Contribution of Islamic instruments to support the performance of Portfolio in Algeria

Contribution des instruments islamiques pour soutenir la performance du portefeuille en Algérie

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Abstract :

The study aims to determine the effect of compensating the government bonds by Islamic government sukuk on the total return of the portfolio of the Algerian investor. The study reviewed the types of shares traded in the Algerian financial market, through which two financial portfolios were formed, one of which includes government bonds and the other which includes government instruments. The most important finding was that Islamic sukuk yield returns that could offset interest rates on bonds that many investors avoid for legitimate reasons. These results have prompted us to urge the relevant actors to seek to provide a legal system for the issuance and circulation of Islamic instruments, which would benefit the various actors involved.

Mots clés:
Mot clé.1: Soukouk islamique.
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Résumé:

L'étude vise à déterminer l'effet de la compensation des obligations d'État par les sukuk du gouvernement islamique sur le rendement total du portefeuille de l'investisseur algérien. L'étude a passé en revue les types d'actions négociées sur le marché financier algérien, à travers lesquels deux portefeuilles financiers ont été constitués, l'un comprenant des obligations d'État et l'autre des instruments publics. La conclusion la plus importante était que les sukuk islamiques produisent des rendements qui pourraient compenser les taux d'intérêt sur les obligations que de nombreux investisseurs évitent pour des raisons légitimes. Ces résultats nous ont incités à exhorter les acteurs concernés à chercher à fournir un système juridique pour l'émission et la circulation des instruments islamiques, qui profiterait aux différents acteurs impliqués.

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1- The introduction: The basic rule of a portfolio is the principle of diversification in the selection of its components with the aim of minimizing the overall risks of the portfolio and increasing its return, which makes an investor in securities follow up on the total return of the available portfolio as well as the strength and returns of each financial sheet to adopt an optimal combination at time. The main obstacle to this principle for investors in the Muslim's world, however, is that securities are often restricted to stocks and bonds, often making shares the portfolio's only component, causing the financial market to lose a wide range of dealers because of their refusal to deal with the usurious benefits offered to bonds.

For these and other reasons, we should have offered a suitable alternative to bonds, through which we could achieve a variety of issues within the portfolio, which are currently represented in "Sukuk", a kind of securities governed by Islamic legal contracts.

Based on all of the above, we will examine the characteristics of these instruments, their compatibility and the dynamics of the portfolio's operation, trying to determine whether this instrument represents a suitable alternative to bonds for the profit-making purposes of investors in the Algerian financial market, by addressing the following major problem.

- What impact does Islamic sukuk have on the performance of portfolio in the Algerian financial market?

Through this major problem, some of the following sub-questions can be addressed:

- How do you configure a portfolio?
- what are the financial characteristics of Islamic instruments?
- How are Islamic instruments effective when included in the portfolio?

On this basis, the study will be divided into three main themes:

- Theme one: Mechanism for building and forming a portfolio;
- Theme two: Islamic sukuk is a form of securities;
- Theme three: Effectiveness of the portfolio through the inclusion of Islamic instruments.

2. Mechanism for building and forming a portfolio:

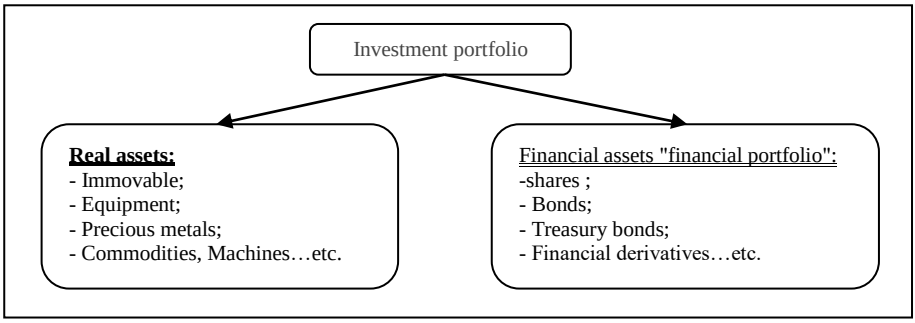
The process of building a portfolio requires steps that must be followed to achieve the ultimate purpose of its composition. Before that, the portfolio and its purpose for formation must be defined and therefore the stages followed in its composition.

