Journal of Financial Services Marketing
https://doi.org/10.1057/s41264-022-00155-y

ORIGINAL ARTICLE

Mediating effect of risk management practices in Iraqi private banks financial performance

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Received: 29 January 2021 / Revised: 14 February 2022 / Accepted: 24 March 2022

Abstract
This study examines the mediating effect of risk management practices on the relationship between understanding risk and management, risk identification, risk assessment analysis, risk monitoring, credit risk analysis, and financial performance. Besides, examined the relationship between risk-related factors and risk management practices, as well as examined how risk management practices affect financial performance in the Iraqi private banks. The population in this study comprised of employees currently working in private banks in Iraq and the unit of the analysis was the individual employees in the private Iraq banks across different departments. Quantitative method was used in order to collect data from current employees of Iraq private banks. Partially qualitative method has been used to gather more information that can't be collected via quantitative method to support the study findings. Overall, the study hypotheses support that risk management practices play a mediating role in the relationship between risk-related factors and financial performance. Finally, the study found that an understanding of the constructs of risk-related factors is a prerequisite for better understanding of risk management practices in order to find out if there is an increase or decrease in financial performance of Iraqi private banks. These results further revealed that formation of a comprehensive risk management system is not only a useful practice to meet the regulatory requirements but an effective exercise to improve the performance of Iraqi banks in general and private banks in particular. This study contributes a new insight into applying risk management in public and private banks in Iraq and extends the existing theoretical literature in the field of banking industry by filling the gaps in this area.

Keywords Risk management practices determinants · Iraqi private banks performance · Mediating effect · Risk management

Introduction

The Iraqi banks do not perform well because they do not practice risk management. The lack of transparency on information disclosure on all practices regarding their risk management program has a negative effect on the practice of risk management, which in turn affects their ability to adopt risk management practices. This has led to poor performance as Iraqi banks are neither able to control risks nor apply ISO 31000 principles (Khalil 2017). The Central bank of Iraq has issued risk management guidelines to strengthen the risk management system and improve the performance of the local and private banks. However, available literature in Iraqi context fails to explain the impact of these efforts on the performance of banks. The non-compliance of the banks to instructions and legislation issued by the Central Bank has led to failure of the banking system to provide advanced services that require them to monitor and control the risks faced. Based on the above-mentioned information, this study will take a close look at the risk-related factors as well as the risk management practices and how risk management practices determine financial performance. Therefore, the current study examines the effect of risk-related factors (understanding risk and risk management, risk identification, risk assessment analysis, risk control, and credit risk analysis) effect on financial performance. This study also examines the relationship of risk management practices to risk-related factors and their effect financial on performance of the Iraqi banking sector.

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Published online: 18 April 2022

The purpose of this study is to empirically examine the effectiveness of risk management processes and their relationship with the performance of Iraqi private banks. This study examined the mediating effect of risk management practices on the relationship between understanding risk and management, risk identification, risk assessment analysis, risk monitoring, credit risk analysis, and financial performance. This study examined the relationship between risk-related factors and risk management practices, as well as examined how risk management practices affect financial performance in the Iraqi private banks. In determining this relationship a model on the relationship between risk-related factors, risk management practices, and financial performance was developed. The results showed that the understanding of risk and management, risk assessment analysis and credit risk analysis had a positive relationship between risk management practices, and financial performance, while risk identification and risk monitoring and monitoring had no relationship between risk management practices, and financial performance. This study found risk management practices to have a positive and significant effect on financial performance. The population in this study comprised of employees e currently working in private banks in Iraq. The unit of the analysis was the individual employees in the private Iraq banks across different departments. This study used quantitative method in order to collect data from current employees of Iraq private banks. This study also partially used qualitative method to solicit more information about this issue. The results showed that the risk-related factors support risk management practices which consequently served as an input to mitigate risks faced by banks, while good risk management practices as a process help to increase financial performance as an output. Based on the study findings, it is suggested that the implementation of risk management practices leads to increased financial performance. Overall, the study supported the hypotheses that risk management practices play a mediating role in the relationship between risk-related factors and financial performance. One particular contribution of this study is the application of the structural equation model to determine the relationships between risks-related factors, risk management practices, and financial performance of Iraqi private banks. In conclusion, an understanding of the constructs of risk-related factors is a prerequisite for better understanding of risk management practice if there is to be an increase or decrease in financial performance of Iraqi private banks. These results further reveal that formation of a comprehensive risk management system is not only a useful practice to meet the regulatory requirements but an effective exercise to improve the performance of Iraqi banks particularly private banks. The study recommends that similar research be replicated to study other banks such as Islamic banks. This study offers new insight into risk management in public and private banks in Iraq, thus extending the existing theoretical literature in the field of banking.

This study aims to extend the theoretical framework and references available to academics and future researchers on the subject of risks characteristics and their impact on financial performance and risk management practices in a real context as opposed to those espoused in hypothetical settings. After the Global Financial Crisis, risk management in banking institutions drew global attention and hotly debated. There is therefore an increasing trend to adopt a more effective framework of risk management practices to ensure that the banking sector can consolidate and succeed. Therefore, this study attempts to contribute to the extant dialogue surrounding the effectiveness of risk management practices in developing countries in general and particular attention to the banking domain in Iraq. The objective of this study is to look into the risk management practices of Iraqi private banks and their consequences on banking performance. Thus, it is essential to identify the risk management practices in order to determine the relationship between risks and their impact on bank performance (Ariffin and Kassim 2011). Therefore, this study adopted the ISO 31000 thinking approach (a novel approach in public and private banking in Iraq) to capture the effect of the relationship between risk-related factors and the risk management practice systems of Iraqi private banks so that an association between risk management practice of banks and financial performance can be established. This study examines empirically risk management practices in Iraqi private banks and its effect on Iraqi private bank's financial performance. Towards this purpose, data was gathered from employees working in various departments in banks as it is known that most bank's operations are risky (Afsheen Shafiq and Nasr Mohamed 2010) and that risk management is not only the responsibility of the staff working in risk management departments in banks but every single bank staff. The existing studies in the Iraqi context have drawn on a limited sample population (Al-Maklafy Ibrahim 2004). Therefore, this study offers a new theoretical integration of relationships that will add valuable insights into the improvement of the banking sector in Iraq by examining the relationship between risk-related factors, and risk management practices and how these practices have a positive influence on financial performance of Iraqi private banks. It will also provide a forum for future research and studies on risk management in Iraq. This study offers new information on risks management practices in the banking sector, particularly the influence of risk characteristics on the financial aspects. As the study unveils the mediation effect of risk management practices on risks characteristics and financial performance, it can also add to the pool of knowledge about the level of performance of banks, offering the opportunity for further studies in risks-related research. As all banking institutions are required to develop an effective

risk management system to reduce risk exposure, this study adds to the growing body of literature by offering a more comprehensive view of the risk management practices in Iraqi private banks. This study also attempts to scrutinize the participation of the Central Bank of Iraq in the implementation of this approach in accordance with the requirements of international standards. Therefore, this study seeks to examine the relationship between risk-related factors, risk management practices, and its mediating effect on financial performance in these financial institutions in Iraq.

