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Applicability of Reliability Model for Improving the Performance of Islamic Financial Institutions in Financing Decision by Mousharakah and Moudarabah Contracts

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Abstract

To offer alternatives to improve the performance of Islamic financial institutions (IFIs), we try in this paper to examine the applicability of the reliability model, as a tool to help decision. We opted for the investment by Mousharakah contracts and Moudarabah contracts because of their resemblance to venture capital, where the reliability model was mentioned. To do this, we developed a documentary research which allowed us, on the one hand, to dissect the notions of decision and performance and to confirm a possible nexus among the two, and on the other hand, to justify the use of this model. Then, we set up the theoretical framework of the model for a potential application to our case study. Then, and after confirming this relationship, we were interested in the case of investment by the Mousharakah and Moudarabah contracts, given their similarity to other financing methods, namely venture capital, where the reliability model was mentioned as a decision support tool. All in all, we can find that this approach will probably create an investigative implement to aid investment choice and decision for IFIs in the future. The developed model constitutes an analytical decision-making aid tool for Islamic financial institutions in the future for Traders and investors.

Keywords: Islamic finance, performance, decision making, limited rationality, reliability model

1. Introduction

Despite its abundance, the literature produced on factors influencing performance, or determinants of the performance of Islamic financial institutions (IFIs), could not provide a concise answer to this question. Indeed, the researchers interested in this problem have decided the words; some have tried to explain performance based on internal factors, others have focused their research on external factors.

However, this work favors a strictly financial approach, thereby neglecting the decision-making aspect which allows IFIs to improve their understanding and their representation of the process leading to performance.

The concept of the performance of an organization is often considered to be a result of the decisions taken by it (Souissi, 2009). This causal relationship is widely observed among IFIs due to the competitiveness of the environment in which they operate and the multitude of complex products and services they offer.

Indeed, the specificities of the decision-making context of these institutions in relations of the risk characteristic in an investment potfolio (info irregularity and asymetry and ethical hazard and imperfect reasoning capacities) product the decision-making process difficult during the selection process projects to be financed, above all, by the Mousharakah and Moudarabah contracts. From this perspective, the problem that arises in this article is as follows: do analytical decision-making tools exist, allowing IFIs to improve their performance?

Taking into account the scarcity of literature evoking the tools of decision support during the selection of projects to finance by the Mousharkah and Moudarabah contracts, our contribution is presented as an attempt to project the reliability model provided by the theory of limited rationality, proposed by Heiner (1989). This choice finds its justification in the resemblance between financing by venture capital and that by the Mousharakah and

Moudarabah contracts.

To provide elements of answers to this research question, we first propose to review the existing literature to study the relationship between the investment decision and the performance of IFIs, after having defined the main concepts. Second, we examine the applicability of the reliability model, as a decision support tool, by IFIs in the process of selecting projects for funding.

In order to deal with our research problem, we firstly adopt an inductive approach by extrapolating certain writings and previous studies in order to take advantage of it to understand the basic concepts, namely decision and performance, and by the same to verify the existence of a relation between them. Secondly, and after a possible validation of this relationship, we use the reliability model as a decision-making tool, mentioned in the field of venture capital, to check its applicability in our case study. Finally, in section 4, we conclude.

2. Literature Review

2.1 The Performance

Since its appearance, the notion of performance has occupied an axial place in the various fields of research. Indeed, this concept has been the subject of several studies while remaining polysemic, complex and difficult to determine. Generally, and whatever the field studied; performance represents a quantified result. It is defined as an official report recording a result achieved at an instant T, always with reference to a plan (strategy), an objective and an expected result. Therefore, in management, it is generally measured using financial ratios.

However, this approach is insufficient, Robert Eccles (1991) explains that purely financial measures have long caused dissatisfaction among practitioners as well as that of academics. Several researchers have tried to define the definition of performance from different angles and using different aspects. Therefore, we limit ourselves to presenting three definitions that surround the notion of performance.

Folan et al. (2007) highlightes three aspects of performance governance, an environmental aspect, an operational aspect, and a real aspect.

- The first aspect is that performance is investigated by any unit inside the restrictions of the milieu in which it operates.

- For the second aspect, profitability is continuously connected to one or additional purposes set by an unit, it is consequently measured in relation to these objectives and targets already established and accepted within this same entity rather than those used by external organizations.

- For the third aspect, the profitability is abridged to the pertinent and identifiable characteristics.

Giving to this concept, profitability is formerly affected by the milieu, the purposes to be attained and by the applicable and identifiable characteristics.