2.1. Portfolio, concept - objectives of its composition: The concepts of a portfolio and an investment portfolio are not often distinguished, but in fact between them there is generality and privacy. A portfolio is part of an investment portfolio. Our study is based only on the portfolio.

2.1.1. The concept of a portfolio: The portfolio is an investment in a group of securities, that differ from its type and form, the sector and activity of the issuing body, the date of its due, the expected rate of return, its geographical area…etc, with the aim of maximizing returns and reducing the risk of capital invested in shaping this portfolio.

So the portfolio is the financial part of the investment portfolio that the investor is making, as shown in the following figure:

Figure 01. Contents of the investment portfolio



Source: (Naamane mahsoul, 2018).

2.1.2. Objectives of the composition of the portfolio: The most important objectives that the investor is pursuing in securities are the following (Al-Baqmi, 2018):

A. Profit maximization: That is maximizing risk; If profit is a priority on the investor's top priorities list, it shows that the investor will create a high-risk portfolio.

B. Future Security: This is by forming a portfolio of securities that acts as a cumulative reserve that increases in value over time, in such cases a portfolio of government bonds and stable financial institutions that have equilibrate return.

C. Growth: that means cumulative capital increase, in this case an investor searches the areas which achieve this objective. That makes him resort to the shares of companies whose board of directors tends to expand, increasing their production lines, capital or profits.

Combine the investor these objectives with maximizing their impact is far-fetched and not objective, because of multiplicity of variables that are outside of their scope and associated with non-controlling parties, which make him based on experience, expertise and estimate, to be able to form an optimal portfolio.

Thus, it can be said that the main common goal from forming any portfolio is to achieve an additional return on the invested capital, with difference in its level on risk's degree accepted by the holder of such a portfolio, while he

may also have other sub-objectives that combine his directions, needs, and his financial and psychological behavior.

2.2. Stages of building a portfolio: The process of building a portfolio requires the intervention of many parts, including the investor or ‘‘portfolio owner’’ whose portfolio is formed based on his or her future goals and aspirations. In addition to the investor there is another important part to the success of the process, and he is the manager of the portfolio. He works on managing the portfolio by adopting the elements of expertise and experience in the financial field and adopting the appropriate investment policy to achieve the goals of the investor.

This process is carried out by stages which are listed as follows:

2.2.1. To plan a portfolio: The agreement process between the investor and the manager on the determinants and controls to be adhered during the formation of a portfolio is the first stage, when The investor will adhere to certain controls and the manager will be restricted to certain determinants that enable him to take the appropriate investment decisions.

The determinants or constraints of portfolio building are the goals and wishes of each investor, which are constrained by several factors, including: His priorities, how old he is, how much of his capital, how dependent he is on another source of income or not…etc.

In general, the determinants for the building of the portfolio can be limited to the following three elements:

A. Capital growth: This is the rate of increase in investment capital, the realization of which is linked to the time period of the investor’s need for liquidity, if he is looking for liquidity in the short term, in which case capital is channeled to short-term investments that achieve a stable and secure growth rate. But if he doesn’t look for short-term liquidity, in this case, he’s comfortable, and capital is channeled into long-term investments that achieve a higher growth rate.

B. Return or profit growth: The desired return will vary according to the needs and orientations of the investor himself. The investor may need a periodic return, and the investment may be directed at financial instruments with fixed returns, such as bonds. He may also be a person who wishes to grow capital, and his investment will be directed at financial instruments with variable returns, such as shares.

C. Level of risk: It is the risk of losing some or all of the invested capital, and its degree is determined by the desired return, so there is a disparity in risk tolerance levels from one investor to another.

2.2.2. ‘‘Appropriate investment policy’’ stage: After the investor sets his goals, it will come the portfolio manager role, who may be the investor himself, chooses the appropriate investment policy "offensive, defensive or

balanced" based on the investor's goals and who depend on the selection process of the securities forming his financial portfolio.

