Investment Risks and Ways to Reduce Them

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ABSTRACT

To attract investments, it is necessary to demonstrate the investment potential of our country in every way. Investors must analyze the risks that may affect investment projects before investing in the conditions of the coronavirus crisis. Based on the above, it can be said that improving the methodology of analysis and assessment of investment project risks based on modern and best practices has become one of the current urgent tasks.

Keywords: Investments,

I. Introduction

It should be noted that when defining the priority directions of our country's development and development programs, the main attention is focused on creating a more favorable investment environment and wide attraction of foreign investments. President of the Republic of Uzbekistan Sh.M. Mirziyoev said: "Investment is the driver of the economy, it is no exaggeration to say that it is the heart of the economy in Uzbek terms. Along with the investment, new technologies, advanced experiences, and highly qualified specialists will enter various industries and sectors, regions, and entrepreneurship will develop rapidly"[1]. Because the implementation of an active and effective investment policy and making the investment environment more favorable for investors will have a positive effect on the economic and social development of the country.

The coronavirus pandemic has a significant impact on the international capital flow, which is foreign to the national economy To attract investments, it is necessary to demonstrate the investment potential of our country in every way. Investors must analyze the risks that may affect investment projects before investing in the conditions of the coronavirus crisis. Based on the above, it can be said that improving the methodology of analysis and assessment of investment project risks based on modern and best practices has become one of the current urgent tasks.

II. Literature Review

In the economic literature, the concept of risk is defined differently by several economists. The word "Risk" is derived from the Spanish-Portuguese word "underwater rock", and it means to skilfully go around the rock, and be connected with danger. In the world-famous Webster's dictionary, risk is defined as "the possibility of danger, damage, and loss"[2].

Michel Crouhy, Dan Galai, and Robert Mark have the following comments about risk:

[1] Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis. Tashkent. January 25, 2020.https://uza.uz/oz/politics/zbekiston-respublikasi-prezidenti-shavkat-mirziyeevning-oliy-25-01-2020

[2] Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis. Tashkent. December 28, 2018.www.press-service.uz

"We understand that risk is not synonymous with the size of a cost or a loss. After all, some of the costs we expect in daily life are very large indeed if we think in terms of our annual budgets. These costs are big, but they do not threaten our ambitions because they are reasonably predictable and already allowed for in our plans.

The real risk is that these costs will suddenly rise unexpectedly, or that some other cost will appear from nowhere and steal the money we've set aside for our expected outlays. The risk lies in how variable our costs and revenues are"[3].

Professor A.V.Vakhabov defined that: "Investment risk is a component of the general financial risk, which shows the possibility of financial losses and the inability to fully receive income from investments or the appearance of additional investment costs"[4].

Martina Merkova, and Josef Drabek commented on risk: "Risk is an unavoidable part of any entrepreneurship, so it is very important to make its analysis, but, paradoxically at the same time, it is one of the most underestimated parts of the project"[5]

Analysis of the set of definitions given to the nature of risk allows us to single out the main aspects that lead to risky situations: the random nature of the emerging situation; the availability of alternative solutions; the ability to determine the expected result; the likelihood of additional costs; the possibility of obtaining additional income.

Currently, project risks are understood as a set of situations that lead to a decrease in the expected benefit (efficiency) from the project. At the same time, the risk of an investment project is also the sum of risks that impede the implementation of the investment project or reduce the efficiency of the project. Investment risk can be defined as the possibility of a loss of reserves, the inability to receive income, or the need for additional costs as a result of making a certain investment decision.

III. Analysis And Results

Today, in the implementation of investment projects, the types of risks affecting the project are not only identified, but also analyzed and evaluated, and then measures are developed to effectively manage and reduce such risks. During the development and implementation of the investment project, it is necessary to separately consider, study and analyze each type of risk, and evaluate and develop measures to reduce them, which is the most effective way to fight against risks.

Risk management can be understood as a set of actions aimed at determining the rational combination of risk and profit[6]. Risk management is a structural process carried out continuously in the company to identify, evaluate, calculate, control (monitor), and reduce the risks affecting the profit goals of the investment project and their consequences. The purpose of risk management and assessment is to provide the investor with the necessary information to make decisions about the advisability of participating in the implementation of an investment project and to develop measures to protect against possible financial losses.

