

COMPUTER MODELING OF BUSINESS VALUATION IN EMERGING MARKETS

Chirkin A.N.

UVECON-KHARKOV LLC, Kyiv-city

The economic conditions in Ukraine have unequivocally allowed to attribute it to “emerging markets”. On the other hand, the new Regulation on the conduct of financial monitoring by the subjects of primary financial monitoring provides for remote verification of clients in electronic mode using modern databases, electronic documents and media. However, even blocks of shares in public companies are often traded over the counter. Therefore, when making financial decisions, the role of modern business valuation in the conditions of Ukraine increases. In this regard, the problem of mathematical modeling of the predicted values of cash flows in these specific conditions seems to be very urgent. In particular, over the past 25 years, when performing work on business evaluation and calculating forecast cash flows Ukrainian appraisers in the vast majority of cases used the method of calculating flows and discount rates in real terms rather than in nominal terms. However, it should be noted that when switching from a model for calculating cash flows in nominal terms to that in real terms, a number of additional issues and practical problems arise. Obviously, these tasks need both a theoretical understanding of their base, and offering solutions.

Based on the principles of calculating cash flows and the relations between their elements both in nominal and real terms, to analyze the possibilities of correct accounting of all cash flow components in practice, depending on their nature and the character of inflationary processes impact thereon. For clarity, it is proposed to consider the issues being discussed in the context of a specific model situation and to describe it using cash flows in both nominal and real terms, and to draw the necessary conclusions based thereon. The assumptions are indeed largely simplified, which, however, allows to track the effect of the matter being considered on the estimated calculations without distracting from the influence of particulars that are not significant in the context of this study.

Depreciation deductions are to some extent certain “fictitious expenses”, the amount of which is calculated normatively and does not generally depend on the dynamics of price changes. Nevertheless, they reduce the amount of taxable profit and income tax actually paid by the entity (the effect of tax shelter). Therefore, in the case when the NSI and expenses increase and the depreciation deductions remain unchanged, the effect of the tax shelter decreases. It is not always easy to determine such index, since the different components of the cash flow forming the profit, change with the same rate in real terms. However, a simplifying assumption has been made about it in the model situation under discussion. Note that due to external chaotic conditions (new technologies, pandemic, instability of world financial markets), classical models for forecasting and discounting cash flows cease to work. Therefore, depending on the length of the investment horizon, fractal time series analysis and fuzzy set theory should be applied. Since there is also a need to use real-time databases, it is appropriate to use FinTech computer models.