Bourguignon (1997) presents a definition that can be applied to all areas of management. Bourguignon (1997) categorizes three key connotations of the term:

- The profitability is an achievement; it does absent. Its determination differs according to illustrations of the "success" of companies or performers.

- Profitability is the outcome of act. This sense only comprises the price. Profitability dimension is unspoken as an evaluation of the results obtained, during a procedure or action.

- Profitability is achievement. In other words, profitability is a procedure, not an outcome that transpires at a given period.

In addition, Marmuse (1997) proposes a definition encompassing all of the elements appearing in the definitions mentioned above: “performance takes on multiple aspects, no doubt convergent, but which deserve to be addressed in more global logic than just the assessment of profitability for the company or for the shareholder ”. Several aspects of performance must therefore be considered.

- According to a strategic dimension which unites the actions undertaken around sustainability.

- From the angle of modest profitability which contains in looking for resolutions outside a superficial construction.

- From a socio-economic performance perspective which reasons for the internal reconfiguration of organizational and social approaches.

2.2 Decision

As for the concept of decision-making, since the 1950s, it has occupied a very important place in all disciplines, thus becoming a quasi-discipline (MTES, 2014). To better understand this notion, we present in the following some definitions proposed by different authors. Woodman et al. (1993) and Mbengue and Ouakouak (2012) assume that the decision is considered as a choice made from among several possibilities, to solve a problem. In the same sense, according to the Strategor group (2005), the decision is a process by which a company modifies its real strategy, that is to say, decisions are the processes by which one makes choices allowing to bring changes to a strategy between a time T and a T + 1.

The decision results from the interaction of several people within an organization, depending on the objective set, the nature of this decision and taking into account the decision environment. Hence the need to study the decision-making mechanisms within the organization, through a reading of the main decision models.

• The rational / classical model

According to this model, the decision-maker is a person (natural or legal) considered as a homogeneous, rational actor who is characterized by an awareness of himself and the environment in which he practices. This decision maker has stable goals and preferences (Abdellaoui, 2010).

The decision maker, therefore, seeks to maximize the achievement of these objectives by using the means at his disposal, by proceeding with a so-called rational reasoning. This rationality, being variable, differs from one decision maker to another according to the situation and according to the context of decision-making, but it is a rationality which avoids conflicts on the objectives and on the way of deciding. The decision-making process in this model comes down to a succession of logically linked steps:

- Problem formulation.

- Identification and explanation of all possible actions.

- Evaluation of each action by criteria derived from objectives or preferences.

- Choice of the optimal solution.

• The psychological model

In this model, considered as a new theory of the company and founded by Simon in the 60s, it is the optimality that is negotiated to reach, with the principle of limited rationality, a decision rather situational and satisfactory than optimal (Gbandanhoun, 2012).

2.3 Performance and Decision-Making: What Relationship?

As we have seen, the definition of performance has different aspects depending on the angles of view adopted by the different authors. To determine the relationship between this and the decision, we use the definition of performance indicators.

It is a set of information that gives an idea of the effectiveness and / or efficiency of the system or process used by an entity, compared to a standard, plan or objective set by this entity (Fortuin, 1988).

Deming (1982) explains that the various performance indicators reflect the level of achievement of the objectives set by the organization and at the same time constitute a reliable and relevant source of information which feeds the decision-making process.

Indeed, for Harbor (2009), it would be difficult for the managers of a company to assess its situation significantly, with the aim of making operational modifications to solve performance problems, in the absence of its indicators. They can also indicate future results, warning managers of possible problems or offering advanced advice on possible options or choices for solving a problem. All this information allows the decision-makers of an entity to manage or take decisions in a proactive and / or effective manner, thus enabling them to stay at least better informed about the various operations and activities of the entity. in question. (Berrah and Foulloy, 2013; Lohman et al., 2004).

From the authors' opinions, we can therefore say that performance and these measures or indicators are closely linked to the decision and the decision-making process.

In addition, other contributions devoted to the study of the performance of organizations, and more particularly among financial institutions, have agreed on the existence of a relationship between it and the decision-making process. However, each study has attempted to explain this relationship from a different perspective than the others.

As we have already mentioned above, this contribution aims to question the applicability of the reliability model, proposed in the theory of limited rationality, when selecting projects to finance by the IFIs. Hence the interest in raising the question of the relationship between rational decisions and the performance of financial institutions.

Indeed, Masmoudi and Gherib (2008) in their article “Speed and performance in family industrial enterprises in Tunisia”, reported the work of Fredrickson and Mitchell (1984), who had studied the influence of environmental stability on the rationality of decision-making defined by the concept of exhaustiveness or "Comprehensiveness". The purpose of this study was to demonstrate how decision-makers adopt rational and comprehensive decision-making procedures in unchanging milieus and recklessness them in active milieus.