Literature review

Humankind has been practicing different techniques of risk management in order to survive; the same can be said of any institution or company. To survive in the market environment that is experiencing rapid velocity of change, banks need to practice the avoidance of risks that could threaten their business and lead to their collapse. Risks are uncertainties and undesirable features or occurrences that could arise at any time. In the banking industry, there are different types of risks. As with any privately owned bank, the management's main goal is to maximize shareholders' value. All banks seek to provide services and strive to maximize their profits and minimize risks that are associated with the stability of the financial sector and economy. The banking sector is the lifeblood of the economy and is one of the leading sectors in modern economies as it considered as an important source of financing for most businesses. However, the Central bank of Iraq has issued risk management guidelines to strengthen the risk management system and to improve the performance of the local and private banks. However; available literature in Iraqi context fails to explain the impact of these efforts on the performance of banks. Over the past few decades, there has been massive volatility in the global financial market as result of commodity price changes, foreign exchange fluctuations, interest rates and capital flows. All these admittedly have together played an important role in financing investment and external deficits in a number of developing countries. According to Njanike (2009), the banking crisis we have today is primarily due to poor risk management practices, some of which are the high levels of insider loans, speculative lending, and high concentration of credit. In addition, financial institutions exposed to a variety of risks such as interest rate risk, foreign exchange risk, political risk, market risk, liquidity risk, operational risk, and credit risk. There is also the possibility of loss of earnings from reduced customer deposits (Akkizidis and Khandelwal (2008) and Al-Tamimi and Al-Mazrooei (2007) show that good risk management is highly relevant as it gives higher returns to shareholders. Hamisu (2011) shows that the major cause of serious banking problems continues to be directly related to lack of implementation of risk management, poor portfolio management, and lack of attention to changes in circumstances in the external and internal environment that can lead to reduced numbers of customers and consequently reduced deposits. According to Kao et al. (2011), ineffective risk management may lead to the collapse of a bank or ultimately the breakdown of the whole banking system. Chelsom et al. (2005) further contended that the lack of assessment and analysis of risk management causes inefficiency in the balance between treated risks and costs due to misinterpretation of how to estimate risks, which consequently affects financial performance of banks. In addition to the ongoing technological revolution, banks appear to face different types of risks such as liquidity risk, market risk, interest risk, foreign exchange risk. This has led to increasing competition between banks to offer new and advanced services and attract more customers. Instability and the current chaotic situation have encouraged the emergence of new risks such as fraud and money laundering, especially in Iraq (World Bank 2013). The external environment in the twenty-first century has changed drastically and it is not possible to manage tomorrow's events with the tools of yesterday (OECD 2014). Hence, managing risk is vital in today's fast-changing environment (Barrie Stevens 2001). Moreover, stakeholders in businesses now demand that their long-term interests are protected in a changing environment with the installation of an appropriate system to handle a 'worst-case scenario' and still provide returns (Lopez 2003). Modern risk management would have individual, commercial and industrial enterprises and governments play a forward-looking role in loss assessment by adopting an integrated, systemic approach to risk management. Risk management has the potential to contribute to economic prosperity through minimization of losses to property (World Bank 2013).

There has been a call for a significant expansion in prudential regulation in all banks, according to the Central Bank of Iraq (CBI). Implementation of a set of effective regulations by the CBI using a progressive means for applications is highly needed. There is a need to set a structure and methodical procedure to implement the banking regulations effectively. Clear policy guidelines can facilitate many aspects of bank operations. Therefore, the management of different risks has become a cornerstone of sensible banking and its importance is increasing over time, especially after the recent Global Financial Crises (Scarborough 2011; Pastor 1999) suggests that banks as a major component of the financial sector place more importance on risk management in the economy than any other sector due to their inherent nature of trade. Furthermore, it is important that banking institutions are not only efficient but also secure. Thus, it is necessary for a bank to understand its risk exposure

and make sure that these risks are adequately managed (Al-Tamimi and Al-Mazrooei 2007).

The CBI has imposed risk management guidelines on Iraqi banks to improve their ability to deal with the competitive environment. These guidelines contain a detailed explanation of key risks that banks may be exposed to and establish some fundamental principles for developing a risk management framework for all the banks. These guidelines include risk management, comprise identification, measurement, monitoring, and controlling risks and to make sure that:-

(I) All persons who manage or take risks clearly understand different risks.
(II) The risk exposure of the bank is within the limits set by the board of directors.
(III) All the risk-taking decisions aligned with the objectives and business strategies established by the board of directors.
(IV) The expected reward compensates for the risks taken by the bank; (V) all the risk-taking decisions are clear and explicit; and (VI) Adequate capital is available as a buffer to take these risks. These guidelines designed to align the risk portfolio of Iraqi banks with best international practices. However, these, risk management guidelines by the CBI are limited to providing a brief overview of all the important actions and not intended to offer a detailed plan of action for every control procedure that might put in place by these institutions.

Moreover, Lopez (2003) asserts that an important element in risk management is the ability to decide the tolerance and extent of risk. Therefore, it is important for banks to keep away from accepting any unnecessary risks for the smooth running and continuity of banking operations. For this purpose, different aspects needed to consider by banks for assessing the risk management approach (Hussain and Al-Ajmi 2012).

The Iraqi banks still face and will continue to face a number of difficulties and challenges to the implementation of the contents of the First and Second International Basel agreements, as well as the Third Basel agreement (Mohamed 2014). As it is, Iraq is still combating an economic legacy of war, insurgency, and several other issues. Given that, Iraq is n newly exposed to open market operations, banks are currently facing several risks and will continue to do so in the future. Therefore, risk management practices needed to be in practice effectively as risk management plays the role of a mediator between several factors. For instance, there is a need to identify the banking activities exposed to risks, estimate the risks and monitor all these risks in order to mitigate these risks. Hence, risk management practice is one of the most important governance mechanisms of financial institutions to ensure there is compliance with ISO 31000 principles imposed by the Central Bank of Iraq.

However, the scope of literature on Iraqi banks covers the specific aspects of Iraqi banking which include capital management, privatization, and banking reforms, but fails to pay attention to risk management details and its relationship with bank performance (Saad et al. 2015; Aza Mohammad 2012). This has led to the emergence of risk management in the financial institutions as a major concern among industry players and policy-makers. Financial crises do not only shake major world economies but also rattle the developing economies (Adeusi 2013) many financial institutions badly affected because of poor functioning of the subprime mortgage lending to firms and individuals with poor credit. The banking crisis in Iraq has shown that banks often take excessive risks, but the risks differ across banks. The quality of assets of most banks has deteriorated as a result of a huge dip in equity market indices (BGL, 2010) However, Iraqi banks have extended minimal efforts into studying the impact of risk-related factors on risk management practices and subsequently financial performance, especially in reference to the Iraqi banking sector (Al-Maklaffi 2004). These findings thus offered an opportunity to conduct a study on the risk management strategies of Iraqi banks.

Though literature abounds with studies on risk management, generally, there is a lack of such research on the relationship between risk management practices and financial performance, especially in the Iraqi context. This work identified the opportunities available to conduct such a dedicated study in the area of risk management in private Iraqi banks. Therefore, this research will visit potential research gaps by looking at the full range of risk factors and particularly analyze the relationship between risk management and performance of private banks in Iraq.

From the above discussion, it is clear that Iraqi banks do not perform well because they do not practice risk management. The lack of transparency on information disclosure on all practices regarding their risk management program has a negative effect on the practice of risk management that in turn influences their ability to adopt risk management practices. This has led to poor performance as Iraqi banks are neither able to control risks nor apply ISO 31000 principles (Shatha Khalil 2016). The non-compliance of the banks to instructions and legislation issued by the Central Bank has led to failure of the banking system to provide advanced services that require them to monitor and control the risks faced. Based on the information from the literature, this study will take a close look at the risk-related factors as well as the risk management practices and how risk management practices determine financial performance. This study

seeks to add two essential contributions from a theoretical and practical standpoint. The expected contributions are in terms of knowledge building of risk management to managers and researchers in this field.

Taking the right amount of risk is essential for successful business. As a response to the importance of risk management, the effectiveness, and implementation of enterprise risk management (ERM) systems recently discussed in the literature.

Davidsson and Falkman (2021) explain the novel standpoint on risk management comprise valued features, giving convinced characteristic frequently ignored in ERM applies. Towards recognising these aspects such as uncertainties, holism, communication, and knowledge, a better ERM process should be undertaken. The methodical literature showed doubt in applied ERM applications. In recollection, this is barely astonishing. Kurdi et al. (2019) review studies conducted on corporate risk management and the financial institutions performance in terms of leadership roles, risk culture, and compliance with the organization's rules and regulations. In Kurdi et al. (2019) study, the independent variables comprise leadership roles, culture of risks and compliance (code of practice, rules, and regulations). While Information and Communications Technology (ICT) used as an intermediate effect on which the relationship between ERM and the financial organisations performance executed. Based on Kurdi et al. (2019) review, the presence of the interface between senior management Enterprise Risk Management and Performance of Financial Institutions in Iraq 89 commitment and high-risk ICT officials considerably increase the impact on financial performance. Kurdi et al. (2019) study disclose that ICT is a good mediator in the relationship between ERM and the financial institutions performance in Iraq. Kurdi et al. (2019) study findings are in line with the findings of the study undertaken by (Cooper 2004 and Eick (2003)).

