



Saudi Arabian Monetary Authority

**Guide on the Calculation of Annual Percentage
Rate**

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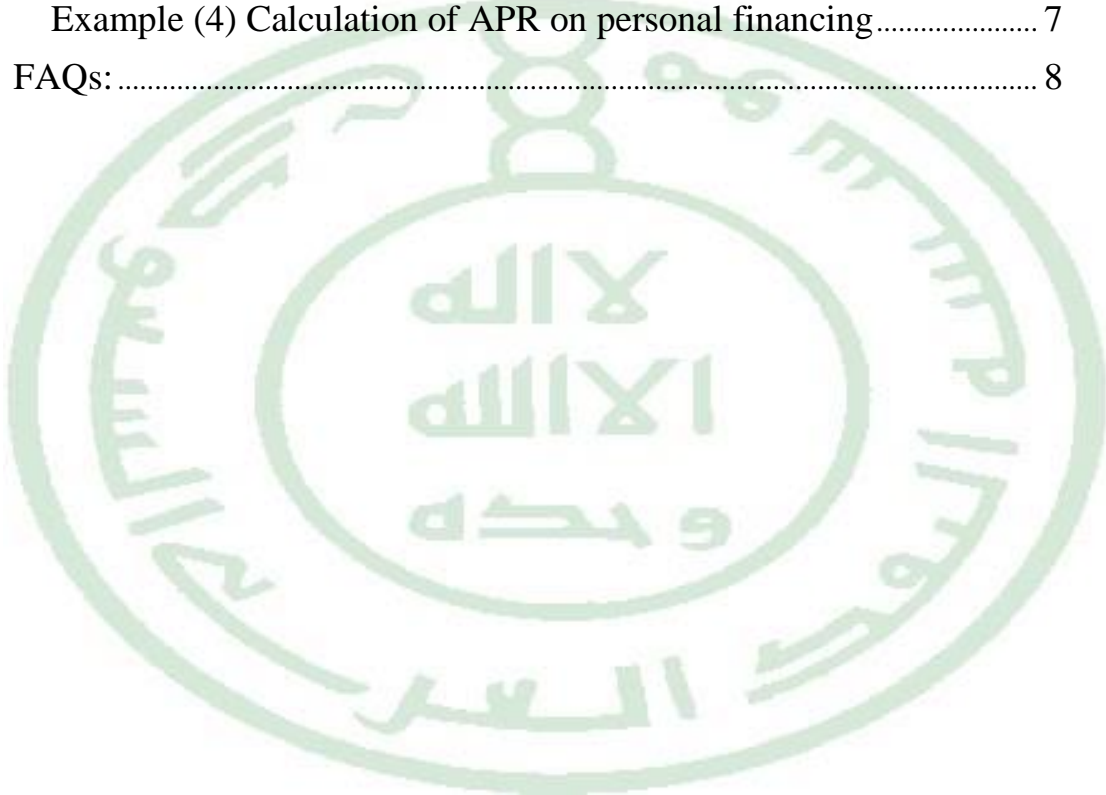
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Introduction

SAMA devotes great attention to any and all factors that would elevate the protection of financial consumers' rights; and enhance transparency and disclosure principles through applying technical standards and best international practices that would promote transparency, disclosure, and fairness of dealing in the sector. The Annual Percentage Rate (APR) is among the standards that determine the actual cost of financing and enable financial consumers to compare finance offers. Therefore, SAMA has required financial service providers (banks and finance companies) to use a standardized method to calculate APR for finance contracts whereby monthly payments are made, such as personal financing, auto lease agreements or otherwise, and real estate financing in order to enable financial consumers to compare the actual costs of finance products offered by banks and finance companies alike.

This Guide has been developed to provide a simplified explanation of the APR and its method of calculation in accordance with Article (11) of the Implementing Regulations of the Finance Companies Control Law issued in Rabi' Al Akher 1434H (February 2013), and Appendix (1) of the first update of the Regulations for Consumer Financing issued in Ramadan 1435H (July 2014).

Annual Percentage Rate (APR)

The APR is the deduction rate where the current value of all installments and other payments payable by the consumer, which represent the total amount payable by the consumer, are equal to the current value of the finance amount payments available to the consumer on the date on which the finance amount or its first payment is made available thereto.