2.2.3. Investment analysis stage: This stage is the pricing and valuation of securities to determine the optimal mix. The analysis is based on both return/risk of securities, the use of asset pricing and valuation models "as a MARKOWITZ model, MEDAF model or APT model", and the use of market indices to estimate market return and risk.

2.2.4. Stock purchase stage: Depending on the results of the previous stages, the actual composition of the portfolio starts, so that the purchase of securities and the actual building of the portfolio actually takes place. However, the latter requires periodic measurement and evaluation, which is measured the level of performance of the portfolio and the extent to which it has achieved the goals outlined at the planning stage, using the performance measures of the investments portfolios, the most important of which are "Sharpe Scale, Trenor Scale, and Jensen Scale".

3. Islamic sukuk is a form of securities:

As we've said before, portfolio is not limited to well-known securities like shares and bonds, so it is possible to be expanded in its components or replace it by other financial instruments existed in the market; In this regard, we will refer to Islamic Instruments as one of these instruments available. It should be noted that under the term Islamic sukuk falls both investments and endowment (Wakf) instruments, and therefore both types will be dealt with separately.

3.1. Investment instruments, their characteristics-types: Investment instruments are defined as: "Documents of equal value representing common shares in the ownership of objects, benefits, services, assets of a particular project or special investment activity, after the collection of the value of the instruments and the closing of the door for subscription and the commencement of their use in what they were issued for (AAOIFI, 2017, p. 467)".

The definition of AAOIFI is that investment instruments are securities which represent the owner's share in a particular project, asset, activity…etc, it's a possession instrument like shares, not a debt instrument like bonds.

3.1.1. Characteristics of investment instruments: The most important features of this tool can be inferred from the following properties (AAOIFI, 2017, p. 471):

- ✓ It is a document issued in the name of the owner or the holder of an equally valuable class to establish the right of the owner to the financial rights and obligations which it represents;

- ✓ It represents a common share in the ownership of assets intended for investment, objects, benefits, services or a mix of them, moral rights, debts and cash, and does not represent a debt of liability to the holder;
- ✓ That they are issued on the basis of a legitimate contract with legal controls governing their issuance and circulation;
- ✓ Its circulation is subject to the term of trading what it represents;
- ✓ Its owners participate in its sheep as per the agreement set out in the release leaflet, and bear the fine of the same with regard to the instruments each owns.

Thus, it can be said that Investment instruments shares the shares as a proprietary instrument for which the owner bears the profit or loss, while the bonds share a defined maturity date. The circulation of investment instruments, as represented by the respective legal contract, shall be correct.

3.1.2. Types of investment instruments: The Accounting and Auditing Organization for Islamic Financial Institutions has prepared about 14 types of investment instruments, the most important of which are (AAOIFI at the disposal of researchers, 2017, pp. 467-482):

A. Rental instruments: Issued by a leased or promised owner of an asset, or by a financial intermediary acting on behalf of the owner, for the purpose of selling it and paying for it from the proceeds of the subscription and the asset becomes the property of the sukuk holders. As for their circulation, this may be from the moment they are issued after the title holder of the assets until the end of their term.

B. Instruments of salam: They are financial documents of equal value issued for the collection of salam capital, and the salam good becomes the property of the holders of instruments, and may not be traded.

C. Instruments of manufacture: They are financial documents of equal value issued for use in the manufacture of a commodity by the proceeds of subscription, and the manufacturer becomes the property of sukuk holders. As for their circulation, it is possible to do so if money becomes deeds-owned objects of the makers in the settlement period.

D. Instruments of profit: They are financial documents of equal value issued to finance the purchase of a profitable good, and the profitable good becomes the property of the bondholders. As for their circulation, this may be after buying the goods and before they are sold to the buyer.

E. Instruments of participation: Financial participation documents representing projects or activities managed on a company basis by appointing a partner or others to administer them. As for its circulation, this may be after the door of the subscription was closed and the activity began.

F. Speculative instruments: Financial participation documents representing projects or activities managed on a speculative basis by assigning participants from partners or others to manage them. As for their circulation,

this may be after the door of the subscription was closed and the activity begins.

G. Proxy instruments on investment: They are Financial participation documents representing projects or activities run on the basis of an agency's investment by appointing an agent for the sukuk holders to manage them. As for their circulation, this may be after the subscription was closed and the activity began.