Numerous challenges considered over decades by financial institutions for various reasons. The main reason for problems of financial institutions remains directly associated with poor ERM and the comfortable credit standards of debtors and counterparties among others (Mahmoud and Ahmed 2014; Muteti 2014a, b). It is very clear that all banks are currently in a highly unstable environment and face some forms of risks, such as liquidity, credit, market, foreign exchange, interest rate, and others. These risks may encourage the bank to continue to achieve success in the market (Aziz et al. 2016; Tarawneh and Al-Shafei 2018).

Moreover, Amin 2019, discusses experts roles in the risk management process in handling cyber security risks is to monitor: changes in risk management tactics, controls, new policies being introduced, insurance coverage, mitigation measures, and the responsiveness of management to threats.

Jankensgård (2019), states that the incapability to understand the immense representation of the risks a firm is unprotected to be unique of the key causes of the financial crisis of 2007–2009 around the globe. It also states that managers often "undermanage" risk of low probability and high impacts, whereas at the same time over manage risks of high probability and of high salience. This means that the agency problem of corporate risk management is a "Black swan" and compares this to the agency problem and the human minds inability to predict randomness or highly unlikely events.

Abkowitz and Camp (2017) mention that ERM might not capture risks that are "outside of the box", and that key risks might go unnoticed as are not directly linked to the operating environment, similar reasoning carried out in (Bogodistov and Wohlgemuth 2017). The authors claim capabilities and routines of a company are restricted to blind spots and cannot identify all systemic risks. In addition, there exist risks that are non-systemic, force major events that were not be identified by a routinised identification process. Furthermore, Bogodistov and Wohlgemuth (2017) state that the capability-based can cope with such trials that there will continuously be measures that are difficult for an organisation to predict. Likewise, trials with low-probability and high impact will make ex-ante of each undefined incident an economic mischance. They advocate applying a dynamic capability-based standpoint in treating those proceedings.

Meanwhile, Agarwal and Virine (2018) use the term "holistic" numerous times to describe ERM, explicitly cited as a holistic view of risks can be realised within the organization, if implementing ERM. Further explicit; by classifying different risks and how they might affect business operations a more holistic view gained, for example, internal risks, strategy risks, and external risks.

Abkowitz and Camp (2017) deliver some evaluation to the ERM, more specific on the matter of how company's assess their risks, as companies section their risks by department, division, project, and if they affect the individual or the enterprise. They conclude that this does not produce a comprehensive set of risks. Other authors, for example, Ashby et al. (2018) explicitly mention a limitation of the concept of ERM, as it does not touch upon the matter of when uncertainty turns into a risk. Furthermore, the authors criticize ERM for not specifying which departments are in specific need of a risk manager.

Furthermore, Althobaiti and Aloraini (2019) indicate the key form of communication of risks demonstrated in post-exercise reports that shared with stakeholders and management. The purpose of this communication process is to assign ownership of identified risks to the affected unit or party.

Yang et al. (2018) indicate that attention to Enterprise Risk Management (ERM) has been increasing in the 1990s

due to the world and regional financial and economic crises such as Asian financial crisis of 1997 among other crises as businesses faced several shocks in competitive environments (Arena et al. 2010). In reaction to unanticipated intimidations, one school of thought believed in the direct impact of ERM on firm performance as indicated by (Callahan and Soileau 2017; Florio and Leoni 2017; Zou and Hassan 2017). Besides, another group of researchers claimed that the relationship between ERM and firm performance could be affected by some internal factors rather than the external factors mentioned by the first group (Khan and Ali 2017; Wang et al. 2010). Considerable research has discussed the importance of ERM practices among businesses in the studies undertaken by (Eckles et al. 2014; Florio and Leoni 2017; Yilmaz and Flouris 2017). In this respect, most of the studies have been conducted mainly in developed economies among the studies are the studies undertaken by (Florio and Leoni 2017), whereas Small and Medium Enterprises (SMEs) in emerging economies have received comparatively limited attention. Furthermore, empirical studies on the relationship between ERM and SME performance are still lacking in the implementation of risk management as stated by (Farrell and Gallagher 2015). Consequently, this study purposes to examine the effect of risk management practices on banks performance as a mediator.

Wood and McConney (2018) pursue to govern the impact of risk management on the commercial banking sector financial performance in Barbados. These study's empirical results designate that Capital Risk, Credit Risk, Liquidity Risk, Interest Rate Risk, and Operational Risk have statistically significant impacts on financial performance. The article mentioned that commercial banks role as financial intermediaries utilise their own balance sheets to absorb the risks of their customers. The risk-return relationship is well known; the higher the risk incurred, the higher potential returns and indeed probable losses.

Rampini et al. (2019) study risk management in financial institutions using data on hedging of interest rate and foreign exchange risk. The study finds strong evidence that better-capitalized institutions hedge more, controlling for risk exposures, both across institutions and within institutions over time. For identification, the study exploits net worth shocks resulting from loan losses due to drops in house prices. Institutions that sustain such shocks reduce hedging significantly relative to otherwise similar institutions. The reduction in hedging is differentially larger among institutions with high real estate exposure. The evidence is consistent with the theory that financial constraints impede both financing and hedging. This causal effect of net worth on hedging that can be explained by the theory of risk management under financial constraints of Rampini and Viswanathan (2010, 2013). Conclude that financing needs associated with hedging are a substantial barrier to risk management for financial institutions.

According to Rampini and Viswanathan (2010, 2013) appreciative, the determinants of risk management of financial institutions are of genuine importance due to their central and quantitatively significant role in the macroeconomic. The study indication recommends that financial constraints are a crucial weakness in risk management by financial institutions. Inadequate risk management grasses financial institutions, particularly financially inhibited ones.

Conceptual framework

To reiterate, the present study takes a close look into the effects of risk-related factors on risk management practices, which in turn influence the financial performances of banks in Iraq. A detailed framework of risk management policies and sophisticated risk management processes needed for systematic identification, measurement, monitoring, and controlling of all risks that banks face. The proposed model also offers a theoretical relationship that will enhance the current literature and help banking practitioners manage financial risks for better financial returns and earnings. Such findings are very helpful in rebuilding the Iraqi economy that has been devastated by wars over years. Risk management practices (RMP) identified as a mediator because it is one of the most important governance mechanisms of financial institutions to ensure there is compliance with the principles of ISO 31000. Therefore, the role of the RMP as a mediator in the relationship with risk factors practices (UR and M, RI, RAA, RMON, and CRA) and banks performance it will be used to enhance and strengthen the role of the RMP in financial performance. Furthermore, the choice of the RMP as a mediating variable for the current study is justified as the RMP has a positive impact as assured by some studies in the literature such as (Azreen and Hayati 2013a, b; Hao-Chieh 2016).

While several studies carried out on risk management, there have been few empirical studies on risk management practices in financial institutions. In addition, most studies in the areas of risk management conducted in developed countries, namely the U.S. and Europe (Santomero 1997; Fan and Shaffer 2004) compared to those in the developing world where it has received less attention (Shehriyar Khalil 2015; Al-Tamimi and Al-Mazrooei 2007; Hassan 2009; Al-Tamimi 2010). To test the link, a model developed by Al-Timimi and Al-Mazrooei (2007). The use of structural equation modeling (SEM) is another aspect that differentiates the present study from previous ones. In the previous chapter, the relevant literature pertaining to risk management discussed, and theoretical gaps in the existing body

identified. One of the gaps highlighted was that previous studies had not considered the mediating effect of risk management practices that serve as the link between risk-related factors (understanding and managing risk, risk identification, risk assessment analysis, risk monitoring, and credit risk analysis) and financial performance.

