

An Example of Using Advanced Excel Applications Within The Scope of Financial Mathematics Calculations: Modelling of Calculations Related to Annuities in Microsoft Excel Program

Assist. Prof. Dr. Mehmet Anıl Sayiner

Istanbul Nişantaşı University,
Faculty of Economics, Administrative and Social Sciences,
Department of Business, İstanbul, Turkey

Abstract

Financial mathematics applications, form the mathematical basis for rational financial decisions within the scope of financial management. Carrying out financial management in line with the scientific rules is of vital importance for businesses to sustain their existence and carry out their activities effectively and efficiently. In this context, the ability to carry out financial management rationally is only based on the correct determination of the mathematical datas (etc. time value of money) that forms the basis for decisions. The use of technology in this area is very important and technology level in this area has evolved from financial calculators to computer programs. And MS. Excel program is perhaps the most important application tool in this field according to its mathematical calculation capacity and capability. In this regard, the study reveals how to perform complex calculations regarding the present and future values of different annuity types in Excel. The calculation of all variables related to annuity calculations and the mathematical relationships between variables are discussed separately according to different annuity types is examined. The study will provide guidance to academics related to the field and professionals working in the field of financial management by combining theoretical knowledge and practical applications.

Keywords: financial management, financial mathematics, time value of money, Microsoft excel, annuity