H. Farming instruments: They are financial documents of equal value issued to use the proceeds of a subscription to fund a project on the basis of agriculture, and the sukuk holders become a share in the harvest as specified by the contract. As for their circulation, this may be after the door of subscription was closed and the activity began if the landlords were the owners of the deeds. If they are committed to work (agriculture), they may only be circulated if trading is done after good farming.

I. Instruments of watering: They are financial documents of equal value issued for the use of their proceeds in the watering of productive trees, and for their main tenancy and sponsorship on the basis of a contract of watering. The campaign of deeds becomes a share of the fruit as specified by the contract. As for their circulation, it may be after the door of subscription and the start of activity is closed if the sukuk holders are landlords. However, if they are committed to work (watering), they may not be traded unless after the emergence of the right to use or use for sale.

J. Instruments of grooming: They are financial documents of equal value issued for the use of their proceeds in plating trees and for the work and expenses required by such planting on the basis of a grooming contract. The sukuk holders become part of the land and cultivation. As for their circulation, it is possible to do so after the door of subscription and the start of activity has been closed, whether the sukuk holders are landlords or are committed to planting.

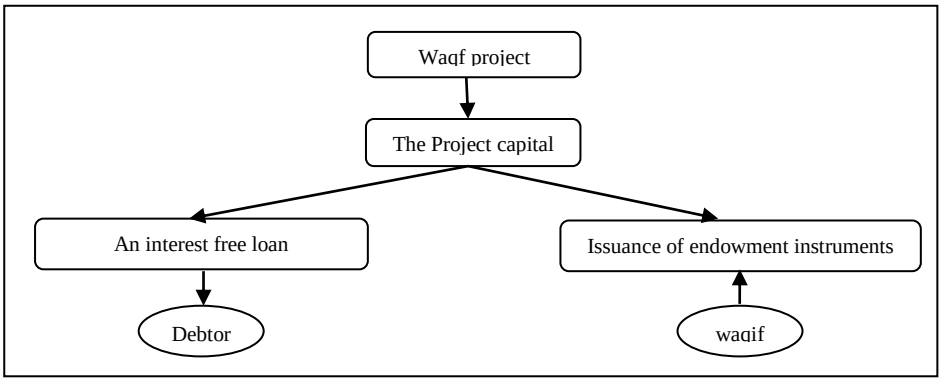
3.2. Endowment instruments, characteristics-goals:

Endowing instruments are defined as: "They are instruments issued by the Endowment Foundation, and are offered to the public for subscription, and are then directed to finance the investment endowment projects. The returns of which are in favor of the endowment persons" (Araban, 2017, p. 15).

The previous definition shows that the legal instruments are documents to prove the contribution of the holder in financing project, which allows us to say that they carry the same meaning of shares. However, the difference between them is that the returns of the endowing instruments are not refer to the holder, but rather to the beneficiaries and the endowment persons who deserve them. The endowment will work on disconnecting the capital related to the endowment project which it is currently carrying out, and

therefore issuing the endowment instruments that are given to the endowment, It has recourse to a proper loan as an additional method of financing the existing endowment project, as shown in the following figure:

Figure 02. Structure of the process of dismantling a project



Source: (Lahsen Oubdi, 2018).

3.2.1. Characteristics of endowment instruments:

Endowment instruments differ from other securities in many of the characteristics that illustrate the most important features of this tool, as listed below (Bou Salem, 2019, p. 26):

- ✓ Endowment sokuk is a product of Islamic Financial Engineering Instruments, which is the form of securities or written certificates of value paid from the endowment persons, with a view to directing it to establish a project and achieve the intended benefit.
- ✓ Have the ability to issues small and large monetary values, which allows for popular participation and general public to contribute.
- ✓ Endowment Instruments is one of the mechanisms contributing to economic development, through their ability to mobilize and channel financial resources towards investment and development projects that are of general benefit to individuals and society.
- ✓ The endowment instruments contribute to achieve social development, and this is reflected in the fight against poverty and unemployment through the establishment of special funds, which reflect positively on society and reduce the disparities between rich and poor.