Theoretical framework

It should be noted that Sekaran (2013) states that "a theoretical framework is a conceptual model of how many theories or concepts make logical sense of the relationship among several factors (variables) that have been identified as important to the problems". Lee et al. (2021) explain that growing number of financial services (FS) companies are adopting solutions driven by artificial intelligence (AI) to gain operational efficiencies, derive strategic insights, and improve customer engagement to via improving risk management practices using digital technologies applications. Nevertheless, adoption rate has been small, in part due to the anxiety about its density and self-learning competence, which makes auditability a challenge in a highly regulated industry. A inadequate literature on how FS companies can implement the governance and controls specific to AI-driven solutions has been observed. AI auditing cannot perform in a vacuum; the risks are not limited to the algorithm itself, but rather permeate the entire organisation. Using the risk of unfairness as an example, in their paper introduce the central governance strategy and regulatory framework to discourse the concrete encounters in mitigating risks AI familiarizes. Lee's (2021) study with regulatory framework consequences and industry practice cases, this framework will enable leaders to innovate with confidence.

This study developed a theoretical framework to empirically examine the mediating role of risk management practices between financial performance and risk-related factors and how risk management practices affect financial performances in the Iraqi private banks. This study contributes to the knowledge body by filling the research gaps of the studies carried out on risk management such as the studies undertaken by Haselkorn (2015), Nazir et al. (2012), Hussain and Al-Ajmi (2012), and Al-Tamimi (2010), Muhammad Ishtiaq (2015) and Jizi Mohammad (2017), among other studies. These studies has not consider a comprehensive group of risk-related factors such as (risk understanding and managing, risk monitoring, risk identification, risk assessment and analysis, and credit risk analysis) with risk management practices as a mediator and financial performance that are considered by this study as shown in Fig. 1.

Hypotheses development

In reference to the theoretical framework shown in Fig. 1 above, the following research hypotheses were established. The five hypotheses tested the impact of risk-mitigating

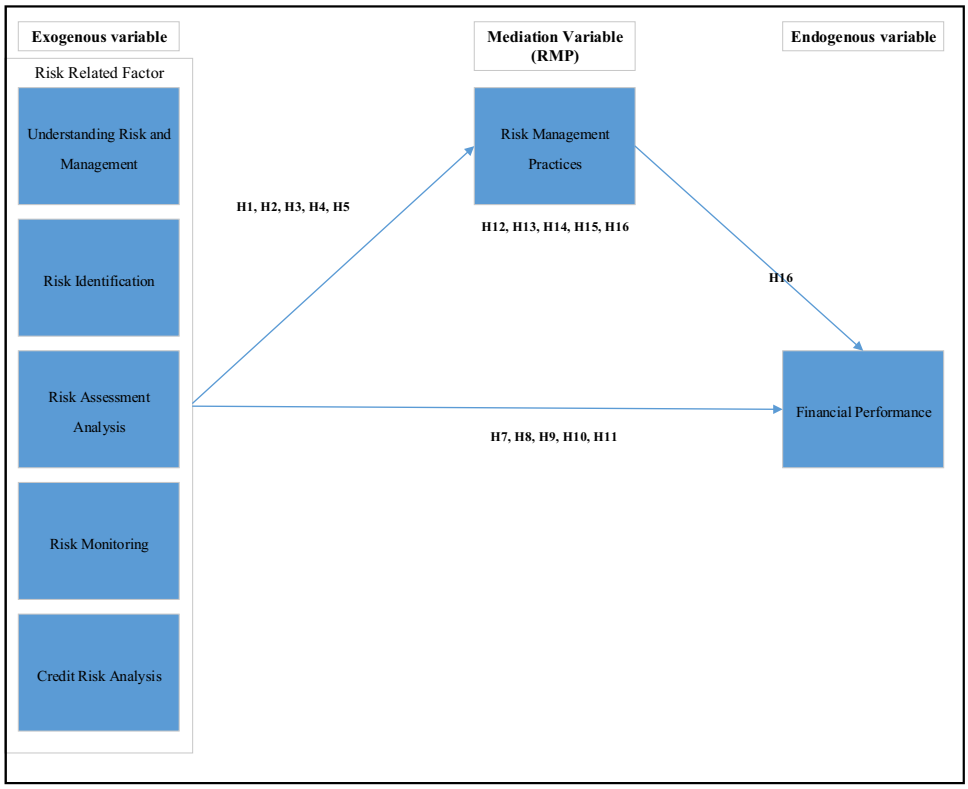

Fig. 1 Research framework

variables on risk management practices and subsequently on financial performance. In this respect, this study extends knowledge in risk management practices in the Iraqi private banks sector area through empirically examining the role of risk management practices as a mediator in the relationship between risks related factors and financial performance and with risk management practices mediating in the relationship among the variables in the model. Table 1 summarizes the hypotheses developed for the present study.

This study used subjective data, primary data (questionnaire survey) as quantitative analysis and to capture the information that cannot captured via questionnaire survey the study uses objective analysis (qualitative). Thus, this study obtained subjective data through a questionnaire survey and objective data through interviews with Iraqi private banks managers to capture the information that cannot captured through the questionnaire survey. Furthermore, this study aimed to examine risk management practices of banks and their relationship with the performance of Iraqi private banks. The focus of this research is on gaining a deeper and more specific comprehension of the risk management system to confirm its effectiveness. Hence, this study took a holistic approach with a positive attitude to both qualitative and quantitative methods as explained by Onwuegbuize and Leech 2005, p. 383. Though this study mainly used quantitative techniques, it also resorted to a partial use of qualitative techniques to provide a background to risk management practices and to gain new insights to contribute to the extant dialogue surrounding the effectiveness of the risk management practices in developing countries in general and the banking domain in Iraq in particular. In this study, Iraqi private banks consider as financial institutions where the managers appear to be under several restraints. The Central Bank of Iraq formulates risk management policies and managers of the banks are required to comply with these policies. The existence of such pressure varies from bank to bank. The motivation for this study comes from the need to disseminate the importance of risk management practices of banks and the role of the Central Bank in clarifying the importance of risk management practices. Ultimately, the research aims to study the impact of risk management practices on the financial performance of Iraqi banks and their compliance with the requirements of the international standards.

Target population

There are total of 36 licensed banking institutions in Baghdad (Central Bank of Iraq, 2011). Out of 36 banks, government owns six of them and 30 banks are private. The six public banks are Al-Rafidain bank, Al-Rashed Bank, Commercial Bank, Industrial Bank, Real Estate Bank, and Socialist Bank. However, this study only selected employees in private banks as the sample. There are 20,000 employees working in Iraqi private banks in Baghdad. The justification for selecting private banks in Baghdad is that it is the capital city and the financial hub of the Iraqi banking system where most of these banks are located. Also, it has the highest number of private banks due to the population of Baghdad, as of 2011, is approximately 7.655 million making it the largest city in Iraq (UNICIF 2014). This figure gives a great opportunity to the banks to attract deposits and provide credit to the public and to other sectors in order to help rebuild the infrastructure of Iraq. By selecting the sample from the 30 banks, it represents the major population of Iraqi private bank employees. The study attempted to get comprehensive information about risk management practices through the responses. Most of these banks began operations after the year 2003, and some of the banks have a small number of staff with little experience and with different educational backgrounds compared to the number of employees who work in public banks, who have more experience in the banking business.

As described earlier, this study adopted a self-delivery and self-collection questionnaire method in order to maximize the response rate of the survey. Saunders et al. (2009) highlight that personally administered questionnaires have fewer issues with response rate. During the course of data collection through the main questionnaire survey, 510 questionnaires were distributed 460 questionnaires were returned, of which 81questionnaires were found incomplete and had to be excluded. The remaining 379 questionnaires found useable and represented a good response rate of 74%. Babbie (2010) proposes that a response rate of 70% or more considered very comprehensive for a questionnaire survey. The mean value calculated based on the valid responses (Hair et al. 1998). The questionnaires that had more than three missing values for a specific construct eliminate. After all the eliminations done, 379 valid questionnaires (74%) used for data analysis (Hair et al. 2010). Additionally, this study also obtained a higher response rate than previous studies where the response rate was less than 200 (Al-Tamimi and Al-Mazrooei 2007; Hassan 2009; Hussain and Al-Ajmi 2012). Table 2 shows the response rate.

