kê.		1,28,00	- 5,75	191,19	0,00	131,79	131,75	-128,50
112	- 4	-	\$12.00	\$12.00	314,775	402,60	7,00%	2,04	1		302,40	2,99	105,39	0,00	105,70	105.39	-101,75
118	3		409,60	479,60	411.99	327,68	1,00%	2,35	6		81,92	1,39	84,31	0,00	84,81	-84,81	-80,69
134			327,58	327,88	329,93	25214	1,00%	5,83			55,54	1,83	67,45	0,00	67,43	-87,45	83,99
115	7		162.14	342.14	363.67	309.73	T,DOM	1,53			53,43	1,55	13,99	0,00	13,99	-33,94	-50,74
118	8		209.72	309,72	210.94	187,72	7,00%	2.31			12100	1,12	45,21	0,00	43,17	48,17	-40,24
117			187,77	\$\$7,77	168,75	134,73	7,00%	0,0	Goal Seek		1.00	0,18	34,55	0,00	04,55	34,53	-31,01
118	10		134,22	114,22	115.00	107.97	7,00%	.0.7	and the	17		0,78	11,60	0,00	27.63	+27,88	(25,81
119	11		-101,57	307,37	108,00	85,340	1,00%	0.0	Tegt celt	19	111 3	0,65	22,10	0,00	22,10	32,30	-20,06
120	11	500,000	#1.90	181.90	180,40	468,73	17,00%	- 9,5	Triplat	.6		0,50	\$37,88	10,00	127,68	777,24	355,07
121	19		468,72	-468,72	471,84	374,99	8,00%	3,5	Be charge o	÷	10112	3,11	96,87	0,00	56,67	-96,87	\$6,42
122	14		-374,98	374,98	377,48	200.95	8,00%	2,2	1922445	1 . I .	deres 18	7,50	77,49	0,00	77,45	-17,49	-88,57
123	15		299.98	799.98	301.48	719,98	R10%	2.0	1	OK	Carol	7.00	IR2,00	-0,00	\$2,50	-67,00	-54,31
124	15		235,94	238,98	241.58	131.99	n.bots	1.4	_	141	- Contrain	1,60	49,60	0,00	49,60	48,60	+45,18
125	17	-	191,99	191.99	191.27	153,53	8,00%	3,23			38,90	1,28	39,66	0,00	39,68	-39,68	-34.18
116	18		152.59	151.54	154.61	122,87	H,00%	1.01			99,72	1,02	31,74	0.00	\$1,74	-31,74	-17,10
127	10		112,87	112,87	123.69	08.30	8,00%	(0,81			24,57	0,82	25,29	0,00	25,50	(25.59)	121,418
125	30		98,30	98,30	98.95	78,30	8,00%	0.61	ñ		30,00	:0,66	20,64	0,00	20,64	-20.64	-17.53
±19	21		76.90	78.30	78.82	58.90	8,00%	0.51			20,00	0.52	20,52	0.00	39,52	-20.52	+17.06
150	22		58,50	58.50	58.82	58.30	8,00%	0,31	e		30,00	0.92	20,52	0.00	20,59	00.59	-18,81
111	10		16.30	16.30	14.53	18.30	8,00%	9,28	ñ		20,00	0,16	30,36	0,00	30,74	-10,34	-16.53
132	28		18.30	18.30	18,41	\$0.0	8.00%	0,11			18.28	0.11	1, 18,40	06.0	38,40	18,40	-14.30
133																	

Figure 19	Using the too	ol Goal Seek
inguic 10		of Goul Seek

3.4. THE AMORTISATION TABLE

The amortisation table provides a set of variables which describe the evolution of the credit over time with respect to drawdowns, balances, financed and non-financed charges, repayments and net cash flows. This information goes beyond what is required by the CCD or the MCD for amortisation tables to be provided to consumers.

	Drawdowns		Bala	ince		Interest o	n capital	Other costs		
Period		Initial	Outstanding (only capital)	Outstanding (capital plus interest)		Borrowing rate (%)	Interest charges	Not financed	Financed	
0	1000.00				1000.00			10.00		
1		1000.00	1000.00	1005.83	800.00	7.00%	5.83			
2		800.00	800.00	804.67	640.00	7.00%	4.67			

Figure 21. The amortisation table (right)

	flows	Illustrative scenarios							
Repa	yment of the o	credit	Costs not financed				mgnest	exchange rate (domestic currency)	
Capital ar amortisation	Interest	Total		Total	Value at each period	Present value	borrowing rate (credit currency)		
			10.00	10.00	990.0	990.00	10.00		
200.00	5.83	205.83	0.00	205.83	-205.8	-204.03	205.83		
160.00	4.67	164.67	0.00	164.67	-164.6	-161.80	164.67		