Purpose of the Annual Percentage Rate

1. Ensure transparency by disclosing the actual cost of finance.
2. Enable financial consumers to compare the prices of different finance products in an easy and transparent manner.

Key Conditions for APR Calculation

1. The rate must include all unavoidable fees and commissions, in addition to the finance amount and the term cost.
2. The finance term must be calculated on the basis of 12 equal months.
3. The monthly effective rate must be converted to APR through the following formula:

$$((1 + \text{monthly effective rate})^{12}) - 1$$

Examples on APR Calculation:

Example (1) Calculation of APR on personal financing	
Financing information	Personal financing of SAR 50,000 with monthly payment of SAR 4,244 for a term of 12 months.
APR calculation	$50,000 = \frac{4244}{(1+X)^{\frac{1}{12}}} + \frac{4244}{(1+X)^{\frac{2}{12}}} + \frac{4244}{(1+X)^{\frac{3}{12}}} + \frac{4244}{(1+X)^{\frac{4}{12}}} + \frac{4244}{(1+X)^{\frac{5}{12}}} +$ $\frac{4244}{(1+X)^{\frac{6}{12}}} + \frac{4244}{(1+X)^{\frac{7}{12}}} + \frac{4244}{(1+X)^{\frac{8}{12}}} + \frac{4244}{(1+X)^{\frac{9}{12}}} + \frac{4244}{(1+X)^{\frac{10}{12}}} +$ $\frac{4244}{(1+X)^{\frac{11}{12}}} + \frac{4244}{(1+X)^{\frac{12}{12}}}$
Converting monthly rate to yearly	<p>The monthly rate is (0.28%). To convert the monthly rate to yearly, the following formula is applied:</p> $X = ((1 + 0,002841)^{12}) - 1$
APR	(X) = 3.46%

Example (2) Calculation of APR on auto lease financing	
Financing information	Auto lease financing agreement of SAR 150,000 with monthly payment of SAR 2,300 for a term of 60 months, with a down payment of SAR 30,000 and administrative fees of SAR 1,000 payable after the contract is concluded.
APR calculation	$110,000 - 30,000 - \frac{1,000}{(1+X)^{\frac{1}{12}}} = \frac{2300}{(1+X)^{\frac{1}{12}}} + \frac{2300}{(1+X)^{\frac{2}{12}}} + \frac{2300}{(1+X)^{\frac{3}{12}}} + \frac{2300}{(1+X)^{\frac{4}{12}}} + \frac{2300}{(1+X)^{\frac{5}{12}}} + \frac{2300}{(1+X)^{\frac{6}{12}}} + \dots + \frac{2300}{(1+X)^{\frac{59}{12}}} + \frac{2300}{(1+X)^{\frac{60}{12}}}$
Converting monthly rate to yearly	<p>The monthly rate is (0.49%).</p> <p>To convert the monthly rate to yearly, the following formula is applied:</p> $X = ((1 + 0,0049)^{12}) - 1$
APR	(X)= 6.16%

Example (3) Calculation of APR on real estate financing	
Financing Information	Real estate financing agreement of SAR 1,000,000 with monthly payment of SAR 4,510 for a term of 300 months, with a down payment of SAR 300,000 and administrative fees of SAR 5,000 payable after the contract is concluded.
APR Calculation	$1,000,000 - 300,000 - 5,000 = \frac{4510}{(1+X)^{\left(\frac{1}{12}\right)}} + \frac{4510}{(1+X)^{\left(\frac{2}{12}\right)}} + \frac{4510}{(1+X)^{\left(\frac{3}{12}\right)}} + \frac{4510}{(1+X)^{\left(\frac{4}{12}\right)}} + \frac{4510}{(1+X)^{\left(\frac{5}{12}\right)}} + \frac{4510}{(1+X)^{\left(\frac{6}{12}\right)}} + \frac{4510}{(1+X)^{\left(\frac{7}{12}\right)}} + \dots + \frac{4510}{(1+X)^{\left(\frac{300}{12}\right)}}$
Converting monthly rate to yearly	<p>The monthly rate is (0.51%). To convert the monthly rate to yearly, the following formula is applied: $X = ((1 + 0,0051)^{12}) - 1$</p>
APR	(X)= 6.25%