From what said above appears the difference between this instrument and other instruments known. The most important characteristic of these instruments is that their holders are considered to be endowments (donors) rather than investors. The issuing of this instrument is aimed at collecting donations from the various social groups. Although the producer invest the subscription but the holders (wakifin) don't benefit from the project's returns but it channeled other part of society that is the poor part and who need any helping sort, these sukuk are given to the endowment by the endowment institute to ensure their monetary endowment and preserve

rights, these are real examples for Contributions of endowment by funds issued by the following States: Kuwait, Oman, Saudi Arabia, Sudan.

3.2.2. Objectives of endowment instruments:

The objectives of the endowment instruments may be summarized as follows (Balmoushi, 2018, p. 238):

- Funding for the Islamic Endowment contribute to its revival. This funding can also be directed to broader areas that benefit all sectors and groups of society.
- The development of charitable work by introducing new models.
- Meet the needs of society and citizens in areas that are not supported properly.
- Popular participation in calling for a halt and managing its projects.

Therefore, the main objective of the Waqf Acts is to provide funding for the endowment sector through the collection of donations of popular participation, which is a charitable donation that is contrary to the profit-making goals of investors.

4. Effectiveness of the portfolio through the inclusion of Islamic instruments:

The main problem in the study is the effect of the types of Islamic instruments on the performance of the Algerian portfolio. On this basis, we will form two portfolios, one consisting of a variety of securities circulating in the Algerian financial market, from government's bonds and shares, and the second portfolio consist of only shares, in addition to the tool of governmental Islamic instruments (investment and endowment) within the portfolio. After that we compare between them to get the final result that shows the effectiveness of this instrument or not in the supporting of the performance of the financial portfolio for the investor.

Study community:

The study community consists of the companies whose shares are traded on the Algiers Stock Exchange and are now distributed in four different sectors after the withdrawal of the Ruwaiba Foundation, leaving each sector:

Insurance, hotel, pharmaceutical industry, tourism. The following table shows the distribution of the study community by sector:

Table 01. Distribution of the study community by sector

Sector Name	Number of companies	The company's name	The Symbol	Percentage %
Insurance	1	ALLIANCEINSURANCE	ALL	20%
Hotel	1	EURASIAN HOTEL	AUR	20%
pharmaceutical industry	2	- SAIDAL COMPLEX - BIOPHARM	- SAI - BIO	%40
Tourism	1	AOM INVEST	AOM	20%
04 Sectors	**05 Companies**	-	-	**%100**

Source: by researchers, depending on the official website of the Algerian Stock Exchange www.sgbv.dz.

Based on the above table, we find that the proportion of companies belonging to each sector (insurance, hotel, tourism) is equal and estimated at 20% for each sector of the total companies listed on the market. As for the percentage of companies belonging to the pharmaceutical sector, it is estimated at 40% of the total companies listed on the market.

Sample study:

Given that the study community is essentially limited to five companies whose shares are traded on the Algiers Stock Exchange, the study will therefore be based on an analysis of the financial statements of these companies, given that the sample study will be the same as the study group to achieve diversification among the sectors within the portfolio of the investor. We exclude the "AOM INVEST" Foundation because of its novelty and lack of information necessary to conduct the study.

Study hypotheses:

- To stabilize the growth rate of stock dividends studied in the coming years at the current rate (2018-2019).
- Stabilization of market prices at the latest announced current value (September 2020).

4.1. First Portfolio:

The expected return of the portfolio requires first the expected return of each of the portfolio instruments in accordance with the industry-recognized rules set out in (Appendix No.01).