The description of the variables is as follows:

- Period: Each time interval within the duration of the credit. Period 0 refers to the starting date of the credit. Except for the first period (which may be specified as different by the user), the lengths of the periods are equal and are assumed to be given by the frequency of repayments of the credit (e.g. weekly, monthly, annually).
- Drawdown: The sum of drawdowns of the credit in each period. When an advance payment to the creditor is required by the agreement, the amount of this payment is deducted from drawdowns in period 0, so that this amount is not included in the financing process.
- Balance: Balance of the credit, according to different definitions:
 - Initial balance is the balance at the end of the previous period.
 - *Outstanding balance (only capital)* is the balance prior to repayment and payment of the charge of any costs, and hence it includes the initial balance plus drawdowns in the period.
 - *Outstanding balance (capital + interest)* is the outstanding balance of only capital plus interest charges over the period.
 - Final balance is the amount owed at the end of the period and hence it is defined as the outstanding balance of capital plus interest charges minus the repayment of the credit including capital and interest made in the period (or, alternatively, the balance outstanding of only capital minus capital amortisation) plus the costs financed with the credit in the period (that is, costs charged but not paid from other resources of the consumer).

The use of different definitions for the balance of the credit is justified by the numerous ways in which costs are defined. For example, maintenance fees in credit cards are usually given as 'Fixed amount' payable at 'Regular' intervals of 1 year 'in advance'; maintenance fees of lines of credit are usually given as a '% of the credit limit' payable at 'Regular' intervals of 1 month or 1 year and 'in arrears'; payment protection insurance (PPI) in revolving credit agreements is usually given as a '% of the final balance in each period', or PPI in instalment credit agreements is usually given as a 'Fixed amount' payable 'At conclusion' and 'Financed'.

In this regard also note that: i) non-financed non-interest costs are excluded from any definition of outstanding balance because it is assumed that they are paid in full when they are charged and hence, they never imply a change of the amount owed; ii) financed costs imply a change in the amount owed at the end of the period (thus, they are included in the final balance).

- Interest: This includes
 - *Borrowing rate*: annual borrowing rate which applies to the amount owed at the beginning of each period (initial balance) expressed as a percentage and defined according to the information entered by the user.
 - Interest charges: charges of the credit generated in the period and calculated on the basis of the borrowing rate²⁷.
- Other costs: Costs other than interest charged in each period. These can be:
 - *Not financed*: If a cost is not financed, it means that it is paid when it is charged, being added to the amount of the repayment of the credit to obtain the total payment made by the consumer.
 - Financed: If a cost is financed, when it is charged it is added to the amount owed. It is assumed that financed costs are charged after the repayment in the period, and hence they are included in the final balance of the period. Given this dependence between financed cost and the final balance, costs given as a percentage of the final balance cannot be financed (in order to avoid circular references), and in the last period of repayment of the credit (where the final balance should be zero) financed costs are omitted (they are assumed to be zero; to avoid this, the user should define the cost payable at the date of the last repayment as a new cost not financed). Similarly, if for a financed cost the user defines the date of charge as the last repayment date, then the simulator will change the nature of the cost to a cost not financed.
- Payments: Payments made by the borrower in each period in respect of:
 - Repayment of the credit: This includes the payments for interest and capital amortisation made by the borrower according to the repayment scheme defined by the user. It should be highlighted that if the repayment of the credit is not enough to pay the interest charges, the part of these charges unpaid implies an increase in the capital of the credit, and so the capital amortisation will be negative, meaning that instead of an amortisation (reduction) of the capital there is an increase in the capital owed.

²⁷ The simulator assumes that these charges depend on the length of each period and hence, a first payment period of different length will imply different interest charges for such a period. Other cases might be covered by the simulator manually.