Example (4) Calculation of APR on personal financing

<p>Financing information</p>	<p>Personal financing agreement of SAR 100,000 with monthly payment of SAR 4,450 for a term of 24 months, with a down payment payable after (20) days from the date of signing the contract, and administrative fees of SAR 1,000 payable after the contract is concluded.</p>
<p>APR calculation</p>	$100,000 - 1,000 = \frac{4450}{(1+X)^{\left(\frac{20}{365}\right)}} + \frac{4450}{(1+X)^{\left(\frac{20}{365} + \frac{1}{12}\right)}} + \frac{4450}{(1+X)^{\left(\frac{20}{365} + \frac{2}{12}\right)}} +$ $\frac{4450}{(1+X)^{\left(\frac{20}{365} + \frac{3}{12}\right)}} + \frac{4450}{(1+X)^{\left(\frac{20}{365} + \frac{4}{12}\right)}} + \dots +$ $\frac{4450}{1+X)^{\left(\frac{20}{365} + \frac{21}{12}\right)}} + \frac{4450}{(1+X)^{\left(\frac{20}{365} + \frac{22}{12}\right)}} + \frac{4450}{(1+X)^{\left(\frac{20}{365} + \frac{23}{12}\right)}}$
<p>Converting monthly rate to yearly</p>	<p>The monthly rate is (0.55%). To convert the monthly rate to yearly, the following formula is applied: $X = ((1 + 0,0055) 12) - 1$</p>
<p>APR</p>	<p>(X)= 7.87%</p>

FAQs:

1. What is the purpose of requiring creditors to disclose APR?

The Annual Percentage Rate (APR) is an internationally recognized indicator as being a tool developed to disclose the actual cost of finance. All costs and administrative fees are included when calculating annual percentage rates using a fixed mathematical formula whereas such rates reported by creditors are determined on the same basis and can be compared in an easy and transparent manner.

2. What are the assumptions that must be taken into account when calculating the APR?

The formula is developed based on the following assumptions:

- a. The declining balance method is used in distributing the term cost on the financing term.
- b. All costs payable by the financial consumer, such as administrative fees/commissions, are added.
- c. Payment is made in equal monthly payments throughout the financing term.
- d. Any costs or fees payable by the consumer upon their violation of any obligation contained in the financing contract are excluded.
- e. The financing contract is valid for the agreed period and both parties comply with their obligations according to the conditions contained in the financing contract.

- f. The fees remain fixed at the initial level and in effect until the end of the financing contract.

3. What is the difference between the percentage rates currently used in the market and the APR?

There are several differences, most notably:

1. The percentage rates currently used do not take into account the monthly financing repayments. Therefore, the percentage rate on the finance paid in installments is the same for the finance that is paid in full at the end of its term.
2. In addition, the percentage rates currently used do not take into account administrative fees, which constitute an important part of the cost borne by the consumer. On the other hand, the APR increases when the administrative fees increase to reflect the actual cost transparently.
3. Creditors calculate APR using a fixed mathematical formula to ensure that the annual percentage rates reported by creditors are determined on the same basis and can be compared in an easy and transparent manner.

4. Will the application of the APR affect the actual cost borne by financial consumers?

The APR is just an indicator used to disclose the actual cost of financing and not to determine it.

5. Will the application of the APR increase the annual percentage rates reported?

It is known that the APR on a given payment schedule exceeds the profit margin percentage on the same payment schedule, and this does not affect the actual cost borne by the financial consumer in any case. For example, the profit margin and APR of a finance of SAR 50,000 with monthly payment of SAR 4,244 for a term of 12 months, with no other fees, will be (1.85%) and (3.45%) respectively. Thus, the creditor must disclose the APR (3.45%), not the profit margin (1.85%), even though the actual cost borne by the consumer did not change as the finance amount and monthly payment remain the same.

6. What does APR include?

The APR includes all mandatory costs that fall under any financing contract, including, without limitation, administrative fees and insurance costs.