4.1.1. Measure expected return of shares: The following table shows the expected return rate for the shares of the Fund's constitution companies (ALLIANCE INSURANCE, EURASIAN HOTEL, BIOPHARM, SAIDAL COMPLEX) for the period (2020-2022) based on the study assumptions, considering that:

$$\text{Profit growthe rate} = \frac{\text{Realizedprofitsin2019} - \text{Realizedprofitsin2018}}{\text{Realizedprofitsin2018}}$$

$$Expectedrateofreturnpershare = \frac{\text{The expected profit share per share}}{\text{The current market price of the share}}$$

Table 02. Projected rates of return for first portfolio instruments for the period (2020-2022)

Company	Realized profits in 2018	Realized profits in 2019	Profit growth rate	Expected earnings for the year 2020	Expected earnings for the year 2021	Expected earnings for the year 2022	Current market price	Expected rate of return for the year 2020	Expected rate of return for the year 2021	Expected rate of return for the year 2022
ALL	45	50	%11,11	55,56	61,73	68,59	377,61	%14,71	%16,35	%18,16
AUR	30	-	-	-	-	-	550	-	-	-
BIO	115	115	% 0	115	115	115	1110	%10,36	%10,36	%10,36
SAI	40,5	25	% -38,27	15,43	9,53	5,88	552	%2,80	%1,73	%1,07

Source: by researchers, based on official price bulletins and monthly reports of stock market activity published on the official website of the Algerian Stock Exchange www.sgbv.dz, using Excel.

From the table above, it appears that the returns rates for ALLIANCE INSURANCE are expected to increase continuously by about 11% over the next three years.

As for the Eurasian Hotel, it does not distribute profits during 2019, so it is not possible to determine the rates of return related to it. In addition to, due to the absence of financial reports for 2019, which require it to know the financial results and analyze the reasons for the lack of distribution, which helps build up future expectations, we will eliminate the Eurasian share in the portfolio.

With regard to Biopharm's shares, it is obvious that the expected rates of return will remain fixed throughout the calculated period, owing to the stability of the profit distribution made by the company, as well as our assumption that the current market prices are fixed at the last announced value on the stock market, which is the market rates for September applied in the table above.

For SAIDAL, its shares are expected to decline by about 38% in the next three years, which does not encourage investors to own or retain these shares, which requires them to be abandoned within the portfolio lineup. Finally, Elians Insurance shares and Biopharm shares the selected tools to form a portfolio based on the expected returns of the shares.

4.1.2. Measure expected return of the portfolio: In this process, we will buy equal amounts of shares (Allians for Insurance and Biopharm) and government bonds (OAT) that make up the portfolio, considering that:

$$E(Rp) = \sum_{i=1}^{n} E(Ri) \times Wi$$

$$\sigma_p = \sqrt{(w_i * \sigma_i)^2 + (w_y * \sigma_y)^2 + (w_z * \sigma_z)^2 + 2(w_i * w_y)\,COV(i,y) + 2(w_i * w_z)\,COV(i,z) + 2(w_y * w_z)\,COV(y,z)}$$

Table 03. First Portfolio

	Expected returns for the portfolio in 2020			Expected returns for the portfolio in 2021			Expected returns for the portfolio in 2022		
	ALL	BIO	OAT	ALL	BIO	OAT	ALL	BIO	OAT
Expected rate of return per share	%14, 71	%10, 36	%5	%16, 35	%10, 36	%5	%18, 16	%10, 36	%5
Amount invested (Wi)	%33. 33	%33. 33	%33. 33	%33. 33	%33. 33	%33. 33	%33. 33	%33. 33	%33. 33
The expected rate of return for the portfolio	%10.02			%10.57			%11.17		
Average expected returns	%10.59								
Portfolio Risk (σ_p)	%0.47								

Source: by researchers using Excel.

It is noted from the table that the expected rates of return for the portfolio are continuously rising during the years studied, owing to the positive impact of the Alianes Stock on the performance of the portfolio in view of the stability of other earnings.

4.2. Second Portfolio:

The composition of this portfolio is based on the same composition of the first portfolio in addition the Islamic instruments (instrument and endowment) instrument, rather than the bonds, to analyze the differences resulting from integrating this instrument into the portfolio.

It should be noted that due to the lack of instruments of investment in Algeria, the study will depend on the investor's orientation towards the international markets dealing with this instrument. The Saudi financial market has been selected (*). On this basis, we will invest in a government company issuing this type of investment instruments, by adopting the Saudi Electricity Company's issuance of governmental sukuk at a rate of return of 4.64% for of 30 years, and considering that the expected returns for the coming years of these sukuk will be the same as their current value.

