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Risk management practices in Moroccan participative banks

Les pratiques de risk management dans les banques participatives marocaines

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Abstract

There is a theoretical debate on risk management efficiency in participative banks compared to their conventional counterparts. Moreover, there are not many empirical studies on this problem. Hence, additional research is necessary to answer this question. The objective of this paper is to explore and analyze the risk and risk management practices in the participative banking industry through the perceptions and the opinions of participants from banking and financial industry.

Using a survey on a sample composed of 65 participative and conventional banks and 10 interviews with conventional and participative banks as well, we found that participative and conventional bankers have similar perceptions of risk management. However, participative banks may be riskier than conventional banks because of the additional risks that they face, but also the constraints of this sector regarding risk management. Unfortunately, we note that risk management techniques in participative banks are not as sophisticated as in conventional banks.

Keywords: risk; risk management; ERM; participative banks; participative finance.

Résumé

Il y a un débat théorique sur l'efficacité de la gestion des risques dans les banques participatives par rapport à leurs homologues conventionnelles. En outre, il n'y a pas beaucoup d'études empiriques sur cette problématique. Par conséquent, des recherches supplémentaires sont nécessaires pour répondre à cette question. L'objectif de cet article est d'explorer et d'analyser le risque et les pratiques de gestion des risques dans le secteur bancaire participatif à travers les perceptions et les avis des participants issus du secteur bancaire et financier.

En utilisant une enquête sur un échantillon composé de 65 banques participatives et conventionnelles et 10 interviews avec des banques conventionnelles et participatives aussi, nous avons constaté que les banquiers participatifs et conventionnels ont des perceptions similaires de la gestion des risques. Cependant, les banques participatives peuvent être plus risquées que les banques conventionnelles en raison des risques additionnels auxquels elles font face, mais aussi en raison des contraintes de ce secteur concernant la gestion des risques. Malheureusement, nous constatons que les techniques de gestion des risques dans les banques participatives ne sont pas aussi sophistiquées que dans les banques conventionnelles.

Mots clés : risque ; gestion des risques ; ERM ; banques participatives ; finance participative.

Introduction

The subject of risk management in participative financial institutions presents many aspects. In theory, participative financial institutions are more resilient than their conventional counterparts in an environment characterized by a financial crisis. Unfortunately, at least in the current form of participative banks' practices, it is not completely accurate. At the beginning of the covid-19 crisis, the assumption was that the participative market would not be at all affected and that it would be resilient to the crisis. Many believed that the crisis would be the chance for participative banks to take off. On the contrary, the crisis highlighted a certain number of aspects of participative banks that need to be solved like risk management as an example.

Risk management is getting increased interest all around the world because of the crisis, and risk management techniques in participative banks are certainly an important and interesting subject. The turbulences of the market in recent years started a vast reassessment of the global financial system and the need for understanding the causes that led to a financial crisis with an unprecedented gravity since the Great Depression. One of the main concerns is the incapacity of many financial institutions to manage their risks in an efficient way.

There is a real debate on risk management in participative banks. The analysis of the existing literature does not bring a clear answer to this debate. The majority of the relevant studies present contradictory points of view. On the one hand, the defenders of participative banks consider that the majority of the participative banking products are less risky than the conventional banking products because they are based on real assets. They insist on the fact that participative banks can be protected from the recession and can be more resilient to economic shocks than their conventional counterparts.

On the other hand, objectors to participative finance consider that the majority of conventional risks are also present in participative banks in addition to other risks that are completely specific to participative banks. Moreover, participative banks' instruments are very limited regarding insurance and taxation (ACHCHAB & HATTAB, 2021). Therefore, the objectors insist on the fact that participative banks are riskier and less developed than conventional banks.

This debate on whether participative banks are riskier or not than their conventional counterparts motivated this study. The answer to it requires a meticulous examination of risks in participative banks, as well as other aspects of the participative banks' activities and their macro-environment that could have an impact on risk culture, risk tolerance and risk management in those institutions. Moreover, most of the arguments in the existing literature are theoretical rather than empirical results. The problem is clearly empirical, it requires thus empirical data from the field.

Therefore, this empirical study tries to fill this gap in the empirical literature on risk management in participative banks. We provide an up-to-date holistic view of the practices, problems and current trends of the market regarding risk management in Moroccan participative banks. It focuses on the practical applications and examines a large range of risks that are specific to participative banks based on the perceptions and the opinions of a sample composed of experts working in the banking and financial industry. It shows that the weaknesses of many financial institutions regarding risk management must be examined in a global approach. The fundamental causes of the current financial system must be questioned and replaced by a more transparent and ethical alternative.

In this study we try to answer the following research questions:

- What are the main risks in participative financial institutions?
- What are the risk perceptions associated with each participative product?
- Does risk management in participative banks differ from conventional banks?
- Are participative banks riskier than their conventional counterparts?
- Are the Basel II and Basel III standards suitable to participative banks?
- Are the capital requirements suitable to participative financial institutions?
- Are participative banks more resilient than conventional banks?
- Is there a difference between the current practice and the moral principles of participative banks?

To answer these questions, we use a quantitative method as well as a qualitative method. The quantitative method is based on a survey using a sample of 65 participative and conventional Moroccan bankers. The qualitative method is based on interviews with 10 conventional and participative banks.

This paper is structured as follows. First, we present a literature review on risk management in participative banks. Second, we present our sample and the methodology of this study. Third, we present our results and their implications. Finally, we present our conclusions.

1. Literature Review

The growing international interest for participative finance in general and for the participative banking sector in particular, is a sign of the importance of this sector in recent years. Moreover, the principles of the charia which stress the importance of value creation for the stakeholders and aim at creating an optimum between the rewards and costs, without harmful speculation, shows a growing interest and start to be well understood in the whole world. Indeed, according to the charia principles that they must conform to, no stakeholder should be damaged, and the ethical value must be reflected in their behavior (LAKMITI & ZAHID, 2019).

Participative banks were defined in several ways which all agree on the conformity to the charia. According to the union international of the participative banks in its first paragraph of *article 5*, participative banks are the banks or the institutions of which the law and the statute expressly envisage the respect of the principles of the charia and whose activities depart from the transactions based on interests (NOUNA & AIT SOUDANE, 2019). As for the Institute of Islamic banking and insurance (IIBI), it states the participative banks are a system or banking conform with the principles of the charia and with their practical application through the development of the participative economy.