Giving to the study, these processes do not consider the instability of the environment since they "consume a lot of time". They empirically demonstrated that rationality, represented by a comprehensive preparation procedure, is positively associated to profitability in industries through a steady milieu, and is negatively correlated to profitability in industries with an active milieu.

This leads to the loss of opportunities from which the bank and the entrepreneur could benefit. Hence the need to study the existence of models or tools to help IFIs to select the right projects in optimal time. Fredrickson and Iaquinto (1989), in a later study of the same companies and in the same industries, initiate that these relations are steady ended period and that rationality shows a certain inertia, on the other hand Dean and Sharfman (1993) conclude that in threatening environments, high uncertainty diminishes the rationality of decision-making.

On the other hand, the most important decision in any financial institution is that of investment. Indeed, its performance as a business is closely linked to the nature of the strategic decisions it makes. In practice, in the field of Islamic finance, the process of selecting the projects to be financed by the Musharakah and Mudarabah contracts requires an exhaustive study which can take a long time including the following six elements (Mustapha, 2015):

- Character of the project
- Capital invested: the share of each stakeholder
- The chances of success of the project
- The collaterals
- Conditions: the legal terms of the validity of the contract, the gain and loss shares of each party, as well as management rights, etc.
- Feasibility from an Islamic point of view

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3. Funding through Mousharakah and Moudarabah Contracts and Reliability Model

3.1 Choice of Model

Previous studies on Islamic finance, financing through the Mousharakh and Moudarabah contracts, have shown that it is similar to venture capital practices. Indeed, these two modes of financing have a portion in mutual, particularly in their method to speculation and in their commencement of corporation in commercial, subsequently they approve to portion the risk with the businesspersons they investment. (Chatti, 2010)

In addition, the decision-making environment of IFIs is like that of venture capital, which is particularly specific, in standings of the risk essential in an asset plan, irregularity of info and ethical risk and the incomplete reasoning measurements of stockholders (Cherif, 1999).

This finding has significant suggestions for the choice of appropriate analytical tools for the selection of projects to be funded. However, unlike the venture capital field, where the literature on this subject is abundant, that in the field of Islamic finance is rare, even absent.

Indeed, in the field of venture capital, many avenues have been discovered in current years utilizing numerous apparatuses, those providing by actual choice model. Though, these apparatuses have exposed convinced restrictions in the face of the discrimination of the executive milieu of undertaking investors, disregarding the realism and the difficulty through which they are challenged. This has controlled supplementary investigators to chooce to confident investigative theories providing by the methods in relations of "incomplete" reasonableness.

Amongst these apparatuses are consistency representations. These are representations from choice model which, different other representations from the identical philosophy (namely satisfaction representations and cost theories), designate the performance of financial managers as approaching from a implicit development assigning to managers of feeble reasoning dimensions. This appears impeccably appropriate to the decision-making milieu of the Islamic Financial Institutions, and mainly, when it arises to supporting by the Mousharakah and Moudarabah contracts.

3.2 Explanation of the Reliability and Applicability Model

3.2.1 Limited Rationality and Reliability Model

The notion of limited reasonableness was established by Simon (1947), in the paper titled "Administrative Behavior". Rendering to Simon (1947), the reasonableness of the choice creator is automatically incomplete; the choice is in fact integrated into a complex environment which makes it narrowly perceived and imposes many constraints on it. It is therefore inadequate in the total of info it can assimilate into the decision-making procedure in each period. It is consequently a request of looking for a reasonable resolution relatively than an ideal resolution. Therefore, we are in the existence of a choice maker who is continuously coherent but inside the restrictions set by his milieu.

In this sense, Heiner (1989) introduces an approach by protecting the subsequent proposition: because their reasoning measurements are incomplete, managers are strapped to limit their variety of dicisions which brands their activities consistent and foreseeable. This model makes a break among the reasoning measurements of a negotiator and the complication of the milieu with which this negotiator is challenged: Skills-Difficulties (**S-D**)

This difference is categorized by two forms of indicators:

p: is a discernment indicator, which recapitulate the reasoning restrictions of the manager and regulate his capability.

e: is a setting indicator, which recapitulate the complication of the milieu and regulate the struggle of the choice problematic.