Table 04. Second Portfolio

	Expected returns for the portfolio in 2020				Expected returns for the portfolio in 2021				Expected returns for the portfolio in 2022			
	ALL	BIO	SUK-waqf	SUK-INV	ALL	BIO	SUK-waqf	SUK-INV	ALL	BIO	SUK-waqf	SUK-INV
Expected rate of return per share /Instrument	%14, 71	%10, 36	%0	% 4.64	%16, 35	%10, 36	% 0	% 4.64	% 18, 16	%10, 36	%0	% 4.64
Amount invested (Wi)	%33. 33	%33. 33	%0	% 33. 33	%33. 33	%33. 33	% 0	% 33. 33	% 33. 33	%33. 33	%0	% 33. 33
Expected rate of return for the portfolio	%9.90				%10.45				%11.05			
Average expected returns	%10.47											
Portfolio Risk (σ_p)	%0.47											

Source: by researchers using Excel.

The table above shows that the government bond repayment with government instruments retains approximately the same rate of return, with the bond portfolio having an average return of 10.59% and the sukuk portfolio having registered 10.47%, at the same level of risk of 0.47%. It is worth noting that the percentage of returns on governments instruments studied is denominated in Saudi Riyals. Therefore, the local currency exchange will support more than the performance of the province, given that the Saudi currency difference is higher.

4.3. Sensitivity study:

Depending on the two tables above, the sensitivity of the portfolio may be studied on the basis of its components, in particular the inclusion of investment instruments without endowment instruments,by offering possible possibilities through the seven positions set out in the following table, considering that:

$$E(Rp) = \sum_{i=1}^{n} E(Ri) \times Wi$$

$$\sigma_p = \sqrt{(w_i * \sigma_i)^2 + (w_y * \sigma_y)^2 + 2(w_i * w_y)\,COV(i,y)}$$

$$\sigma_p = \sqrt{(w_i * \sigma_i)^2 + (w_y * \sigma_y)^2 + (w_z * \sigma_z)^2 + 2(w_i * w_y)\,COV(i,y) + 2(w_i * w_z)\,COV(i,z) + 2(w_y * w_z)\,COV(y,z)}$$

Table 05. Impact of Islamic instruments on portfolio performance

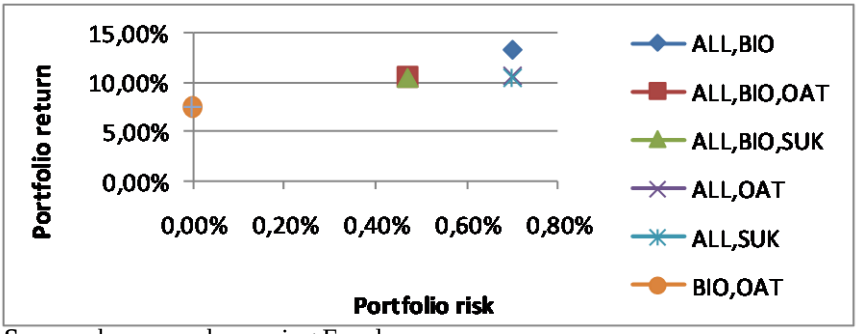
Positions	Portfolio configuration	Portfolio return	Portfolio risk
1	(ALL,BIO)	%13.38	%0.7
2	(ALL,BIO,OAT)	%10.59	%0.47
3	(ALL,BIO,SUKUK-INVESTMENT)	%10.47	%0.47
4	(ALL,OAT)	%10.70	%0.7
5	(ALL,SUKUK-INVESTMENT)	%10.52	%0.7
6	(BIO,OAT)	%7.50	%0
7	(BIO,SUKUK-INVESTMENT)	%7.50	%0

Source: by researchers using Excel.

Depending on the results of the table above, the effect of bond compensation in investment instruments can be more scrutinized within the different combinations of portfolio. Each time the bonds are compensated by government instruments, the result is the same degree of risk with a slight difference in the level of return. This makes us say that the instrument of investment deeds is very suitable for investor's attitudes, especially those who refuse to deal in bonds.