We can deduce that participative banks are a system of financial intermediacy which avoids charging and paying interest on its transactions, and carries on its activities in a manner which help to achieve the economic goals, this means that it is characterized mainly by sharing profits and losses which makes it possible to ensure justice and equity.

Participative banks in Morocco are not a negligible or temporary phenomenon but it is under a perpetual development. Since 2014, Morocco adopted a new category of banking institutions known as participative banks. Deposits and credits are clearly progressing through the years. This situation encourages participative banks to develop their presence in the Moroccan territory to be able to answer the increasing demand on alternative products, by opening new agencies while accelerating the digitalization's process (ABOUZAID & BALLA, 2021).

Participative banks' products and services must conform to the principles of charia. To ensure consistency, the legislator made the choice to integrate the legal framework of participative banks in the banking law 103.12. In fact, title 3 of the Moroccan banking law is entirely devoted to participative banks. Under this law, participative banks are approved under the same legal conditions and requirements that those applied to conventional banks and they must also adhere to professional associations.

This new type of banking institutions can provide traditional banking services like participative commercial and financial investments provided that they do not involve in any manner the perception or the payment of interest.

The main principle of participative banks is that all forms of interest are prohibited. The participative financial model functions on the basis of risk sharing (MIRAKHOR & ZAIDI, 2007). For AKKIZIDIS and KHANDEWAL (2008), the interest is prohibited by the law of the charia, funders become investors and not creditors. Funders and the entrepreneur share the commercial risk in exchange of a share of profits, which has an impact on risk management. However, the use of this risk-sharing model in participative banks modifies the nature of risks in these institutions.

Conventional banks reached a stage of maturity. In contrast, although participative banks have existed in their modern form for more than three decades, they remain with many regards an emergent industry. Participative banks try to build their reputation by exploiting the "dead angles" of the market while trying to develop a competitive advantage. They face a serious competition for the development of customer loyalty and face high levels of uncertainty. These institutions cannot only count on religious arguments to market their products and services, they also have to be competitive in terms of price, quality and profit on their offers (BOULARAS & LAKIR, 2019).

Therefore, they are based on the concept that focuses on the objective of the financing and its direct consequences on stakeholders rather than only the risk reduction and the maximization of profits which is the case in conventional banks (ENNADIFI & AZOUGAGH, 2021).

Risk management is an important aspect in the process of financial intermediation of banks, and had the greatest importance in the context of the recession, which had the worst complexity and the highest volatility of the financial markets in the history. A suitable risk management became a factor of differentiation in the creation of a competitive advantage for financial institutions.

Today, the regulators, the creditors and the rating agencies attach a great importance to the risk management's process and to corporate governance, in particular in the emerging markets with rapid growth, where these factors tend to be less considered than in more mature economic and commercial environments.

Risk management is the term applied to the process elaborated to identify, analyze, assess, manage, supervise and communicate the risks associated with all the activities of the institution in order to minimize its losses, to maximize its opportunities and to achieve the strategic objectives that were fixed (JORION & KHOURY, 1996). Risk management is a complete system that includes the creation of a suitable environment to manage risks, to maintain an effective process of assessing, reducing and monitoring risks, and the integration of an adequate internal control process (KHAN & AHMED, 2001).

Risk management is a continuous and vigilant process. The objective of an effective risk management system is not only to avoid losses, but also enabling the institutions to reach the financial results that they set with a high degree of reliability and coherence. Risk taking is an integral part of any financial activity. There is a risk when there is a profit opportunity and when the final result is unknown (SCHROECK, 2002). Although all the companies are confronted with uncertainty, financial institutions are confronted with certain types of particular risks given the nature of their activities (KERRAOUS & BAKKALI, 2021).

Risk management is not only one discipline reserved for specialized professionals, but concerns each activity of a financial institution. It starts with a clear definition of the risk tolerance chosen by the institution, and includes activities to guarantee that its risk profile remains within the defined risk tolerance levels. Moreover, it is not limited to a narrow number of risks, but evaluates them holistically in the internal and external environmental context and the way in which they can affect the institution.

Participative financial institutions are not an exception. Like conventional banks, they are confronted with many challenges in order to define, identify, measure, select, assess and attenuate risks in an adequate way in all the activities and all the categories of their assets. Unfortunately, risk management is a field of research ignored in participative finance.

Consequently, a certain number of challenges still exist in this field. These challenges come from various sources. Firstly, certain risk management techniques are not accessible to the participative financial institutions because of the requirements of conformity to the charia. The participative alternatives to several techniques of hedging and risk mitigation that are largely used in the conventional banking system were not fully explored yet. Secondly, a certain number of the charia principles directly affect the risk management's process. Among those, there is the absence of effective means to face a voluntary failure, the prohibition of the sale of the debt, the prohibition of forward contracts, etc. Thirdly, the absence of standardization of the participative financial contracts is also an important challenge.

The majority of the risks in conventional financial institutions in particular the credit risk, market risk operational risk, liquidity risk and others, are also present in participative institutions. However, the gravity of some of these risks is different for participative banks because of their particular economic model related to their conformity to the principles of the charia. Moreover, the participative financial institutions are confronted to other risks regarding the various characteristics of the Assets/Liabilities, the balance structure and the respect of the principles of the charia. Moreover, the specificity of profit sharing in participative banks introduces additional risks. For example, the fact of giving the depositors shares of the benefits of the bank creates a risk of withdrawal, a fiduciary risk and a displaced commercial risk.

Hedging can be one of the most discussed questions in participative banks. Forwards contracts and the short conventional positions, which are often essential ingredients of risk mitigation, can be difficult to apply within the principles of the charia (KPMG, 2006). Between the end of 1990 and the beginning of 2000, we started to discuss the range of financial engineering and the derivative products in participative finance. This subject did not receive much attention in the literature, mainly because the majority of the transactions were conceived by lawyers and experts of the charia and were applied in the private by financial institutions that did not discuss the structure in a transparent way (ASKARI et al., 2011).

The majority of the specialists in the charia considered until recently that the hedging activities belong to the category of speculation and uncertainty. These last years, however, the increasing sophistication of participative banking products led certain specialists to consider that the participative banks can use hedging contracts, provided that they are structured in conformity with the charia and that the operation is concluded to be protected from a risk or a real liability, rather than a purely speculative end. According to KHAN and AHMED (2014) there is an increasing demand for derivative hedging products that are conform to the charia and that are only used for hedging and not for speculation.