In our opinion, risk management consists of six stages, the first of which is to determine the risk factor, that is, the cause of the risk and the event or situation that may affect the project. In the second stage, the analysis and assessment of risks are carried out; it should be noted that risk assessment can be divided into two groups: a) qualitative risk assessment - aimed at identifying types of risks, their causes, and organizational measures to reduce risks; b) quantitative risk assessment - means calculating a quantitative expression of project

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[3] Michel Crouhy, Dan Galai, Robert Mark. The essentials of risk management. Copyright © 2006 by The McGraw-Hill Companies, Inc. - 416 p. (2-5 pages.)

[4] Vakhabov, A.V., Xajibakiev, Sh.X., Muminov, N.G. (2010). Khorijiy Investitsiyalar. (Foreign Investments). Tashkent: Moliya. 2002. p.324.

[5] Martina Merkova, Josef Drabek. (2015). Use of Risk Analysis in Investment Measurement and Management. (http://toc.proceedings.com/29281webtoc.pdf). Access: 16.03.2021. Procedia Economics and Finance Volume 34, pp. 656-662.

[6] Mamatov, B.S., Khuzhamkulov, D.Yu., Nurbekov, O.Sh. (2014). Investitsiyalarni Tashkil Etish va Moliyalashtirish. (Organisation and Financing of Investments). Tashkent: IQTISOD-MOLIYA. p. 608.

risks through project indicators, determining the likelihood of risks and the impact of risks on the project. Next, risk mitigation planning is the application of specific measures within the selected risk management measures and methods. In the fourth stage, risk prevention and control are carried out; specific organizational and technical measures based on specific plans and programs, such as risk monitoring, risk prediction, collection of data on negative impact and subsequent costs associated with risk, and development of risk prevention guidelines are discussed. Then, in the fifth step, risk management methods are selected and applied. At the final stage, information about risky situations and their consequences are collected and recommendations for the future are given. The received instructions and conclusions will be used in the implementation of subsequent projects.

Using the risk assessment methods, we will evaluate the risks of the towel manufacturing enterprise.

Initial information on the project is given below (Table 1,2,3,4).

The main goal of the investment project of "Gentle & Soft" LLC is to get a loan from the bank in the amount of 468,750 US dollars for the production of towels. The loan will be used to purchase electronic jacquard machines from a French company, as well as a belt machine from a German company and raw materials (high-quality cotton yarn) from PolimerNamStroy LLC and Etiqod Savdo Servis LLC.

The total cost of the project is 666 951 US dollars, of which 70.3% or 468 750 US dollars are bank loans, and the remaining 29.7% or 198 201 US dollars are the company's funds.

Table 1.
The cost of the investment project of "Gentle & Soft" LLC

Indicators	Bank loans	"Gentle & Soft" LLC	TOTAL
	USD	**USD**	**USD**
Fixed assets			
Equipment		161 563	161 563
Electronic jacquard machines of a French company	400 000		400 000
Total			***561 563***
Working capital			
Working capital for raw materials	68 750		68 750
Total			***68 750***
Financial costs			
One-time commission fee		4 688	4 688
Commission fee		3 516	3 516
Commission fee for loan management		703	703
Registration		844	844
Interest payments in the pre-production period		9 247	9 247
Insurance		675	675
Rent payment		7 592	7 592
Unpredictable expenditures		9 375	9 375

Total			**36 639**
GRAND TOTAL	468 750	198 201	**666 951**
Total in percentage	70.3%	29.7%	**100%**

The term of the investment project of "Gentle & Soft" LLC is 5 years.
According to the plan, "Gentle & Soft" LLC will reach its full capacity (100%) by the 4th year, and by year the capacity development is set as follows: in the 1st year - 85%; in the 2nd year - 90%; in the 3rd year - 95%; in the 4th year - 100%; in the 5th year - 100% (Table-2).

Table 2.
Schedule of full capacity development for the investment project of "Gentle & Soft" LLC

Reaching full capacity/ Years	**1**	**2**	**3**	**4**	**5**
Capacity	85%	90%	95%	100%	100%
Total revenue	**1 716 839**	**1 847 241**	**1 977 643**	**2 108 045**	**2 108 045**

The production costs of the investment project of "Gentle & Soft" LLC at full capacity are given in the table below.