It should also be noted that the efficiency of the portfolio (ALL,BIO), compared to the portfolio in which the (BIO) is replaced by the bonds or investment instruments, is the highest in terms of return at the same level of risk, which in this case makes investing in shares only the best for the investor. This result can be further illustrated by the next form:

Figure 03. **Finance Governor Expected Change of Formation**



Source: by researchers using Excel.

The figure above shows the location of each portfolio within the return/risk curve and the impact of the financial instruments configuration on each portfolio, to show that all the configurations in which the bonds was replaced by the investment instruments are located at the same point (level of return/risk), which stimulates the trend towards this tool as an investment alternative to bonds in the Algerian financial market.

5. Conclusion:

Building an optimal portfolio cannot rely on all available types of Islamic instruments, such as those intended for investment. These are investment instruments of various types that reflects and that the ownership of their owners, their contributions to the trust and their profit shares. And there is another type (Waqf sukuk) channeled to charity which doesn't have future return.

Thus, as an answer to the main problem posed by the study on the impact of Islamic instruments on the performance of the portfolio in the Algerian financial market, the following conclusions can be drawn:

- The inclusion of endowment instruments in the portfolio does not reflect any positive impact on the performance of the portfolio, since this instrument is zero-yield.
- The inclusion of investment instruments, in particular government instruments, such as those under consideration, as an alternative to government bonds in the portfolio reflects almost the same positive impact on the return of the portfolio, which encourages investors to adopt them and to move towards them as a legitimate alternative.
- The possibility of the Algerian financial market adopting this financial product as an additional tool for the available system allowing investors to subscribe to it.

On the other hand, the popularity of these instruments requires taking into account some of the recommendations, including:

- Work to provide a legal system that allows the various bodies concerned with issuing investment instruments, whether by the government or by the financial bodies, such as banks and financial institutions, and stock companies…etc.
- Work on regulating the circulation of these sukuk in the secondary market, which would allow the expansion of the segment of investors in the Algerian financial market, as it seeks what is in accordance with legitimate dealings.
- Spreading cultural awareness of how to deal with these instruments, which allows them to be removed from ambiguity and the positive returns and benefits that they offer to investors or exporters.

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7. Appendices:

(*): This option was adopted based on the report prepared by the international credit rating agency "Moody's" stating that the Saudi Capital Markets Authority approved in August 2020 a decision to allow non-residents to invest in local sukuk instruments to support the gradual expansion of the investor base in Saudi Arabia.

Appendix No 01:

$$\text{Profit growthe rate} = \frac{\text{Realizedprofitsin2019} - \text{Realizedprofitsin2018}}{\text{Realizedprofitsin2018}}$$

$$Expectedrateofreturnpershare = \frac{\text{The expected profit share per share}}{\text{The current market price of the share}}$$

The expected rate of return for the portfolio: $E(Rp) = \sum_{i=1}^{n} E(Ri) \times Wi$

$E(Ri)$: Expected rate of return per share

Wi : The ratio of the stock to the portfolio (the relative weight of the stock), and we have relied on an equal distribution of the relative weights of the portfolio's instruments.

Variance: $\boldsymbol{\sigma_i^2} = \frac{\sum(E(Ri) - E(\overline{Ri}))^2}{N}$

standard deviation: $\boldsymbol{\sigma_i} = \sqrt{\frac{\sum(E(Ri) - E(\overline{Ri}))^2}{N}}$

$E(\overline{Ri})$: The average expected return per share over a given period of time.

Covariance: $COV(i,y) = \frac{\sum(E(Ri) - E(\overline{Ri}))*(E(Ry) - E(\overline{Ry}))}{N}$

Portfolio Risk (two-share): $\sigma_p = \sqrt{(w_i * \sigma_i)^2 + (w_y * \sigma_y)^2 + 2(w_i * w_y)\,COV(i,y)}$

Portfolio risk (three shares):

$$\sigma_p = \sqrt{(w_i * \sigma_i)^2 + (w_y * \sigma_y)^2 + (w_z * \sigma_z)^2 + 2(w_i * w_y)\,COV(i,y) + 2(w_i * w_z)\,COV(i,z) + 2(w_y * w_z)\,COV(y,z)}$$

Correlation coefficient: $\rho = \frac{COV(i,y)}{\sigma_i * \sigma_y}$