In fact, hedging techniques and derivative products caused many debates as for their admissibility. There are two schools of thought regarding hedging in participative finance: a very preserving vision which prohibit hedging in all its forms, and a more liberal vision that seeks to develop hedging techniques that are conform to the charia. This preserving school of thought think that the derivative products cause the volatility of the market through speculation without getting involved in real economic transactions. Nevertheless, according to the other point of view, certain derivative products are authorized because they are integrated in the total price of the transaction and do not cause an injustice to anybody.

Another challenge for the participative hedging instruments is the lack of liquidity on the secondary market. Derivative and hedging products in conventional banks are developing on the liquid secondary market. It is an obstacle for the participative financial institutions because there is not enough liquidity.

The research of technique to apply derivative products to reduce certain risks related to currencies and raw materials developed considerably. In Malaysia, for example, certain hedging instruments in conformity with the charia, such as the swaps of profit rate, are used. However, most of this progress remains specific to this region and the possibilities of apply them elsewhere are limited, and additional work are still necessary on the subject.

Considering the improvement of the financial innovation in participative finance, some efforts were successful in order to demonstrate that there is a certain number of contracts in participative banks that can be regarded as a base for the derivative instruments conform to the participative framework. In particular: bai' salam, arbun, khiyar Al-shart and wa'ad.

The question is to know if participative banks are riskier than their conventional counterparts is in the main purpose of this study. The examination of the existing literature does not make it possible to have a clear answer to this problem. The majority of the relevant works present contradictory points of view while being based on theoretical arguments rather than empirical analysis. The question is empirical, whose answer requires data from the field. The study thus tries to fill this gap in the empirical literature on risk management in participative banks.

2. Methodology

In this study we used a quantitative as well as a qualitative method. A research method combining two or several methods of research to study a problem provides a better interpretation, because the information missed by a method can be seized by the other, which enables obtaining better results from the analysis (CRESWELL & TASHAKKORI, 2007).

In the quantitative method, we used a questionnaire to collect our data on a sample composed of different bankers and risk managers. The questionnaire was divided into four sections. The first section concerns the general and contextual information of the respondents and their organizations. The second section is used to collect the opinions of the respondents on various questions regarding risk management in participative banks. It is divided in two subsections: the first is on the inherent risks, the risk assessment and the risk gravities in participative banks, and aims to know the opinion of the respondents on the various products in participative banks, while the second concerns the adequacy of the capital in participative banks. In the third section, the respondents were invited to give their opinion on the use of the risk mitigation techniques used in their organization. The fourth and final section seek to find if there is a certain difference between the practice and the principles of the charia in participative banks.

We limited our population to Moroccan financial institutions. These institutions have more advanced risk management practices than non-financial institutions (KERRAOUS, 2020).

To choose our sample, we use a non-probabilistic sampling technique. Indeed, we used the convenience sampling technique. The convenience sampling technique enables choosing a sample composed of people that enable the most convenient access (THIETART, 2014).

As shown in table 1, 100 questionnaires were sent on the second semester of 2021. We received 70 answers. Unfortunately, five questionnaires were incomplete and therefore unusable. The final sample includes 65 questionnaires answered by both participative and conventional bankers. Therefore, the answer rate is 65%.

Table N° 1: Response rate of the questionnaire

Distributed	Received	Incomplete	Valid	Response rate
100	70	5	65	65%

Source: Prepared by the authors

The qualitative method is based on interviews with executives, like risk managers, heads of the risk management's department and other directors, on many risk management aspects in participative banks in order to support and compare the data that we collected through the questionnaire and to answer our research questions.

For the interviews we used a script. This script was prepared based on the initial research questions. It guided our different interviews. It covers the same subjects as the questionnaire, because the main objective of the interviews is to prove or refute the conclusions drawn from the data analysis of the questionnaire. Consequently, the interviews are also divided into four sections which facilitated collecting and analyzing the data.

Each interview took approximately an hour. As shown in table 2, the 10 interviewed persons are executives working either in a participative bank (6), or a participative window (2) or a conventional bank (2).

We determined the number of interviews needed according to the data saturation concept according to which "bringing new participants continually into the study until the data set is complete, as indicated by data replication or redundancy. In other words, saturation is reached when the researcher gathers data to the point of diminishing returns, when nothing new is being added" (BOWEN, 2008; MILES & HUBERMAN, 1994). Indeed, additional collected data became redundant, and thus we stopped at 10 interviewed executives.

Table N° 2: Sample distribution for the interviews

Type of financial institution	N	Percentage
Participative bank	6	60%
Participative window	2	20%
Conventional bank	2	20%
Total	10	100%

Source: Prepared by the authors

For the data analysis of the questionnaires, we used descriptive statistics. They help to summarize the data and they can be tabular, numerical or graphic. Various types of descriptive statistics such as the mean, the mode, the median and the percentages were calculated and presented in this study.

Regarding the interviews, they were based on open-ended questions. Consequently, we transcribed all the recorded interviews and read the notes of these interviews, then transferred them in segments representing complete thoughts on only one question or one subject, in accordance with the initial research questions. The generated results from the analysis of the interviews were also subjected to an interpretative analysis in order to better understand the data and the results. This method helped us to develop an integrated approach for the data in order to obtain a rich qualitative analysis.