Results and discussion

Data from 379 respondents coded and analyzed via AMOS version 20.0. Several statistical validity tests and methods of analysis conducted such as reliability and composite reliability tests, validity tests using CFA for construct validity, discriminate validity for multicollinearity treatment, descriptive analysis, and correlation. The steps in the SEM analysis were CFA analysis, measurement analysis, discriminate analysis, composite reliability, and average variance extracted. Also presented are the results of the direct and indirect impact

Table 1 Summary of hypotheses development in the proposed model

No	Name variable	Hypothesised relationship
H1	Risk understanding and management (RUM)	There is a positive relationship between risk understanding and managing and risk management practices (Related to question one and objective one), activity Al-Tamimi (2010), Bilal et al. (2013), Hussain and Al-Ajmi (2012)
H2	Risk identification (RI)	There is a positive relationship between risk identification and risk management practices (Related to question one and objective one), Romzie (2009), Anderson (2010) and Haselkorn (2015)
H3	Risk assessment and analysis (RAA)	There is a positive relationship between risk assessment and analysis and risk management practices (Related to question one and objective one), Al-Tamimi and Al-Mazrooei (2007), Hussain and Al-Ajmi (2012), Shehriyar Khalil (2013) and Aliv Basir (2015)
H4	Risk monitoring (RMON)	There is a positive relationship between risk monitoring and risk management practices (Related to question one and objective one), Hassan (2009), Wael 2010, Khalid and Amjad (2012) and Bilal et al. (2013)
H5	Credit risk analysis (CRA)	There is a positive relationship between credit risk analysis and risk management practices (Related to question one and objective one), Ismat et al. (2009), Ariffin et al. (2009), Hussain and Al-Ajmi 2012 and Bilal and Talib and Khan (2013)
H6	Risk management practices(RMP) and financial performance (FP)	There is a positive relationship between risk management practices and financial performance (Related to question three and objective three), Adam, 2012), Adeusi 2013, Walid, 2014 and Idode (2016)
H7	Understanding risk and managementand financial performance	There is a positive relationship between understanding risk and management and financial performance (Related to question two and objective two), Maziol, 2009, Normani (2012), Wanjiru (2013), Muhammad Ishtiaq (2015) and Jizi Mohammad (2017)
H8	Risk identification and financial performance	There is a positive relationship between risk identification and financial performance (Related to question two and objective two), Al-Tamimi 2008, Hoyt and Liebenberg, 2011, Omasete (2012), Momanyi and Njiru (2016), Adeusi (2013) and Muhammed (2015)
H9	Risk assessment and financial performance	There is a positive relationship between risk assessment and financial performance (Related to question two and objective two), Omasete (2012), Momanyi and Njiru (2016) and Muhammad Ishtiaq (2015)
H10	Risk monitoring and financial performance	There is a positive relationship between risk monitoring and financial performance. (Related to question two and objective two), Khalid and Amjad (2012), Wanjiru (2013) and Matis (2015)
H11	Credit risk analysis and financial performance	There is a positive relationship between credit risk analysis and financial performance (Related to question two and objective two), Wanjiru (2013) and Salim Ruhu (2017)
H12	Risk management practices Mediation of RUM	There is a mediating effect of risk management practices on the relationship between risk understanding and management and financial performance. (Related to question four and objective four), McMillan and Gilley et al. (2002) and Azreen and Hayati (2013a)
H13	Risk management practices mediation of RI	There is a mediating effect of risk management practices on the relationship between risk identification and financial performance (Related to question four and objective four), McMillan and Gilley et al. (2002) and Azreen and Hayati (2013b)
H14	Risk management practices mediation of RAA	There is a mediating effect of risk management practices on the relationship between risk assessment analysis and financial performance. (Related to question four and objective four), McMillan and Gilley (2002) and Azreen and Hayati (2013a)
H15	Risk management practices mediation of RMON	There is a mediating effect of risk management practices on the relationship between risk monitoring and financial performance. (Related to question four and objective four), McMillan and Gilley (2002) and Azreen and Hayati (2013b)

Table 1 (continued)

No	Name variable	Hypothesised relationship
H16	Risk management practices mediation of CRA	There is a mediating effect of risk management practices on the relationship between credit risk analysis and financial performance. (Related to question four and objective four), McMillan and Gilley (2002) and Azreen and Hayati (2013b)

Table 2 Response rate of the questionnaires

No. of population 20,000	No of population	Percentage (%)
Distributed	510	100
Returned	460	90
Eliminated	81	
Total no. of respondents used in this study	379	74

analysis (mediating effect), the tested fit for the hypothesized structural model, revised model, and comparison analysis, confirmatory factor analysis conducted on every construct and measurement model.

All CFAs of constructs produced a relatively good fit as indicated by the goodness-of-fit indices such as CMIN/ df ratio (< 2), *p*-value (> 0.05), GFI of > 0.90, and RMSEA of values less than 0.08. The measurement model has shown to have a good fit with the data based on assessment criteria such as ratio, *p*-value, GFI, CFI, TLI, and RMSEA. In the confirmatory factor analysis, the chi-square values were significant due to the large sample size but based on the maximum likelihood factor loadings, and goodness-of-fit indexes, all model fit indices showed a good fit between the model and data. Using the paradigm of Anderson and Gerbing (1988), convergent and discriminant validity and reliability of the measures were generally supported. In addition, the AVE for each contract was higher than the squared correlation between that construct and any other construct, providing support to the discriminant validity of the measures (Fornell and Larcker 1981). Composite reliability values of 0.70 and above and Cronbach's coefficient alpha values of 0.70 and above followed the recommendation of Nunnally (1978) and Kline (1998 and 2010). Thus, all measures appeared to be one-dimensional, internally consistent, reliable, and valid for hypotheses testing using the structural equation model. Out of the 16 hypotheses, twelve supported and the remaining hypotheses rejected.

Table 3 shows all correlation values of dimensions in independent, mediating, and dependent variables, which are in bold to highlight the homological validity. Risk-related factors specifically positively linked to risk management practices and financial performance. This result is consistent with the prediction that risk-related factors positively related to risk management practices. Moreover, the correlation results indicated that all items correlated with each other, which shows Support for the relationship. The correlation matrix (Table 3) all correlations between exogenous variables were less than 0.90, indicating that the variable interactions were free from multicollinearity problems (Ghazali 2004).

Table 4 shows results of goodness-of-fit analysis of measurement models between endogenous and exogenous variables. In sum, all CFAs of constructs produced a relatively good fit as indicated by the goodness-of- fit indices such as CMIN/df ratio (< 2); *p*-value (> 0.05); goodness-of-fit Index (GFI) of > 0.90, and root mean square error of approximation (RMSEA) of values less than 0.08. The

Table 3 Correlation matrix

	CR	AVE	MSV	ASV	RMP	CRA	RAA	RMON	URM	RI	FP
RMP	0.916	0.523	0.321	0.136	**0.723**						
CRA	0.897	0.556	0.1	0.051	0.312	**0.745**					
RAA	0.885	0.523	0.203	0.109	0.45	0.162	**0.723**				
RMON	0.892	0.623	0.159	0.055	0.203	0.194	0.399	**0.789**			
URM	0.901	0.561	0.152	0.081	0.39	0.208	0.372	0.225	**0.749**		
RI	0.853	0.537	0.006	0.002	−0.001	0.056	−0.044	0.049	0.016	**0.733**	
FP	0.914	0.514	0.321	0.115	0.567	0.316	0.352	0.2	0.314	0.076	**0.717**

CR composite reliability; *RMP* risk management practices; *RAA* risk assessment, *RMON* risk monitoring; *CRA* credit risk analysis; *RI* risk identification; *RUM* risk understanding and management; *FP* financial performance; *AVE* 0.523; 0.556; 0.523; 0.623; 0.561 0.537; 0.514 for (RMP, CRA, RAA, RMON, URM, RI, FP) *MSV* 0.321; 0.1; 0.203; 0.159; 0.152; 0.006; 0.321 for (RMP, CRA, RAA, RMON, URM, RI, FP) *ASV* 0.136; 0.051; 0.109; 0.055; 0.081; 0.002; 0.115for (RMP, CRA, RAA, RMON, URM, RI, FP) and *RMP* 0.723, *CRA* 0.745, *RAA* 0.723, *RMON* 0.789, *URM* 0.749, *RI* 0.733, FP0.717

Table 4 Goodness-of-fit analysis of measurement models ($n=379$)

Indices	Measurement model (endogenous)	Measurement model (exogenous)
No of items	20.00	31.00
CMIN	487.4	572.6
Df	169.0	424.0
CMIN\DF	2.884	1.351
p-value	0.0000	0.0000
GFI	0.8800	0.9700
CFI	0.9200	0.9100
TLI	0.9100	0.9700
RMSEA	0.7100	0.3000

measurement model had a good fit with the data based on assessment criteria such as GFI, CFI, TLI, and RMSEA (Bagozzi and Yi 1998; Anderson and Gerbing 1988).

