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USE OF MS EXCEL FINANCIAL FUNCTIONS IN ECONOMICS

Economic calculations are becoming increasingly complex in the modern world and require fast and accurate analysis. Data is the basis for decision-making, so proper processing and analysis are becoming a major challenge for businesses, researchers, and students. One of the main tools for working with data is Microsoft Excel [1].

The Microsoft Excel spreadsheet processor is very popular among economists, financiers, accountants, marketers, and managers due to its extensive tools for performing various financial calculations.

Functions in Excel are predefined formulas that help to quickly calculate values according to certain criteria, correct data in cells and extract the necessary information from a large array. There are about 14 categories of functions in the program [2].

It is very important to pay attention to the financial functions. It is difficult to overestimate the importance of these Excel functions in the economic sphere, as they allow you to save a lot of time, make better economic decisions, automate tasks, and increase the accuracy of calculations.

Financial functions are used to solve tasks related to investment analysis, profit determination, financial planning, investment probability analysis, credit and investment policy, etc.

Let's consider the application of the financial function "YIELD" on the example of solving a problem. The YIELD function returns the return on securities with periodic interest payments [4]. The function takes into account: how many coupon periods fit before the maturity date and the accumulated coupon yield from the last payment to the date of submission.

The task. The issuer issued a bond with a face value of UAH 1 million on April 01, 2022, and matures in two calendar years. The amount of payments on bonds is set at 20% per annum, payments are made quarterly. The bond was purchased on 01.10.2020 at the rate of 64 units (from the face value of 100 units). Determine the feasibility of investing in purchasing a bond if the market rate of return is 45%?

In the Excel spreadsheet processor, create a table and record the data we know (Refer to Figure 1).

	A	B
1	Date of purchase	01.10.2020
2	Maturity date	01.04.2022
3	Purchase rate	64
4	Redemption rate	100
5	Annualized return rate	0,2
6	Frequency of payments	4
7	**Placement rate**	

Fig. 1. Initial data

Source: created by the author.

Let's use the YIELD function to calculate the placement rate (Refer to Figure 2 and 3).

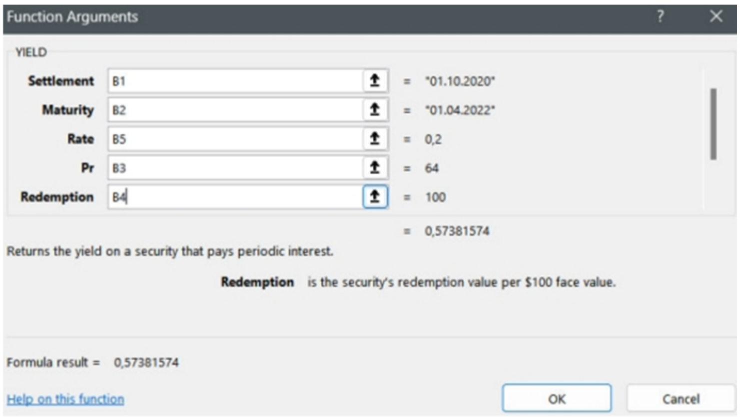

Fig. 2. Using the "YIELD" function (part 1)

Source: created by the author.

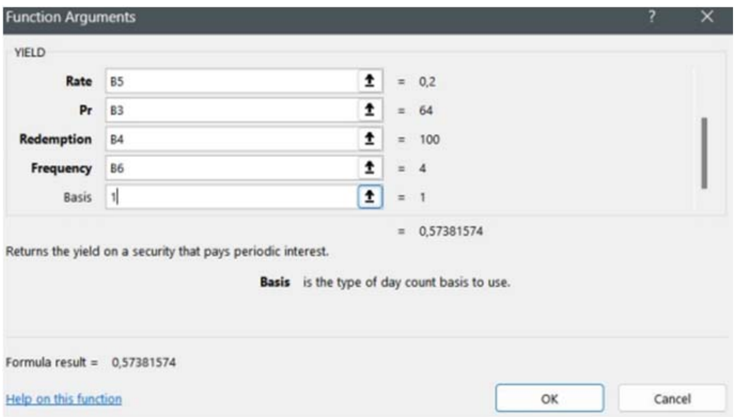

Fig. 3. Using the "YIELD" function (part 2)

Source: created by the author.

Answer: The purchase of the bond is advisable because the annualized rate of return on the investment is 57.38%, which is higher than the market rate of return of 45%.

The YIELD function in Microsoft Excel is an indispensable tool for any investor. This function helps to automate the calculation of profit, taking into account all the factors that affect it; allows you to easily compare the annual yield of a bond with the market level; guarantees the accuracy of the calculation, while reducing the risk of errors and saving time and gives a clear answer on the feasibility of investing.

So, Microsoft Excel is a powerful tool for data processing and analysis. It is widely used in various fields, as its functionality allows you to solve effectively the tasks related to the organization and analysis of data. Excel is easy to use, which makes it an indispensable tool for working with data in various fields, including economics [3].

References

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