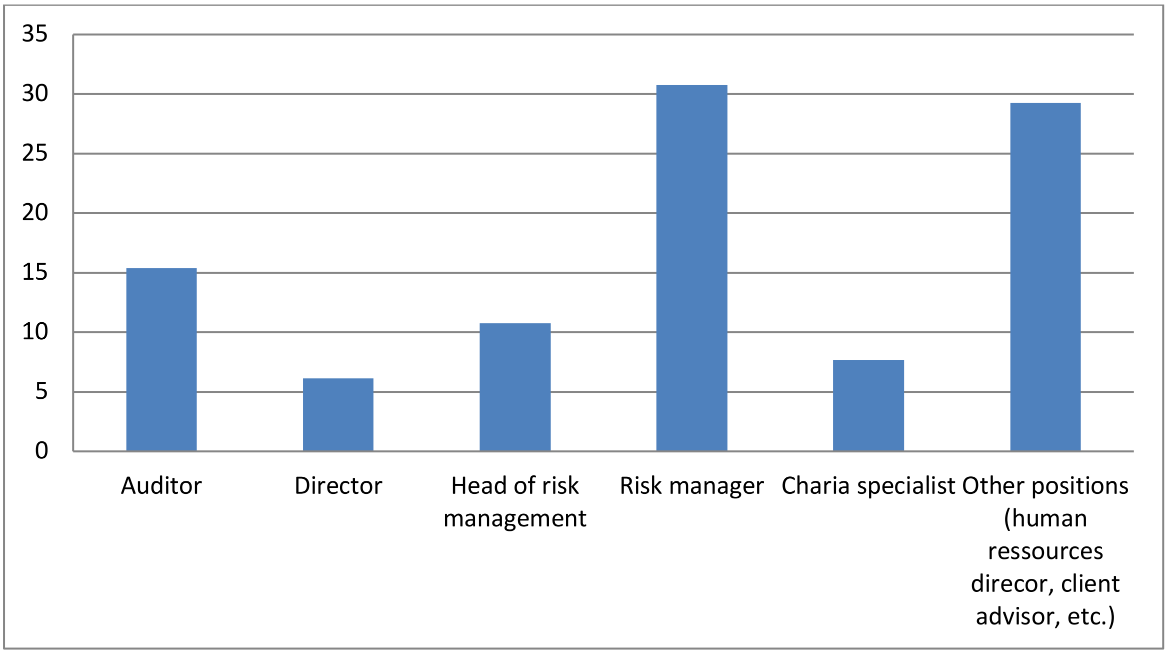
3. Results and Discussion

The first part of the questionnaire is meant to identify the various characteristics of the respondents. The variables used to evaluate the respondents' profiles are the respondents' positions, the nature of the financial institutions and the accounting standards used.

3.1. Characteristics of the Respondents

As we can see in figure 1, the risk management directors and risk managers represent more than 41.54% of the sample. This will improve the quality of the data collected in this survey.

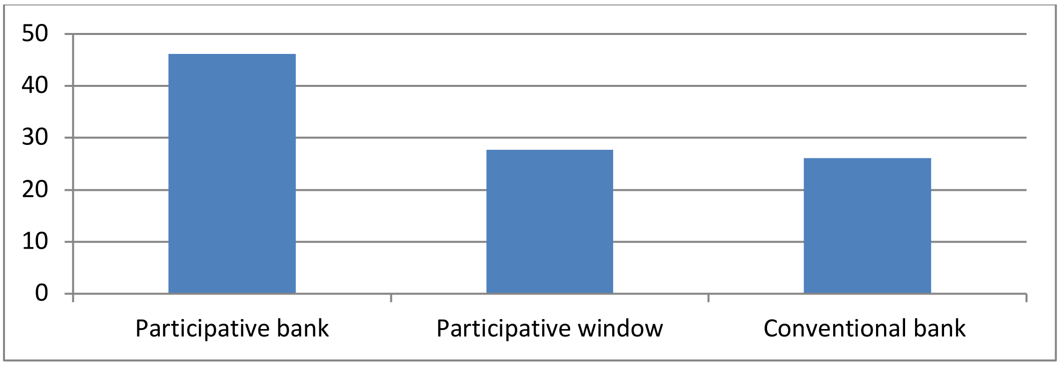
Figure 1: Distribution of the positions of the participants



Source: Prepared by the authors based on the questionnaire data

The nature of the financial institutions that took part in this survey is also studied. On the 65 questionnaires collected, (46.15%) of the respondents work in participative banks, whereas (27.7%) work in participative windows and the remainder (26.15%) work in conventional banks.

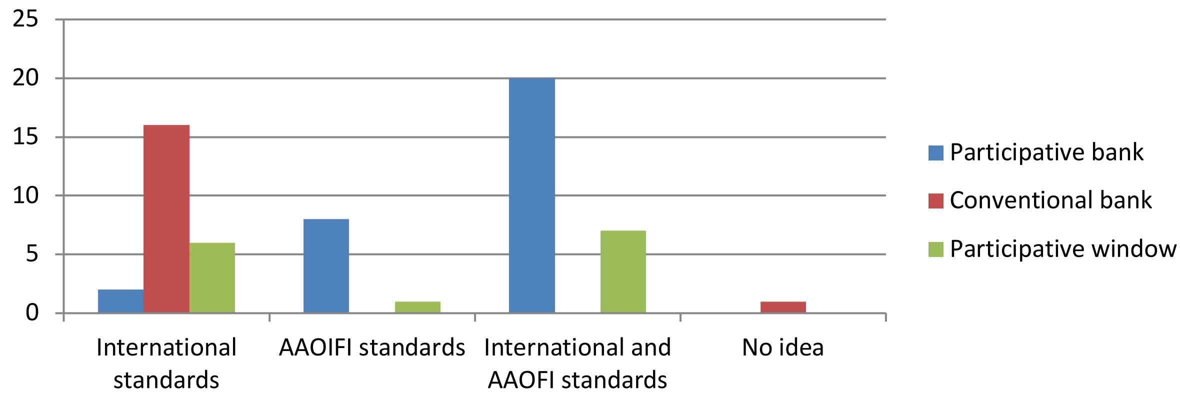
Figure 2: nature of the financial institution



Source: Prepared by the authors based on the questionnaire data

The accounting standards used by the financial institutions in the sample were also included in our questionnaire. As shown in figure 3, the majority of the participating banks use both the international accounting standards and the AAOIFI standards (41.5%), (36.9%) use the international accounting standards, while (16.9%) use only AAOFI standards.

Figure 3: Accounting standards used by the financial institutions



Source: Prepared by the authors based on the questionnaire data

3.2. Risk nature, participative products, capital requirement and Basel standards

Table 3 presents the assessment of the gravity of the risks that impact the participative financial institutions.

Table N° 3: Descriptive statistics for each type of risk

Risk	N	Mean	Median	Mode
Liquidity risk	65	4.01	4	5
Risk related to Assets/Liabilities Management	65	3.94	4	5
Reputational risk	65	3.92	4	5
Concentration risk	65	3.81	4	5
Credit risk	65	3.75	4	4
Risk of nonconformity with the charia	65	3.71	4	3
Legal risks	65	3.49	3	3
Displaced commercial risk	62	2.94	3	4
Operational risk	65	2.93	3	3
Risk related to the investments in stocks	65	2.74	3	2
Market risks	64	2.72	2	2

Source: Prepared by the authors based on the questionnaire data

As shown in table 3, the liquidity risk is perceived as the most serious risk that impacts the participative financial institutions, with the highest mean value of (4.01), followed by the risk of assets/liabilities management (3.94) and reputational risks (3.92). Then we have the concentration risks (3.81), credit risks (3.75), the risks of nonconformity with the Charia (3.71) and legal risks (3.49). After that, we have the displaced commercial risk (2.94), operational risk (2.93), risks related to the investments in stocks (2.74) and market risks (2.72), but they were not considered by the respondents as critical as the other main risks.