Table 3.
The production costs of the investment project of "Gentle & Soft" LLC at full capacity

Cost item	**Total costs, USD**	**Fixed costs (share)**	**Variable costs (share)**	**Fixed costs, USD**	**Variable costs, USD**
Material costs	1 243 915	0%	100%	0	1 243 915
Personal costs	151 536	0%	100%	0	151 536
Other expenses (the cost of decorating the fabric)	240 240	0%	100%		240 240
Rent payment	9000	100%	0%	9000	0
Administration services	8 460	100%	0%	8 460	0
Insurance	469	100%	0%	469	0
Depreciation charges	56 156	100%	0%	56 156	0
TOTAL	**1 709 776**			**74 085**	**1 635 691**

Loan terms for the investment project of "Gentle & Soft" LLC are given in Table 4.

Table 4.
Loan terms for the investment project of "Gentle & Soft" LLC

Grace period		**6 months**		
Interest rate		**8%**		
Amount of credit, USD		**468750**		
Payment periods	**Principal payments**	**Balance**	**Interest payments**	**Total payments**
Year 0	0	468750		-
Year 1	52083	416667	36130	88213
Year 2	104167	312500	29514	133681

Year 3	104167	208333	21181	125347
Year 4	104167	104167	12847	117014
Year 5	104167	-	4514	108681
TOTAL	**468750**	**-**	**104186**	**572936**

The structure of cash flows of the investment project of "Gentle & Soft" LLC, future income, and expenses of the investment project are presented in the table below, where investment costs in year 0 amounted to 468,750 US dollars, cash flows in the 1st year amounted to 249713 USD, in the 2nd year 312523 USD, in the 3rd year 203615 USD, in the 4th year 259015 USD, and in the 5th year 267348 USD.

Table 5.
Cash flow from "Gentle & Soft" LLC investment project for the production of towels

Indicators/Years	**1**	**2**	**3**	**4**	**5**
Total revenue (USD)	**1 716 839**	**1 847 241**	**1 977 643**	**2 108 045**	**2 108 045**
Depreciation charges	56 156	56 156	56 156	56 156	56 156
Material costs	1 057 327	1 119 523	1 181 719	1 243 915	1 243 915
Total Income	**603 356**	**671 562**	**739 768**	**807 974**	**807 974**
Period expenses					
Administration services	8 460	8 460	8 460	8 460	8 460
Insurance	469	469	469	469	469
Production costs	151 536	151 536	151 536	151 536	151 536
Other expenses (rent payment, the cost of decorating the fabric)	213 204	225 216	237 228	249 240	249 240
General operating costs	**373 669**	**385 681**	**397 693**	**409 705**	**409 705**
Operating income	**229 687**	**285 881**	**342 075**	**398 269**	**398 269**
Loan interest	36 130	29 514	21 181	12 847	4 514
Taxes and fees	-	-	173 435	182 563	182 563
Net Profit	**193 557**	**256367**	**147459**	**202859**	**211 192**
NCF	**249 713**	**312523**	**203615**	**259015**	**267 348**
DCF (r=18%)	**211 621.2**	**224 449.2**	**123 926.4**	**133 597.1**	**116 860.3**

The following efficiency indicators were identified using the cash flow data of the investment project for the production of towels "Gentle & Soft" LLC:

Table 6.
Efficiency Indicators of "Gentle & Soft" LLC

Net Present Value – NPV, USD	**143503.04**
Profitability index – PI	**1.22**
Internal Rate of Return – IRR, %	**27.67%**
Discounted Payback Period – DPP, days	**3 years 292 days**

In general, the analysis and evaluation of the financial and economic efficiency of "Gentle & Soft" LLC investment project for the production of towels has shown that the efficiency of the project is positive, and the project can be accepted for financing.

A project sensitivity analysis was performed based on a 10% change in the project's initial data. The results of the sensitivity analysis for the planned investment project are shown in Table-7.

Table 7.
Sensitivity analysis of "Gentle & Soft" LLC investment project to produce towels.