For the interior ambiguity, the **S-D** break presents vagueness into the resolve of the ideal achievement: because of it, the manager cannot methodically select the optimum act. Heiner (1989) represents the construction of this uncertainty by the following equation:

$$\mathbf{I} = \mathbf{i}\ (\mathbf{p}_{-}, \mathbf{e}_{+}) \tag{1}$$

3.2.2 Applicability of the Model: Case of Mousharakah and Moudarabah Contract Financing

In what follows, we assume a project leader using an IFI to benefit from funding by a Mousharakah or Moudarabah contract.

The elements of the model are defined as follows:

$\mathbf{R_A}$: the set of circumstances in which the choice to finance the project is appropriate.

$\mathbf{W_A}$: the set of circumstances in which the choice to finance the project is unsuitable.

$\boldsymbol{\pi_A}$: is the likelihood that conditions will be advantageous to invest in the enterprise.

$\mathbf{1 - \pi_A}$: is the likelihood that the conditions will be disapproving to invest in the enterprise.

$\mathbf{g_A}$: the expected revenu in project funding when this selection is ideal.

$\mathbf{l_A}$: the expected cost of project funding when this selection is not ideal.

$\mathbf{r_A} = \mathbf{p}\ (\mathbf{A}/\mathbf{R_A}) = \mathbf{r}(\mathbf{I})$: is the likelihood of funding the investment when this selection is ideal.

$\mathbf{w_A} = \mathbf{p}\ (\mathbf{A}/\mathbf{W_A}) = \mathbf{w}(\mathbf{I})$: is the likelihood of funding the investment when this selection is not ideal.

Thus, according to the model, an IFI will agree to invest in this project, if the expected average gain from this financing exceeds the probable average loss.

The model is then written as follows:

$$\boldsymbol{\pi_A r_A g_A} > (1 - \boldsymbol{\pi_A})\ \boldsymbol{w_A l_A} \quad (2)$$

Which gives:

$$(\mathbf{r_A}/\mathbf{w_A}) > (\mathbf{l_A}/\mathbf{g_A}) * [(\mathbf{1} - \boldsymbol{\pi_A})/\boldsymbol{\pi_A}] \quad (3)$$

Or, condensed:

$$\boldsymbol{\rho_A} > \mathbf{T_A} \quad (4)$$

Where, $\boldsymbol{\rho_A}$ is the reliability ratio associated with the investment decision, that is to say the sureness assumed to the selection of supporting for the investment, $\mathbf{T_A}$ present the limit or lowest tolerance verge that the dependability relation necessity influence in order for capital to be approved.

Thus, if the additional percentage $\boldsymbol{\rho_A}$ is elevated so the proportion $\mathbf{T_A}$, then the Islamic Financial Institutions will accept a supple behavior towards the supporting of the investment. Then (when $\boldsymbol{\rho_A}$ is fewer than $\boldsymbol{\rho_A}$) the Islamic Financial Institutions will not assume supporting to the investment and will perhaps go to alternative investment fulfilling the reliability situation.

It is therefore suitable to accomplish that this approach will establish an investigative decision-making aid instrument for Islamic Financial Institutions in the forthcoming investment.

Though, it must be distinguished that the extent of project in Islamic Financial Institutions, furthermore to financial restraints, is administered by "extra-financial" instructions. It is effectively maintained by five rudimentary supports; absence of interest rate, absence of indeterminate speculation, absence of funding of informally damaging "illicit" actions (firms complicated in the promotion of properties or facilities thought haram, such as weaponries, beef or sports of chance), revenue sharing and losses and the requirement that all monetary businesses must be sponsored by touchable properties. Then, this will boundary the variety of investments to be supported and will affect the probability of taking or refusal of a specified investment. This will principal to severity in the behavior of Islamic Financial Institutions related to additional manners of funding such as undertaking capital.

Furthermore, the instruments utilized by an Islamic Financial Institution to support an investment must conform with Islamic Sharia law. Nevertheless, the absence of coordination in the explanations of Islamic Financial Institutions and jurisdictions regarding what is acceptable or not under Sharia, results in less normalization or standardization in the products available.

4. Conclusion

In this contribution, we have tried to justify the possibility of applying the reliability model, as decision-making tools to improve the performance of IFIs. For this, we carried out a documentary research to confirm the presence of a connection among the notion of decision and that of profitability, among organizations in general and more precisely among Islamic financial institutions.

Then, and after confirming this relationship, we were interested in the case of investment by the Mousharakah and Moudarabah contracts, given their similarity to other financing methods, namely venture capital, where the reliability model was mentioned as a decision support tool.

All in all, we can remark that this approach will probably establish an investigative instrument to aid investment decision-making for IFIs in the future.

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