Table 4 shows the results of the analysis of the targeted answer for the question in the interview about the main risks in participative banks.

Table N° 4: The main risks that impact the participative banks

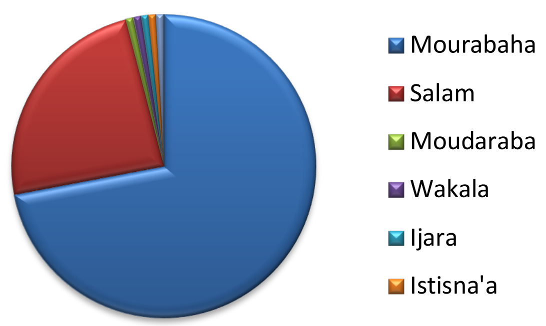
Question	**Which are the main risks that impact participative banks?**
Targeted answer	
1	Risk of nonconformity with the charia
2	liquidity risk
3	The risks of Assets/Liabilities management
4	Concentration risk
5	Reputational risk
Topic: The main risks that impact the participative financial institutions are the risk of nonconformity to the charia, the liquidity risk, the risks of Assets/Liabilities management, the concentration risk and reputational risk.	

Source: Prepared by the authors based on the interviews' data

As shown in table 4, the interviewed executives identified several weaknesses and vulnerabilities among the participative financial institutions related to risk management, in particular regarding the management of the asymmetry of the deadlines of the Assets/Liabilities, the nonconformity with the charia, the reputational risk and the concentration risk. The respondents identified the non-respect of the charia, the liquidity, the concentration, the Assets/Liabilities management and the reputational risks as being the main risks that impact the participative financial institutions.

The questionnaire also aims to determine the perceptions and the opinions of the respondents on the various participative financing methods. Whereas a question concerns the intensity of the use of the various participative finance contracts, the following question seeks to obtain information on the inherent risks of these contracts.

Figure 4: Intensity of the use of the various participative finance contracts



Source: Prepared by the authors based on the questionnaire data

Figure 4 summarizes the manner by which participative banks use the contracts of participative finance. As expected, mourabaha are the contracts that are the most used. This type of contract was criticized by many participative economists and certain specialists in the charia, but it remains unfortunately the backbone of the bank and the participative finance. Recently, one of the participative banks started using the contract salam. Figure 4 also indicates the absence of other contracts such as moucharaka, Moudaraba, Ijara, Istisna'a, etc.

Table 5 stresses the fact that the financing methods by profit sharing have higher risks, while the contracts with fixed income (such as ijara and mourabaha) are perceived as the least risky.

Table N° 5: Risk perception related to the various contracts of participative finance

Risk	N	Mean	Median	Mode
Moudaraba	48	6.21	1	1
Moucharaka	48	5.89	2	1
Isrisna'a	45	4.20	3.5	3
Salam	48	3.75	4	5
Ijara	47	3.73	4	2
Mourabaha	45	1.90	7	7

Source: Prepared by the authors based on the questionnaire data

The main reason of this great concern regarding the partnership contracts can be the fact that the investments of the mandators are not guaranteed in the financing methods by partnership. Moreover, they are long-term instruments, whereas the contracts with fixed income are perceived as having shorter maturity and as being less risky, with certain implicit guarantees.

Table N° 6: Targeted answers on the contracts of participative finance

Question	**Do you think that the participative financial institutions prefer the contracts based on the increase compared to the contracts based on profit sharing? Why?**
Targeted answer	
1	The participative financial institutions want to share the profits without sharing the risks
2	There is a lack of will for the risk sharing.
Topic: The contracts with fixed income are the most used and the use of profit and loss sharing method is negligible.	

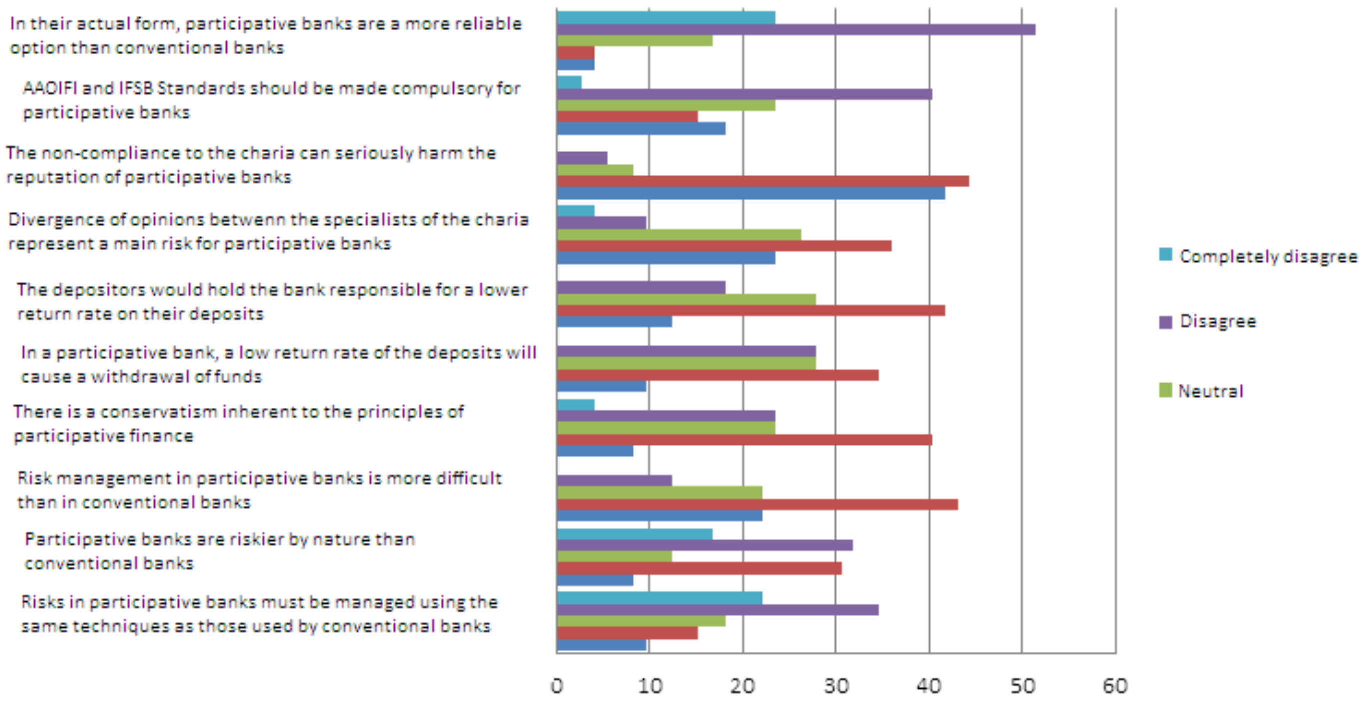
Source: Prepared by the authors based on the interviews' data

As show it table 6, the interviewed executives agree on the fact that if the participative bank is founded based on the assets and risk sharing, in reality, participative financial institutions differ in the levels or risk sharing.

