



THE IMPACT OF INFLATIONARY PROCESSES ON INVESTMENT PROJECT APPRAISAL IN THE CONTEXT OF AN EMERGING MARKET ECONOMY: PRACTICE AND METHODOLOGICAL CHALLENGES IN UZBEKISTAN

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Abstract. *Inflation is one of the most significant yet frequently underestimated factors in the appraisal of investment projects. Under conditions of high and volatile inflation, nominal cash flows distort the true economic efficiency of a project, potentially resulting in erroneous investment decisions. This paper examines how inflationary processes affect key investment appraisal indicators—Net Present Value (NPV), Internal Rate of Return (IRR), and Payback Period—using Uzbekistan as a case study, where annual inflation fluctuated between 7% and 14% from 2017 to 2023. Both theoretical approaches to inflation adjustment (nominal vs. real methods, cash flow indexing, scenario analysis) and practical difficulties encountered by investors and analysts in the Uzbek context are explored. The study reveals that only 28% of analyzed investment projects correctly account for inflation, while the majority rely on simplified or incorrect methods, leading to systematic overestimation of expected returns. Practical recommendations are proposed to improve methodological rigor and investment decision-making quality.*

Keywords: *inflation, investment project appraisal, NPV, IRR, Uzbekistan, real vs. nominal cash flows, inflation expectations, scenario modeling.*

Introduction

Inflation plays a crucial role in shaping the real economic outcomes of investment projects, particularly in emerging market economies characterized by

price volatility and macroeconomic uncertainty. In Uzbekistan, despite recent progress in stabilizing inflation, price dynamics remain a significant challenge for long-term investment planning.

Ignoring inflation in investment appraisal leads to distorted financial indicators and creates an illusion of profitability. Nominal cash flows may increase over time, but their real purchasing power often declines, undermining the true economic efficiency of projects. This issue is especially relevant for capital-intensive investments with long payback periods.

The purpose of this study is to analyze the methodological challenges of accounting for inflation in investment project appraisal in Uzbekistan and to propose practical tools to enhance analytical accuracy and decision-making reliability.

Methods

The research employs a mixed-methods approach combining theoretical analysis and empirical investigation.

The theoretical framework is based on classical investment appraisal techniques, including Net Present Value (NPV) and Internal Rate of Return (IRR), with particular attention to the distinction between nominal and real valuation methods. The Fisher equation is used to link nominal discount rates, real rates, and expected inflation.

Empirically, 45 investment memoranda prepared between 2020 and 2024 were analyzed across several sectors, including industry, agriculture, energy, and services. Scenario modeling and sensitivity analysis were applied to assess the impact of inflation deviations on project outcomes. Expert interviews with financial analysts, bankers, and public officials supplemented the quantitative analysis.

Results

The analysis revealed significant methodological shortcomings in inflation treatment. Approximately one-third of projects ignored inflation entirely, while others

applied inconsistent or incomplete adjustments. Only 28% of the reviewed memoranda employed a coherent real or nominal framework.

Failure to properly account for inflation led to substantial distortions in economic indicators. In several cases, Net Present Value was overstated by 15–30%, and projects deemed profitable under nominal assumptions became unviable when recalculated in real terms under higher inflation scenarios.

The findings also highlight the specific inflationary characteristics of Uzbekistan, including higher inflation rates for investment goods compared to consumer prices, significant import dependence, and exposure to exchange rate fluctuations.

Discussion

The prevalence of methodological errors reflects broader institutional and informational constraints. Limited access to reliable price indices for capital goods, insufficient analyst training, and the absence of standardized appraisal guidelines contribute to inconsistent practices.

Moreover, inflation expectations among businesses often exceed official statistics, further complicating forecasting. The tendency to prioritize speed over analytical rigor exacerbates the problem, particularly in public-sector investment planning.

Policy Recommendations

To improve the quality of investment appraisal under inflationary conditions, the following measures are recommended:

1. Adoption of standardized methodological guidelines for inflation adjustment.
2. Mandatory scenario and sensitivity analysis for major investment projects.
3. Development of open-access databases for sector-specific price indices.
4. Integration of exchange rate risk into project appraisal models.
5. Capacity-building programs for analysts in both public and private sectors.

Conclusion

Inflation is a critical determinant of investment project viability in emerging market economies. In Uzbekistan, neglecting inflation leads to systematic appraisal bias and inefficient capital allocation. A transition toward real-term, scenario-based analysis is essential to ensure sustainable and economically sound investment decisions.

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