- Other costs not financed: they are a part of the payments in the period because, as stated above, they are paid as soon as (in the same period) they are charged.
- *Total*: Sum of the repayment of the credit and the cost not financed, rounded to two decimals (euro cents).
- Cash flows:
 - *Value at each period*: Net amount received by the borrower in each period, defined as the sum of drawdowns of the credit minus the sum of total payments for the credit (for repayment of the credit and costs not financed).
 - *Present value*: The previous net amounts valued (discounted) at period 0 using the APR.
- Illustrative scenarios (only available for the MCD):
 - Payments if highest borrowing rate (credit currency): Payments to be made by the borrower if the borrowing rate of the credit rises to the highest level at the earliest possible opportunity. This column is filled by the simulator when an illustrative scenario of change in the borrowing rate is requested by the user for a credit where Article 17(5) of the MCD does not apply.
 - Payments if highest exchange rate (domestic currency): Payments to be made by the borrower expressed in domestic currency²⁸ for a foreign currency loan if the value of the domestic currency fells the high depreciation rate at the earliest possible opportunity. This column is filled by the simulator when an illustrative scenario of change in exchange rate is requested by the user.

Other relevant comments about the amortisation table are the following:

- Except for borrowing rates and periods, all the values in the amortisation table refer to amounts.
- Values are assumed to refer to end of period values, except for the borrowing rate. As stated above, the borrowing rate specified for a period is the rate used to calculate interest charges over that period. Note that assuming values for end of periods implies that the simulator is unable to treat cash flows which take place before a period ends.

Finally, it should be noted that titles in the amortisation table are shaded in different colors and also use different font colors to indicate the possibility of changing the information at different stages as follows:

²⁸ The term 'domestic currency' is used because it fits in with the definition of foreign currency loan of Article 4(28).

- If a title is shaded in yellow: the values can be changed by the user after obtaining the preliminary amortisation table (second stage, i.e. button *Generate*) and before calculating repayments and APR (third stage, i.e. button *Calculate*), as these value will be respected to obtain the repayments and APR. They can also be changed after calculating the repayments and APR, together with the values of the repayments of the credit (column Payments/Repayment of the credit/Total; its title is in a blue font) and any dynamic cell in the input area, but in this case it might be necessary to click on the buttons *Recalculate* to obtain a coherent amortisation table.
- If a title is in red font: the values cannot be changed under any circumstance.
- If a title is in blue font: information needed to obtain the APR only from drawdowns, repayments and payments of charges. In this case, all the columns in the table can be deleted except for those columns with a title in red font, then the user enter manually the information on drawdowns, repayments and payment of charges and finally he clicks on the button *Recalculate* next to the cell with the value of the APR to obtain a valid APR which equates the present value of drawdowns to the present value of repayments and payments of charges.

3.5. BRIEF INSTRUCTIONS

Obtaining the amortisation table and the APR of a credit agreement using this simulator consists of three stages.

During the three stages, the user should read the explanatory notes and the assumptions applicable and provide consistent information in order to obtain the APR. Any errors highlighted in red should be resolved before proceeding.

STAGE 1

Enter the characteristics of the credit product in the area 'Description of the credit product'.

Notes:

- The frequency of the repayment of the credit determines the length of the regular periods shown in the amortisation table.
- All the periods are assumed to have the same duration except for the first period of repayment if specified so.
- For credits with repayments given as a percentage of the balance outstanding or as a constant amount known in advance, the duration entered in this stage can be a rough estimation of the duration of the credit or just the number of periods the user wishes to see in the preliminary amortisation table which will be obtained in stage 2. This is because for these credits, the real duration is given implicitly by the drawdowns, costs and repayments (e.g., if a credit for a total amount of €1000 should be repaid in monthly repayments of €500 plus interest charges, the duration will be 2 months, as this is the period until full repayment). The real duration of the credit will be obtained by the simulator in stage 3. If the user plans to make manual changes in the preliminary amortisation table obtained in stage 2, the duration to be entered should be long

enough to ensure that the table will not be extended by the simulator to further periods in stage 3.

STAGE 2

Click on the button *Generate* in the area 'Generate amortisation table' to obtain a preliminary amortisation table from the information provided in stage 1.

Notes:

- The new table will replace any existing information in the table by the information provided in stage 1.
- Once the preliminary amortisation table has been generated, the user can change manually the information in the table for all those variables with a title shaded in yellow (drawdowns, borrowing rate and other costs). The rest of the variables should not be changed for consistency of the simulator. The information introduced in this way will be considered in stage 3 as long as the periods covered in the preliminary amortisation table also appear in the final amortisation table.

STAGE 3

Click on the button *Calculate* in the area 'Calculate repayments and APR' to obtain the APR and other relevant information about the credit. This includes the results of illustrative scenarios in the case of Directive 2014/17/EU (MCD).

