Theoretical-Methodological Basis of the Time Value of Money in Developing Countries

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Summary

In the article, the latest literary sources, the sequencingconsistently studied economic theory and economic practice in such an important issue, such as the time value of money, Showing his determination and application features using the developing country preven. The study is particularly relevant to the issue of the Georgia, when in the foreground on the need for coordination of fiscal and monetary political risk.

Keywords: Time value, value of money, inflation, cost of capital, Rate of Inflation, Interest Rates, Efficiency, hard currencies.

რეზიუმე

ფულის დროითი ღირებულების თეორიულ-მეთოდოლოგიური საფუძვლები განვითარებად ქვეყნებში

სტატიაში, უახლეს ლიტერატურულ წყაროებზე დაყრდნობით, თანმიმ-დევრულადაა შესწავლილი ეკონომიკური თეორიისა და სამეურნეო პრაქტიკის ისეთი მნიშვნელოვანი საკითხი, როგორიცაა ფულის დროითი ღირებულება, ნაჩ-ვენებია მისი განსაზღვრისა და გამოყენების თავისებურებანი განვითარებად ქვეყ-ნებში.საკითხის კვლევა განსაკუთრებით აქტუალურია თანამედროვე საქართვე-ლოსათვის, როდესაც წინა პლანზე დგება ფისკალური და მონეტარული პოლიტი-კის კოორდინირების აუცილებლობა.

საკვანძო სიტყვები: დროითი ღირებულება, ფულის ღირებულება, ინფლაცია, კაპიტალისფასი, ინფლაციის განაკვეთი, საპროცენტო განაკვეთები, ეფექტურობა, მყარ ვალუტაში.

Introduction

Time value of money is an economic principal determining future value of currently available money. Despite the fact that present value of available cash is considered more valuable than the same amount in the future, the time value of money could be described as money's potential to grow in value in the future.

Money's value over some period of time could be increased if certain interest rate applies; however inflation and deprecation rates raises concern. Generally, inflation rate as one of the important factors in determining present value of future cash flows has reverse effect on the time value of money.

Plain text:The present or future values of cash flow are calculated using so called discount rate, which also is known as a cost of capital. Thus, discount rate is used to determine present value of future cash flow that is determined by three main factors:

- Rate of Inflation – predicted high inflation rate causes investors to require high rate of return for their investments.
- Interest Rates – low interest rates on deposits and high rates on debt securities cause the grater loss of income from interests on future money flows. This becomes ground for investors to demand higher rate of return to their investments.
- Risk Premium –greater risk related to future cash flows of an investment,establishesamong investors' requirement to compensate additional risk.

Time value of money is widely used tool in financial management to understand economic impact of the time value of cash flows in business decisions. However, in order to calculate time value of money three key principles shall be applied, equations given below:

1. Cost Of Capital:
2. Present Value Of Cash Flows:

Whereas, PV stands for Present Value of Cash Flow; FV – Future Value; r – interest rate per time period; n – number of time periods.

3. Future Value Of Cash Flows:

Whereas, FV – Future Value of Cash Flows; P – Principal; r – interest rate per year; n – number of years; c - number of compounding periods in a year.

Calculation of the time value of money allows defining amount that is needed to invest today to meet certain targets in the future.

Penny Jackson (2012) in OECD's Value For Money and International Development describes value for money (VFM) as a way to keep balance between the "three E" – economy, efficiency and effectiveness:

- Economy: reduce cost of resources;
- Efficiency: minimize input and increase output while keeping same or better quality;
- Effectiveness: successfully achieving the target outcome.

Foreign Direct Investment (FDI) is the major sources of capital inflow, especially, in developing countries. It helps

to create jobs, increase disposable income of households, develop market access regulations and modernize technology, achieve fiscal stability, improve social environment and even develop political culture at local market.

Governments of developing countries are using range of financial instruments to attract FDI in to their economy, however at least one of three factors determining discount rate of the cash flow makes negative influence on Government's efforts to attract FDI. Does not matter how attractive financial instruments Governments will deploy, if there is no stable inflation rate and competitive interest rates on creditswith considerably low risk premium, not many investors will show willingness to invest in local market. Activities related to attracting investment needs complex approach: Governments of developing countriesneed to create not only seductive incentives but primarily shall work on stabilizing economic indicators such as purchasing power parity (PPP), GDP per capita stable growth rate, etc.

Consumers in developing countries are usually price sensitive mainlybecause of limited disposable income. At the same time, corporate consumers are demonstrating concerns on prices on goods and services to gain competitive advantage at local market, so they always take into consideration value analysis when signing important purchase agreements. We conclude that companies in developing as well as in developed markets need to introduce cost-innovation capabilities instead of simply cutting costs for goods or services that may negatively affect quality of company's final products. It is advisable companies to spend resources on research and development (R&D) rather than using simple cost cutting techniques. R&D may bring new competitive advantage to the company because of restructured cost in innovative ways so they can offer customers higher quality products with lower price compared to their direct or indirect competitors.

When investing in R&D, restructuring cost or making any other strategic activities, companies are analyzing time value of money that particularly is sensitive in developing countries.

Not only private but public sector as well is cautious towards the time value of money when developing range of social welfare projects. Small developing countries are not able to fund their social projects based on national output, mostly they rely on foreign direct investment, international financial aid and public debt. Most developing countries have high debt to Gross Domestic Product (GDP) ratio and the ratio is increasing steadily in past decades. Only exceptions are countries who carefully studied time value of money they borrowed and invested in development of national economy along with efficient strategy to attract foreign direct investment; good example of such successful country is Singapore who wisely used every cent they received either from foreign investors, lenders or donors.

Paying back the debt, especially in a strong currency is tough for developing countries whose national production is on low level. In most cases such countries are taking new credits topayback old ones.

Vanessa Baird (1998) and Wayne Ellwood (1998) describes worldwide debt crisis that started in 1970 by oil exporting countries depositing their access money in international banks with high rankings. Those banks used available long-term deposits to issue credits for large development projects in different parts of the world. As a result, demand on those credits increased and interest rates increased consequently, it was followed up by recession and low commodity prices that caused size of debts to start growing rapidly. Developing countries taking credits for social programs rather then for development of manufacturing sector are suffering most; after increased interest rates and low level of foreign capital inflow, they ended up by double-digit debt to GDP ratio which in 21st century became usual practice. Most developed or developing countries nowadays have on average 40 percent debt to GDP ratio.

Biggest problem for developing economies is that they have so called soft currencies and they are paying back debts in so called hard currencies. Such problem is critical in countries that fail in calculations of the time value of money and prioritization of public spending. This is especially hard for small economies whose export volume is on low level and import increases steadily.

Conclusion:Private and especially public sector needs to think for every cent they own today how to best use it today and if not used, carefully calculate what will be the future value of it. Every cent public sector of developing nations are borrowing shall be justified and before taking credits think for answers: (1) Do we really need to fund this social welfareproject via debt or we better support development of manufacturing sector?Do we really need to refinance our old debt or we better re-structure our debt? (3) Shall we take new credit to increase public spending or we better cut bureaucracy cost?

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