Table 5 summaries the goodness-of-fit of the measurement models. Based on the confirmatory factor analysis of research variables, all constructs in the model were reliable for conducting the structural equation model. These results indicate that the model fitted the data very well and the scales were valid. As evidence of convergent validity, all items loaded significantly on their pre-specified latent constructs and all estimated loadings were large (> 0.500) and statistically significant (Hair et al. 2006). The composite reliability (0.88) and average variance extracted (0.75) of endogenous constructs surpassed the recommended thresholds.

Based on Table 6, the smallest Akaike's Information Criterion (AIC) value is the best model (mediation model) in the mediation model, the variance increased to 0.36 or 36% of variance when all variables tested directly and indirectly. The increase of 36% implies that the mediation model is the best model to predict financial performance.

Recapitulation of the study and its findings

Many financial institutions have placed more and more emphasis on the significant role of risk management (Cummings and Mietle 2001)**.** Firms that had a good reputation suddenly announced large losses due to failing or upsetting credit exposures, interest rate positions that had backfired, or derivative exposures that may not have done anything about hedging the balance sheet risk. This is a result of the global crisis. Banks, both public and private, have almost universally embarked upon upgrading their risk management and control systems to reduce risk. They have taken time to identify measure and control the risks better. The Basel Committee on Banking Supervision had initiated and founded the Financial Stability Institute to help improve the supervision of the financial sector towards creating and consolidating the financial systems worldwide. (Muhammad Shahbaz et al. 2012).

To generate and analyze data for this study, four research questions and four objectives formulated. From these four questions and objectives, 16 research hypotheses generated

Table 5 Summary of goodness-of-fit analysis confirmatory factor analysis (CFA) of models ($n=379$)

Indices	Recommended value	RUM	RI	RAA	RMON	CRA	RMP	FP
No items		7	5	7	5	7	10	10
Chi-square statistic (×2)	Smaller×2 is better	20.86	8.696	22.63	8.424	22.60	48.87	48.31
Related chi-square	≤2	1.490	1.739	1.617	1.685	1.614	1.396	1.380
p-value	> 0.05	0.10500	0.1220	0.0660	0.1340	0.067	0.0600	0.0670
GFI	≥ 0.9	0.9850	0.9910	0.9820	0.9910	0.982	0.9750	0.9750
AGFI	≥ 0.9	0.9700	0.9720	0.9640	0.9740	0.964	0.9600	0.9600
RMR	≤ 0.8	0.0170	0.0190	0.0150	0.0110	0.014	0.0210	0.0270
NFI	≥ 0.9	0.9840	0.9880	0.9810	0.9920	0.983	0.9740	0.9740
CFI	≥ 0.9	0.9950	0.9950	0.9920	0.9970	0.993	0.9930	0.9930
IFI	≥ 0.9	0.9950	0.9950	0.9930	0.9970	0.993	0.9930	0.9930
RAMSEA	≤ 0.08	0.0360	0.0440	0.0400	0.0430	0.040	0.0320	0.0320

Table 6 Summary of model comparisons

Model	Chi-square	df	$\chi 2$/df	RMSEA	GFI	IFI	CFI	AIC
Direct	1986.656	1209	1.643	0.0410	0.838	0.923	0.923	2220.656
Indirect	1830.654	1208	1.515	0.0370	0.846	0.939	0.938	2066.654
Mediation	1812.588	1203	1.507	0.0370	0.848	0.940	0.939	2058.588

in this study, and all of them tested to ascertain which supported, and which discounted.

The first question of this study was "*Is there any relationship between risks characteristics (understanding risk and managing risk, risk identification, risk assessment analysis, risk monitoring, and credit risk analysis) and risk management practices"?*

Based on the results of the study, Hypotheses 1, 2, 3, 4, 5, showed a positive relationship between understanding risk and management, risk assessment and credit risk analysis with risk management practices. These are broadly in line with several researchers in this field (Shehriyar Khalil, 2013; Al-Tamimi and Al-Mazrooei 2007; Afsheen Shafiq and Nasr Mohamed 2010; Hussain and Al-Ajmi 2012; Abul Hassan 2009; Ismat Begum et al. 2009; Md Zahangir Alam 2011; Wael 2010; Romzie 2009; Sania and Shehla, 2012; Main Sajid et al. 2012; Swaranleet 2012).

Hypotheses 1, 3, 5 supported, a positive significant relationship between understanding risk and management, risk assessment analysis, credit risk analysis and risk management practices. While this study found a negative relationship between (risk identification and risk monitoring) with risk management practices, this result is in line with the studies of Tahir (2006) and Shehriyar Khalil (2015). Hypotheses 2 and 4 not supported, as there was an insignificant and negative relationship between risk identification and risk management practices.

The second question of this study was "*Is there any relationship between risks characteristics.*

(understanding risk and managing risk, risk identification, risk assessment analysis, risk monitoring, and credit risk analysis) and financial performance"?

Hypotheses 7, 9, and 11 supported risk understanding and management, risk assessment analysis, credit risk analysis found to have a positive and significant relationship with financial performance. This result is in line with Eastburn and Sharland2017; Wanjiru 2013; Jizi, Mohammad 2017; Tandelilin et al. 2007; Afande 2014; Muteti 2012; Mutesi 2011; Bilal et al. 2013; Selma et al. 2013; Omasete 2012).

Hypotheses 8 and 10 not supported, as there was an insignificant and negative relationship between risk identification, risk mentoring, and financial performance. This result is consistent with the findings of Sabana (2014), Shehriyar Khalil (2013), Mohamed (2010), Salman, and Zain (2011).

The third question of this study, Is *there any relationship between risk management practices and financial performance"?*

Hypothesis 6 supported since there was a significant and positive relationship between risk management practices and financial performances. This result is in line with that of several researchers (Mohamed 2014; Wanjiru 2013; Momanyi and Njiru 2016; Omasete 2012; Selma et al. 2013; Ariffin and Kassim 2011; Oluwafemi et al. 2013; Kao et al. 2011; Berk 2005).

The fourth question is, "*Do risk management practices have potential to mediate the relationship between risks characteristics (understanding risk and managing risk, risk identification, risk assessment analysis, risk monitoring, and credit risk analysis) and financial performance?*

Hypothesis 12 supported as risk management practices found to mediate in the relationship between understanding risk and management (URM) and financial performance. The mode was full mediation.

Hypothesis 13 not supported as risk management practices did not mediate in the relationship between risk identification (RI) and financial performance as; that is, the second stage of Baron and Kenny (1986) not supported.

Hypothesis 14 supported as risk management practices found to mediate in the relationship between risk assessments (RAA) and financial performance. The mode was full mediation.

Hypothesis 15 not supported as risk management practices did not mediate in the relationship between risk monitoring (RMON) and financial performance, the second stage of Baron and Kenny (1986) not supported.

Hypothesis 16 supported as risk management practices found to mediate in the relationship between credit risk analyses (CRA) and financial performance. The mode was partial mediation. This result is consistent with that of (Azreen and Hayati 2013a).

These results are important, as they have highlighted the areas where it is possible to enhance the development of a new technique to help banks mitigate any type of risk. The results are applicable for developing countries, and they provide new knowledge in this area. This new knowledge has established a link between risk management practices as a mediation variable, with risk related factors and financial performance. For quick reference, the results from these hypotheses summarized as shown in (Tables 7 and 8).

