Some examples on the Time Value of Money

Assignment with results

Determine the amount of the annual interest rate that corresponds to the appreciation of your funds in the bank account if you know that you deposited 5,000 on March 1, 2021 and you have available the amount of 5,120 on September 1, 2021.

[4.8 % p.a.]

The promissory note issued on January 1, 2022 in the amount of 1,000,000.00 will be payable including interest of 6.2 % p.a. on November 1, 2022. What amount will the owner of the security receive on 1.3. 2022 at a discount rate of 8.4 % p.a.?

[992,773.3]

How long must the owner hold the promissory note in order to receive the subscribed amount at the time of issue at the given discount rate?

[about 3 months - 2 months and 29.4 day]

You know that the future value of the capital is 22,500,000.00. The current value of the capital two years before maturity is 19,800,000.00. Determine the annual interest rate.

[6.6 % p.a]

You know that the annual effective interest rate (r_e) is 10 %. What nominal annual interest rate will it correspond to when the interest is calculated every month?

Note: $\left(1 + r_e\right) = \left(1 + \frac{r}{m}\right)^m$

[9.569 % p.a.]

Determine the real amount of the capital in five years, if you know that the current value of the capital is 100,000.00, the nominal interest rate corresponds to 3.4 % p.s. with quarterly interest accrual. Furthermore, you assume an average annual inflation of 3.5 %.

[117,955.3]

Determine the annual effective interest rate if you know that the nominal rate is 1.9 % p.q. with monthly interest.

[7.8704 % p.a.]

Calculate the interest intensity (f) for an effective interest rate of 5 % .

[4.879 % p.a.]