Notes:

- For credits payable in equal, increasing or decreasing instalments, the simulator will obtain the instalments which pays off the credit in the last period according to the duration specified by the user. In stage 3 the amortisation table is updated and the amount of the first repayment of the credit is shown in the area 'Main results'.
- For credits with repayment given as a percentage of the balance outstanding or as a constant amount known in advance, the simulator respects the scheme and definition of repayments entered in stage 1 and increases or decreases the number of periods in order to ensure full repayment of the credit in the last period. In stage 3 the amortisation table is updated and the duration of the credit is shown in the area 'Main results'; the duration is also copied to the cell with the duration of the credit agreement in the area 'Description of the credit product' in order to facilitate the design of new credit agreements with similar characteristics.
- For all credit agreements the simulator displays the APR and other relevant information of the credit in the area 'Main results'.

AFTER STAGE 3

Once stage 3 is finished, the user has control of the characteristics of the credit and the amortisation table. That is, it is possible to change the dynamic cells in the input area and the variables with a title shaded in yellow and also the repayments of the credit in the column 'Payments/Repayment of the credit/Total 'in the amortisation table. This allows the user to view the effect of these changes on the credit.

Since these changes might mean that the credit is not fully repaid in the last period or the present value of cash flows is not equal to zero, the user should be aware of any message in

red next to the buttons Recalculate in the area of 'Main results'. If a message appears, it will be necessary to recalculate the amount of the first repayment or the APR by clicking on the corresponding button.

3.6. Q&A

Following there is a list of frequent Q&A on the simulator.

- *Protection:* The simulator is locked to preserve its integrity and functionality; it is not anticipated to provide an unlocked version.
- Calculation of interest charges by the simulator uses compound interest: Yes, the simulator uses a nominal annual rate which is charged periodically using a proportional conversion method OR an effective annual rate which is charged periodically using the corresponding compounding frequency. Other rules or practices are not considered, but can be entered manually by the user (e.g. simple interest).
- *Frequency of payments/capitalization of interest*: The simulator uses five different frequencies for payments and capitalization of interest, namely weekly, monthly, quarterly, half-yearly and yearly. Other frequencies are not foreseen. However, credits with other frequencies might be solved using equivalences and manual changes. For example, daily capitalization of interest can be addressed converting nominal rates to effective rates (see approach 2 of example 10 of the CCD) and a single payment in some days can be addressed using a first period of different length (see approach 1 of the same example).
- Interest charged on a fee: Whether interest is charged, or not, on any fee can be specified in the two places shown in Figure 22: before generating the preliminary amortisation table by choosing No/Yes in the column *Financed* corresponding to the fee, or after generating this table by entering manually the fee (without interest charges) in the columns *Not financed/Financed* of *Other costs* in the amortisation table.

Figure 22. Financed costs

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- Digit .	% of the providence in backgrowing		100				
Lun1	Kothe anne contemp (anni - reest) e no peru		line.				
1002	A of the microbiological principal constraints and an en-		100				
- Cent	In other part of our string regiment with prod		line.				
Tast T	North he tand history	-	1000				

			Balance			Interest on capital			costs	Payments					Cash flows		
											Repayment of the credit						
	Period	Drawdowns	Initial		Outstanding (capital plus interest)	Final	Borrowing rate (%)	Interest charges	Not financed	Financed	Capital amortisation	Interest	Total	Costs not financed	Total	Value at each period	Present value
	0	6000,00				6000,00								0,00	0,00	6000,00	6000,00
	1		6000,00	6000,00	6045,00	5770,89	9,00%	45,00			229,11	45,00	274,11	0,00	274,11	-274,11	-272,07

• *Manual changes*: As explained in previous sections of these instructions, manual changes in the amortisation table allows a large range of variations, such as enter

specific drawdowns and payments at specific periods, apply several borrowing rates, calculate interest charges using user-specific methods, include other costs financed or not, deal with repayments and costs at different frequencies, or consider grace periods, among others.

3.7. FINAL REMARKS

- To cancel any procedure, press the ESC (escape) key.
- The button *Reset* at the top of the simulator clears the input area and enters the characteristics of the default example. Clicking on this button is advisable to delete user-specific information and start from scratch.
- If the user writes on the area below the amortisation table, the information will be deleted if the *Calculate* button is clicked on.
- The simulator uses the tool Goal Seek of Excel to obtain the APR or any other results which need iterative calculations. The precision of the calculations using Goal Seek can be controlled by the user by the "Maximum Change" setting. In Excel 2013, choose File > Options > Formulas > (Calculation options) Maximum Change. The default precision setting is 0.001, and this is the value used in the calculations provided in this document. A lower value (e.g. 0.0001) will increase the precision of the calculations.