Figure 5 represents the opinions of the respondents regarding certain questions on risks and on risk management in participative financial institutions.

The results indicate that the majority of the respondents (56.9%) think that the risk of the participative banks must be managed using some techniques that are different than those used in conventional banks. Even though (48%) of the respondents consider that the principles of participative finance contain a naturally integrated preserving element, approximately (75%) of the questioned people think that the bad practices in participative banks in their actual state make them a way riskier financing institutions than conventional banks.

Figure 5: Other risk management problems in participative financial institutions



Source: Prepared by the authors based on the questionnaire data

Table 7 present the difference between the risk management perception in participative banks compared to conventional banks.

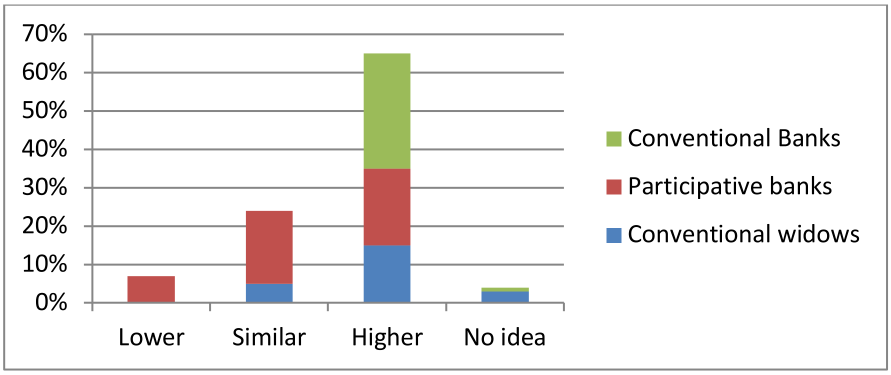
Table N° 7: Risk management perceptions in participative banks compared to conventional banks

Question	**Does risk management perception in participative banks differ from risk management perception in conventional banks, and in which way? Are participative banks riskier than their conventional counterparts?**
Targeted answer	
1	Risk management in participative banks presents specific challenges.
2	Participative banks as they exist today, face more risks than conventional banks
Topic: Risk management in participative banks is more difficult than risk management in conventional banks. In theory, participative banks are more secure than the conventional banks. In practice, the situation is different.	

Source: Prepared by the authors based on the interviews' data

The participants were invited to evaluate the capital requirements in participative and conventional banks. The answers to this question as presented in figure 6 gave unexpected results, since almost 65% of the participants estimate that the capital requirements in the participative financial institutions should be higher than the capital in their conventional counterparts. That could be meaningful, in the actual environment since participative banks have more risks and they should thus have higher capital reserves in order to enable the participative financial institutions to cover unexpected losses.

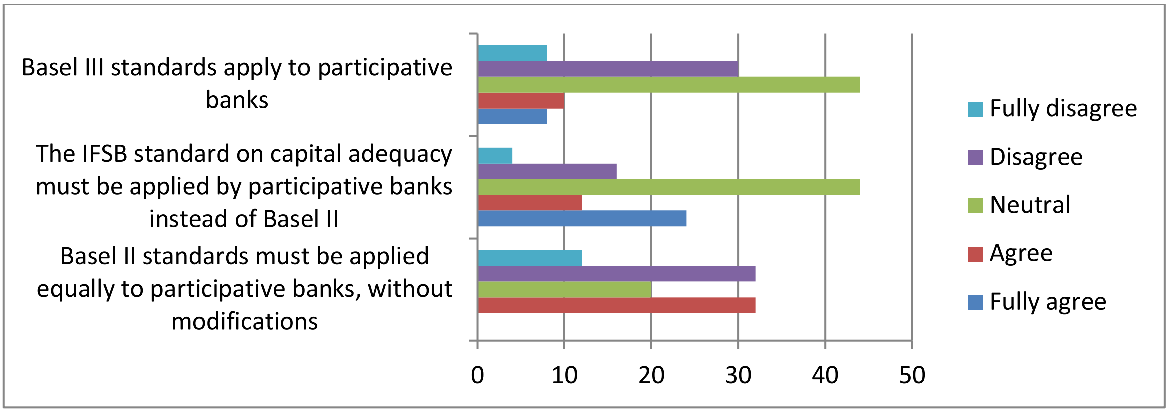
Figure 6: Assessment of the capital requirements in the participative banks compared to conventional banks



Source: Prepared by the authors based on the questionnaire data

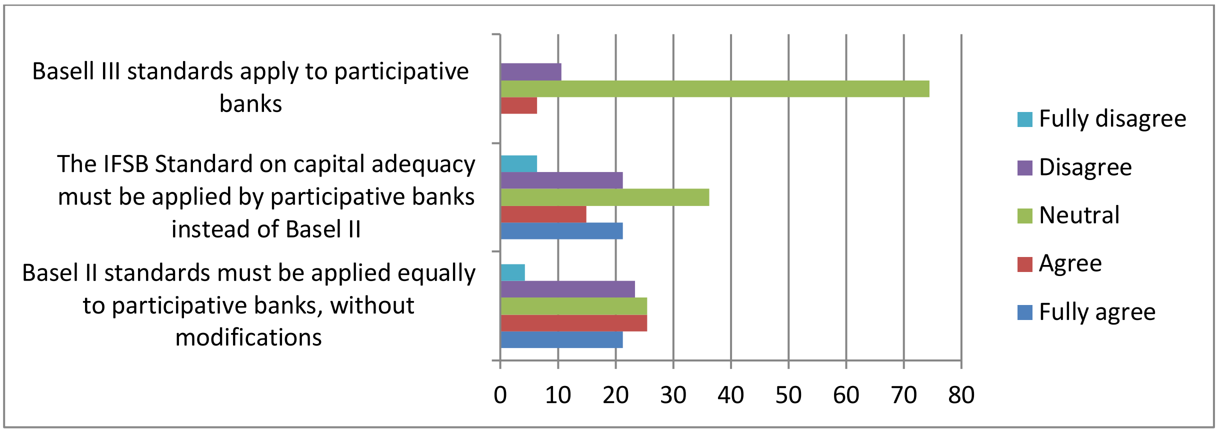
The opinion of the respondents on Basel II and the standard of capital adequacy of the IFSB was also required, since this question required from the respondents to give their opinion on other questions related to the capital adequacy. This closed question had three answers, and the respondents were to express their preference in terms of the degree of agreement or disagreement with each answer. The results, using the likert scale in five points, are summarized below.