Testing mediation using Baron and Kenny (1986)

In order to meet the objectives of this study, the evaluation of the mediation model used, when a third variable or construct gets involved between two other related constructs, a mediator effect created (Hair et al. 2006). In order for this to happen, it is essential for all the three constructs to have a significant correlation. Theoretically, in mediating construct facilitates, there is the involvement of the relationship between the other two constructs (Hair et al. 2006).

The traditional methods of mediation testing are termed basic normal theory approach. This theory explained by Baron and Kenny (1986) who specify the conditions that

Table 7 Results of the direct hypotheses

Test of direct relation between variables				Beta	*p*-value	Results
H1	Understanding risk and mgt. (URM)	→	Risk mgt. practices	0.225	0.001	Supported
H2	Risk identification (RI)	→	Risk mgt. practices	0.004	0.931	Not Supported
H3	Risk assessment (RAA)	→	Risk mgt. practices	0.356	0.001	Supported
H4	Risk monitoring (RMON)	→	Risk mgt. practices	−0.033	0.549	Not Supported
H5	Credit risk analysis (CRA)	→	Risk mgt. practices	0.224	0.001	Supported
H6	Risk management practices	→	Financial performance	0.576	0.001	Supported
H7	Understanding risk and mgt. (URM)	→	Financial performance	0.172	0.003	Supported
H8	Risk identification (RI)	→	Financial performance	0.072	0.172	Not Supported
H9	Risk assessment (RAA)	→	Financial performance	0.270	0.05	Supported
H10	Risk monitoring (RMON)	→	Financial performance	0.001	0.983	Not Supported
H11	Credit risk analysis (CRA)	→	Financial performance	0.243	0.001	Supported

****P* value at .000; *p*-value above .01 not significant

Table 8 Summary of hypotheses testing

Hypothesis	Test of relation between variables			Results
H1	URM	➡	RMP	Supported
H2	RI	➡	RMP	Not supported
H3	RAA	➡	RMP	Supported
H4	RMON	➡	RMP	Not supported
H5	CRA	➡	RMP	Supported
H6	RMP	➡	FP	Supported
H7	URandM	➡	FP	Supported
H8	RI	➡	FP	Not supported
H9	RAA	➡	FP	Supported
H11	CRA	➡	FP	Supported
H12	URandM	RMP	FP	Full mediation
H13	RI	RMP	FP	No mediation
H14	RAA	RMP	FP	Full mediation
H15	RMON	RMP	FP	No mediation
H16	CRA	RMP	FP	Partial mediation

are necessary to consider and apply this theory. Baron and Kenny suggested the following steps to test the mediation model:

Step 1: There must be a significant correlation between predicting and dependent variables.

Step 2: The predictor variable must account for a significant relationship between the mediating variable and the predictor variable.

Step 3: The mediating variable has to be significant in the relationship with the dependent variable.

Step 4: According to Baron and Kenny (1986), the indirect relationship between the predictor and dependent variable has to be significantly less than the direct relationship between the independent and dependent variables, regardless of the effect of the mediating variable.

This study has only one mediating variable namely risk management practices. According to Mathieu and Taylor (2006), a direct relationship between independent variables and dependent variables is a condition to test the mediation effect. This study tested the mediation effect using five methods of analysis. First, this study tested risk management practices as a mediation variable in the relationship between risk understanding and management and financial performance. Secondly, that risk management practices mediate the relationship between risk identification and financial performance; thirdly, that risk management practices mediate the relationship between risk assessment and financial performance; fourth, that risk management practices mediate the relationship between risk monitoring and financial performance; finally, that risk management practices mediate the relationship between credit risk analysis and financial performance (Table 9).

Risk management practices mediate in the relationship between understanding risk and management (URM) and financial performance. The mode of mediation is full mediation.

Risk management practices do not mediate in the relationship between risk identification (RI) and financial performance. Hence, the second stage of Baron and Kenny (1986) not supported.

Risk management practices mediate in the relationship between risk assessment (RAA) and financial performance. The mode of mediation is full mediation.

Risk management practices do not mediate in the relationship between risk monitoring (RMON) and financial performance. Hence, the second stage of Baron and Kenny (1986) not supported.

Risk management practices mediate in the relationship between credit risk analysis (CRA) and financial performance. The mode of mediation is partial mediation.

Table 9 Standardized regression weights in the direct, indirect and mediation model (testing mediation using Baron and Kenny 1986)

Independent variables		Dependent variables	Mediation model	Indirect model	Direct model
Understanding risk and mgt. (URM)	→	Risk mgt. practices	0.223***	0.226***	
Risk identification (RI)	→	Risk mgt. practices	0.000	0.004	
Risk assessment (RAA)	→	Risk mgt. practices	0.342***	0.346***	
Risk monitoring (RMON)	→	Risk mgt. practices	−0.025	−0.023	
Credit risk analysis (CRA)	→	Risk mgt. practices	0.216***	0.223***	
Risk management practices	→	Financial performance	0.449***	0.576***	
Understanding risk and mgt. (URM)	→	Financial performance	0.068		0.172**
Risk identification (RI)	→	Financial performance	0.071		0.072
Risk assessment (RAA)	→	Financial performance	0.096		0.270***
Risk monitoring (RMON)	→	Financial performance	0.025		0.001
Credit risk analysis (CRA)	→	Financial performance	0.137***		0.243***

Qualitative method

Other than respondents being asked to respond to narrative questions of variables within the research, "quantitative, researchers seek explanations and predictions that will generate to other persons and places the intent is to establish, confirm, or validate relationships and to develop generalizations that contribute to theory" (Leedy and Ormrod 2001, p. 102). The qualitative methods aim to evaluate issues in the context of social developments. A qualitative method allows the researcher to become more familiar with a certain area of study while also proving or disproving theories on the areas concerned (Camic et al. 2003). Moreover, qualitative methods of research are able to yield highly elaborate information (Jones et al. 2007). This information is often not pre-categorized, and therefore the research has to focus on each detail in order to create appropriate and relevant categories for the data. The detailed information allows the research to form more affective conclusions on how to improve and have the policies on the social issues addressed (Roberson 2015). In this study, the qualitative method partially used by interviewing eight managers to enable them to express their opinions on the extent of risks management practices in Iraqi private banks. This section reveals that this approach was a useful process to add new and valuable information to the current study and to minimize the disadvantages of a single research approach (Modell 2005; Grafton et al. 2011).

Qualitative findings

The qualitative approach used partially in the current study to validate the questionnaire results following the suggestion by previous studies (Modell 2005; Grafton et al. 2011). This section reveals that this approach was a useful process to add new and valuable information to the current study and to minimize the disadvantages of a single research approach. However, since some of the issues of the current study cannot be well explained quantitatively at this stage in the Iraqi context because of the recent application of risk management practices, the qualitative approach was used to provide further details to explain and validate the quantitative results.

The level of financial performance

The first issue posted by the semi-structured interviews aimed at evaluating the level of private bank's performance based on the measurements that used in the questionnaire. Seven managers in the top management level asked to evaluate their bank's financial and non-financial performance over the last 3 years in comparison to their major competitors. The interviewees were required, moreover, to provide explanation and justification about the level of financial performance.

Through the semi-structured interviews, all managers ranked financial performance in the lowest rank. In this manner, the managers confirmed that the main concern of the banks is minimizing the risks since all are profitable organizations listed on the Baghdad Stock Exchange (2014–2015). Further supplementary questions showed five out of seven managers to report that their bank's performance, both financial and non-financial performance was not at an acceptable level, while other managers (2 out of 8) indicated that their bank's performance was not up to their expectations. Those who felt that their bank's performance was not satisfactory cited two reasons: (i) lack of effort and (ii) the accumulated experiences of the original founders of the banks who placed more emphasis on the negative effect of the global financial crisis. Moreover, four out of seven managers believed that the reason behind the relatively low performance (based on the qualitative results) is the little attention given to risk management by their banks. Generally, the current subsection has provided confirmation and validation to the quantitative results of the performance of the banks.