Risk factor	Indicators	Unit	Estimated value, USD	Deviation ±10%	NPV after a change, USD	Absolute change, USD	Relative change, %
Q	Production volume (Quantity of product)	tons	663.128	596.815	-455898.42	-599401.62	317.69 %
VC1	Material costs	USD	1057327	1163059.7	-216958.83	-360462.03	151.19 %
VC2	Production costs	USD	151 536	166689.6	96115.14	-47388.05	33.02%
VC3	Other expenses (the cost of decorating the fabric)	USD	204204	224624.4	75950.55741	-67552.64	47.07%
FC1	Rent payment	USD	7650	8415	142959.34	-543.86	0.38%
FC2	Administration services	USD	8460	9306	140857.46	-2645.74	1.84%
FC3	Insurance	USD	469	515.9	143356.38	-146.819959	0.10%
FC4	Loan interest	USD	36130	39743	136172.44	-7330.76	5.11%
NPV	**Net Present Value**	**USD**	**143503.04**				

The results of the project sensitivity analysis by changing the project values ±10 % show that the risk factors that most cause the decrease in NPV are production volume, material costs, the cost of decorating the fabric and production (labor) costs. The effect of other factors such as loan interest and administration services and is not so significant. Costs for rent and insurance have very little effect on NPV.

To use the scenario method, it is necessary to draw up 3 scenarios: optimistic, pessimistic, and realistic. In this example, for a realistic scenario, we select all initial data for the project. And for the optimistic and pessimistic scenarios, we will change the data by 10%. Unlike the sensitivity analysis method, the scenario method considers all parameter changes at once (rather than individually).

IV. Conclusions

It should be noted that when managing the risks of investment projects, management methods are selected based on the results of their analysis and evaluation. This means that the more accurate the project risk assessment is, the more accurate and reliable the project data will be and the more efficient project management will be.

Effective implementation of investment projects in the national economy requires improvement of project risk assessment and management methods. For this, the following conclusions and recommendations were developed:

1. Management methods are selected based on the results of their analysis and evaluation in the management of investment project risks. Effective project management leads to the desired effective result. Therefore, it is necessary to carefully and perfectly perform the project risk assessment.

2. When choosing the methods of risk assessment and management of investment projects, it is necessary to take into account the specific characteristics of the risks affecting the project. For example, risks are divided into insurable and non-insurable types. It is preferable to determine the method of allocating financial reserves and the amount of funds needed to cover costs rather than managing uninsurable risks, force majeure risks, or political risks through the insurance method and calculating insurance costs;

3. When assessing the risks of investment projects, it is necessary to carry out comprehensive assessment work, that is, when assessing risks, one should not be satisfied with only one assessment method, but objective (based on statistical and reporting data) and subjective (based on expert opinion) methods, as well as quality and a complex assessment based on the integration of quantitative assessment methods should be carried out. In this case, the disadvantage of one method is compensated by the advantage of the second method, and a perfect assessment of risks is achieved;

4. Risk assessment methods in the national economy should be based on foreign experiences and especially on information and communication technologies. The use of risk management methods based on financial instruments proposed by foreign economists leads to the use of innovative financing mechanisms and the widespread use of advanced and modern management methods.

References

1. Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis. Tashkent. January 25, 2020.https://uza.uz/oz/politics/zbekiston-respublikasi-prezidenti-shavkat-mirziyeevning-oliy-25-01-2020
2. Address of the President of the Republic of Uzbekistan Shavkat Mirziyoyev to the Oliy Majlis. Tashkent. December 28, 2018.www.press-service.uz
3. Michel Crouhy, Dan Galai, Robert Mark. The essentials of risk management. Copyright © 2006 by The McGraw-Hill Companies, Inc. - 416 p. (2-5 pages.)
4. Vakhabov, A.V., Xajibakiev, Sh.X., Muminov, N.G. (2010). Khorijiy Investitsiyalar. (Foreign Investments). Tashkent: Moliya. 2002. p.324.
5. Martina Merkova, Josef Drabek. (2015). Use of Risk Analysis in Investment Measurement and Management. (http://toc.proceedings.com/29281webtoc.pdf). Access: 16.03.2021. Procedia Economics and Finance Volume 34, pp. 656-662.
6. Mamatov, B.S., Khuzhamkulov, D.Yu., Nurbekov, O.Sh. (2014). Investitsiyalarni Tashkil Etish va Moliyalashtirish. (Organisation and Financing of Investments). Tashkent: IQTISOD-MOLIYA. p. 608.