Figure 7: The answers of the participative bankers



Source: Prepared by the authors based on the questionnaire data

Figure 8: The answers of the conventional bankers



Source: Prepared by the authors based on the questionnaire data

Figures 7 and 8 enable us to draw the following conclusions:

- the majority of conventional bankers (46.8%) think that the Basel II standards should be applied in the same manner to participative financial institutions without modification, the majority of the participative bankers state the opposite (44%). In general, there is no clear consensus, with a score slightly higher for "fully agree" and "agree" than "disagree" and "fully disagree".
- There are similarities between the opinions of the two groups regarding the use of the IFSB standards by the participative financial institutions, the majority of them prefer "fully agree" and "agree" more than "disagree" and "fully disagree".

3.3. Risk Assessment

Table 8 presents different techniques used to assess risks. These techniques can be used in various forms, ranging from a simple analysis to more sophisticated models.

Table N° 8: Risk assessment techniques

Risk assessment techniques	Participative banks			Conventional banks		
	Total of the answers	%	Ranking	Total of the answers	%	Ranking
Internal rating	19	39.5	2	15	88.2	2
Rating agencies' ratings	21	43.75	1	16	94.1	1
Value at the risk	14	29.16	5	13	76.4	5
Risk Adjusted Return On Capital (RAROC)	10	20.83	6	13	76.4	4
Expected Shortfall	09	18.75	7	04	23.5	7
GAP analyzes	19	39.5	3	14	82.3	3
Stress testing	15	31.25	4	13	76.4	6

Source: Prepared by the authors based on the questionnaire data

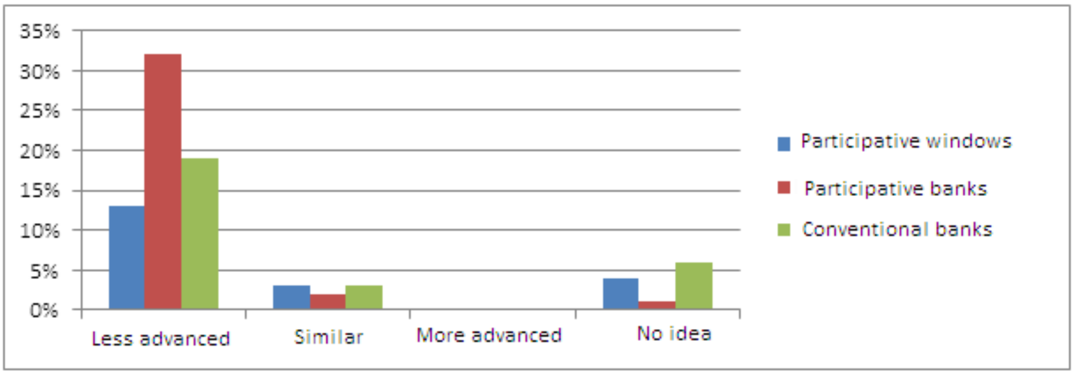
The most used technique by the participative financial institutions is rating agencies' ratings (43.75%), followed by the internal rating and GAP analyzes (39.5% for each one). Only (29.16%) indicated using the value at the risk models.

By comparing these answers with conventional bankers' ones, we note that risk management's techniques in participative banks are not as sophisticated as in conventional banks.

3.4. Risk mitigation

A comparative analysis was performed between the risk mitigation in the participative and conventional banks. As shown in figure 9, (72.2%) of the respondents think that risk mitigation techniques in participative banks are less advanced than in conventional banks.

Figure 9: Risk mitigation in participative banks compared to conventional banks



Source: Prepared by the authors based on the questionnaire data

Table 9 examines the respondent's perception concerning the level of the capital reserves that the participative financial institutions should have compared to the capital reserves held by conventional banks.

Table N° 9: the level of the capital reserves in participative banks compared to conventional banks

Question	**Do participative banks have to reserve more or less capital than their conventional counterparts?**
Targeted answer	
1	Less capital
2	More capital
Topic: The participative financial institutions are exposed to more risks and must thus hold more capital.	

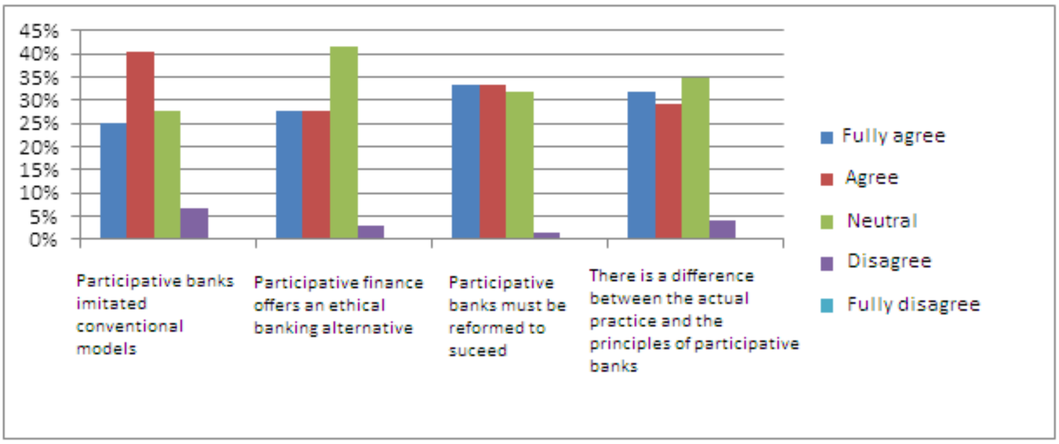
Source: Prepared by the authors based on the interviews' data

It is obvious that the majority of the questioned executives think that participative financial institutions must hold more capital than their conventional counterparts because their economic model, in its actual state, involves more risks.

3.5. The implementation of the charia principles in risk management

This section aims to analyze the opinions and the assessment of the respondents on the implementation of the charia principle regarding risk management in participative banks. One of the main assertions examined in this section is the one according to which participative banks strayed from their roots by imitating conventional banks. To this end, this question had four assertions, and the respondents had to choose their preferences in terms of the degree of agreement or disagreement with each assertion. The results in terms of frequency for the whole sample are summarized in figure 10.

Figure 10: Distribution of perceptions on the current practices of participative banks



Source: Prepared by the authors based on the questionnaire data

As show it the results in figure 10, at the total level as well as at the individual level, the majority of the respondents "completely agree" or "agree" with the four assertions. Although participative finance offers an ethical banking alternative, the participative financial institutions must be reformed before being able to exploit the ethical base of the participative banking model. The answers of participative and conventional bankers are close, the first being closer to " completely agree" than the seconds.

Risk mitigation is currently one of the most delicate questions in the field of participative banks. The single nature of the risks in participative banks, combined with the restrictions added by the charia, make risk mitigation for participative banks a difficult and complex process. There are risks that the participative banks, like their conventional counterparts, can manage and control thanks to suitable risk policies and risk controls that are not in contradiction with the charia principles. However, there are other risks which the banks cannot eliminate and which can only be reduced by transferring or selling them on well-defined markets. These risks can generate unexpected losses which require risk retention, and to hedge them in order to limit the impacts of the unexpected loss.

In this section of the interviews' analysis, we sought to know the opinions and perceptions of the executives regarding risk mitigation in participative banks. The answers of the interviewed executives in table 10 show that risk mitigation became a necessity in participative banks, provided that it is used only in hedging and not in speculation.

Table N° 10: perceptions of the interviewed executive regarding risk mitigation in participative banks

Question	**What do you think of the risk mitigation in participative banks? Do you think it conforms to the charia? What is the importance of hedging for the sector?**
Targeted answer	
1	Can only be used for hedging and not for speculation.
2	The participative financial institutions have an urgent need to hedge risks
Topic: The risk mitigation techniques are highly requested by the participative financial institutions, but they still have a long way to go.	

Source: Prepared by the authors based on the interviews' data

Most of the respondents agree that the single nature of risks in participative financial institutions, combined with the restrictions added by the charia, make risk mitigation for participative financial institutions a difficult and complex process. However, there was a clear disparity between the respondents regarding the applicability of the hedging solutions that are conform with the charia.

3.6. The Difference Between the Theory and the Practice of Participative Banks

This last section examines the idea that participative banks diverted from their original purpose by imitating conventional banks. Table 11 indicates that, although in theory, the participative financial system is more resilient to economic shocks than the conventional system, the theory is unfortunately very different from the reality in the actual financial practices of participative banks.

Table N° 11: Participative banks and the conformity with the charia

Question	**In which way participative banks are conform to the charia in the current practice? Do you think that participative banks must be reformed to succeed?**
Targeted answer	
1	The imitation of conventional banks became the standard
2	The participative financial institutions are in a constant fight to reconcile the faith and finance
Topic: Participative banks deviate for a long time from the true principles of the charia.	

Source: Prepared by the authors based on the interviews' data

The majority of the interviewed executives criticized participative banks for trying to integrate the principles of the charia in the structures of conventional products; when the participative products copy conventional products, they are exposed to the same risks. Participative financial institutions also hesitate to be more responsible in social terms.

A certain number of interviewed executives think that some participative financial institutions deviated significantly from the basic principles of participative finance; they were impacted by the influence of conventional banks. Indeed, most Moroccan consumers do not trust participative banks because they do not see the difference between conventional banks and participative banks, even though they are based on charia principles (HATTAB & ACHCHAB, 2022).

Our results are in line with the objectors to participative finance who consider that participative banks are riskier than their conventional counterparts. In contrast, our results contradict the defenders of participative banks who consider that the majority of the participative banking products are less risky than their conventional counterparts.

Moreover, we do not agree on the fact that participative banks can be more protected from the recession and more resilient to economic shocks than their conventional counterparts. Indeed, both of these institutions face many risks in their activities which make them risky. However, the risk management's process can reduce risks in participative banks as well as conventional banks, even though they are some techniques that are still specific to conventional banks.

Conclusion

This study shows that, although participative financial institutions are confronted to additional risks compared to conventional financial institutions, the participative and conventional bankers have similar perceptions of risk management in participative banks. The liquidity risk, Assets/Liabilities management and concentration risks appear among the principal risks identified by the two groups. Moreover, the financing methods with profit sharing and the differed sales of products are perceived as being riskier than mourabaha and ijara. That explains why the participative financial institutions diverted from these instruments because of their reluctance towards riskier assets, which is due to the fact that they try to imitate the conventional model.

The results also show that, although the participative financial institutions do relatively well in terms of global risk management, they are still perceived as using less advanced risk management techniques.

With regard to the results of the interviews, the interviewed executives indicated that the approach of risk management in participative financial institutions is not ideal, which results in concentration risks, poor liquidity management and bad Assets/Liabilities management. Moreover, the interviews revealed that the risk of nonconformity to the charia is a big risk in participative financial institutions. We also note that the participative and conventional bankers have a similar perception of risk management in participative banks. Our results indicate that participative banks, in their actual form, may be riskier than conventional banks because of the challenges and the additional constraints of this sector regarding risk management. As stated by the interviewed executives, there are several risk management areas where improvements can be made to promote and reinforce the functioning of participative financial institutions.

Lastly, the interviewed executives agree almost unanimously on the fact that participative banks have the possibility today of thriving, because they can contribute to a more stable economy. However, under their current form, participative banks do not have much to offer in terms of long-term solutions and durable financing, because the solution must ultimately be moral and nonmaterial. Participative banks must aim at a truly alternative vision based on the ethical guarantees and morals of the authentic participative concepts, while improving the techniques of risk management, by reinforcing the management of the liquidity and by reducing the concentrations.

Our results constitute an important contribution to the theoretical debate on risk management efficiency in participative banks compared to their conventional counterparts. Moreover, it reduces the problem of the lack of empirical studies on this problem. Finally, they will encourage financial institutions to improve their risk management since it is an important aspect of their activities and it can help them achieve their goals.

The principal limitations of this study are using a non-probabilistic sampling technique and using descriptive statistics rather than statistical tests. In addition to this, this empirical study was conducted during the crisis of COVID-19 which may impact the collected data.

We recommend that future works focus not only on risk management in participative and conventional institutions, but also on its impact on the performances of those institutions. Moreover, we recommend that they determine the practices that are specific to each category of risk.

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