In summary, most of the interviewees (five out of eight) agreed that three factors, namely, risk identification, risk assessment analysis, and risk monitoring were considered as vital contributors to the financial performance. The interviewees indicated that these risk factors have played a very critical role in determining the characteristics of the banking industry and consequently enhancing the financial performance of banks.

Mediating effect of risk management practices

The last phase of the semi-structured interview aimed at validating the quantitative results in connection with the risk-related factors (understanding and management of risk, risk identification, risk assessment analysis, risk monitoring, and credit risk analysis) which theorized to improve financial performance through the effect of risk management practices. This means that risk-related factors enhance risk management practices, which in turn increase financial performances. In this part of the interview, the eight managers asked to give their opinions to support the quantitative findings. Seven managers indicated that, under this business situation with risk management practices in Iraq, risk-related factors provide very important information to modify the strategy and to update the bank's plans to achieve better performance. The majority of the interviewees (five out of seven) indicated that risk management practices increase their efficiency and profitability. Risk management practices are a useful tool for managing uncertainty related to business activities and financial performance. Business enterprises have continuously practiced some aspects of risk management, implicitly or expressly (Meulbroek 2002).

Performance and risk inextricably linked. Further inquiries showed that six out of eight interviewees had confirmed the impact effect of risk management practices on organizational performance. They illustrated that the risk-related factors played an important role in reducing the uncertainty, such that ultimately, it enhanced overall financial performance. However, these qualitative results seemed to be quite contrasting with the results from the quantitative study, which had provided weak evidence to support the notion that the risk management practices mediated the impact on financial performance of private banks. Moreover, three managers asserted that under high-risk management, if a bank did not generate and actually use the external practices (such as risk-related factors) to reduce the risks and update the strategy, this could negatively affect the bank's performance. The semi-structured interview results brought some new insights with regard to the mediating effect of risk management practices on the financial performance of banks. These qualitative results were in contrast to the quantitative study, which provided little evidence on the mediating effect of the risk management practices.

Conclusion and implications

The purpose of this study is to empirically examine the effectiveness of risk management practices determinants and their impact on the performance of Iraqi private banks. In determining this relationship a model on the relationship between risk-related factors, risk management practices and financial performance was developed. The results showed that the understanding of risk and management, risk assessment analysis and credit risk analysis had a positive relationship between risk management practices and financial performance. Whereas risk identification and risk monitoring and monitoring had no relationship between risk management practices and financial performance. It has been found that risk management practices to have a positive and significant effect on financial performance. The results showed that the risk-related factors support risk management practices which consequently served as an input to mitigate risks faced by banks, while good risk management practices as a process help to increase financial performance as an output. Based on the study findings, it is suggested that the implementation of risk management practices leads to improve financial performance.

This study examines the selected Iraqi private banks risk management practices and how these practices affect the financial performance of these banks. In addition, the study also contributes to providing the link between risk management practices and financial performance of Iraqi private banks using structural equation modeling analysis. The study fills a significant gap in existing literature, as well provides insight and solutions to risk management practices in the private banks in Iraq. In order for this information to be availed generally, the study deeply examined the risk management practices in specific Iraqi private banks, with the intention of unearthing how these practices affect financial performance of these banks. This is looking at what connects the risk management practices with overall financial performance.

This study contributes to the body of literature on the factors that affect risk management practices and subsequently, the financial performance of the private banking sector in Iraq. To begin with, the existing literature critically reviewed offering insight into what is happening in the banking sector in Iraq. There several factors that identified and factors ascertain to measure financial performance. The relationship between these factors and financial performance was tested.

Risk management practices affected by understanding risk management, risk assessment analysis and credit risk analysis. From the hypothesis, the relationship found to be significant. This study found a positive relationship between understanding risk and management, risk assessment analysis, credit risk analysis with risk management practices. In addition, the study found a positive and

significant relationship between risk management practices and financial performance. These reveal how essential it is to comprehend the risk management practices so that definite measures put in place for the management of risks.

Consequently, this study found an insignificant and negative relationship between risk identification and risk monitoring as the financial performance affected by various uncontrollable factors such as the economic condition. An alternative explanation is that time lag can also be a major factor, i.e. those banks with successful risk management practices may require some time until improvement seen in their practices. The results also revealed a mediation relationship between risk understanding and management, risk assessment and credit risk analysis, while there was no mediation role between risk identification and risk monitoring with risk management practices and financial performance. In particular, this study considered the influence of risk-related factors process i.e. risk understanding and management, risk identification, risk assessment, risk monitoring and control, and credit risk analysis on risk management practices.

Looking at these negative results, something else came to light and that was the problems that exist in the current risk management techniques, particularly, how they are in need of improvement to achieve better financial performance of the Iraqi private banks.

The present study has provided empirical evidence that risk-related factors positively affect the implementation of risk management practices, which in turn lead to enhanced financial performance. This finding is the primary contribution of the present study in filling the existing gap in the literature. The mediation effect of risk management practices confirms the argument that applying risk management practices helps to mitigate risk faced by banks which consequently leads to increased financial performance (Azreen and Hayati 2013b).

Recommendations and implications

In conclusion, this study focuses on examining the risk management practices and their relationship with performance in Iraqi private banks. These results indicate that an effective risk management framework depends upon a number of important factors. The effectiveness of the risk management practices significantly depends upon the proper understanding of risk and risk management among bank employees in Iraqi private banks. Furthermore, it is very important for banks to formulate an active risk management process to identify measure, monitor and control different risks by considering guidelines of the Central Bank of Iraq. Formation of a comprehensive risk management system in Iraqi banks is not only a useful exercise to meet the regulatory requirements but an effective practice to improve the performance of banks. Consequently, the results of this research study evidently support the assertion that risk management significantly contributes to better performance in Iraqi private banks.

This research work is of great importance as this paper is not only contributed to the existing academic literature in the field of banking but also offers some valuable practical contributions to this important area. In summary, this study is a message addressed to the private banks in Iraq, that they need to give greater attention to applying a risk management framework in order to improve the quality of banking activities, given the' importance of banks in supplying funds to the economy for the re-building of Iraq.

Limitations of the study and suggestions for future research

This research has identified several limitations, can considered in understanding and assessing the results to aid and enhance future studies.

The first limitation lies in the fact that the study focused on private banks in Iraq. There are distinct differences between the private banks in Iraq and the public banks within the region. The results of this study may not be easily applicable to a variety of situations or even the region as a whole. The risks that various banks face vary greatly, as does the clientele that the private and public banks are serving.

The second limitation related to the data collection methodology, which was a questionnaire survey, which is generally reliable, therefore, more time should have been taken for observation and qualitative analysis, as this would have increased the reliability of the results.

The third limitation looks at the number of factors that have been examined in this study. The fourth category of risk-related factors has been examined, and even then, the responses have been significantly generalised. This is because, within the pool of Iraqi private banks, the interaction with risk management practices and employee development is generally low. More research, therefore, needed to get a proper picture of the impact that risk-related factors have on risk management practices.

The final limitation looks at the scale that used in the study. A 7-point Likert scale was used and the respondents gave their answers by rating on the scale of 1 to their perceptions of the questions that were asked. As perception is relative, the interpretations of the questions may have affected the reliability of the results. In addition, there may be some response bias in the information collected.

To pave the way for further research on risk management practices, future studies may need to consider looking into the effects of risk management practices on financial performance in international and local banks. This comparative

analysis is important to validate further the findings of the present study. In addition, bank managers and practitioners to improve their risk management practices concerning what other banks are doing can use the findings.

A comparative study will provide information that can be used for banks to benchmark their practices against better banks especially in terms of the way they assess and conduct risk management exercises. Therefore, prospective researchers might need to consider gathering data from a variety of other banks, namely, public banks, Islamic banks, financial companies, chamber of commerce institutions, and insurance companies. In addition, future studies should also include data collected from other regions to formulate a more holistic and all-encompassing analysis to bring about improvements to the banking industry.

In addition to a comparative analysis, more variables and antecedents can be inserted into the research model to understand further, what factors affect risk management practices and financial performance such as bank culture or innovation. The International Institute of Finance (2008) described a "bank-culture environment" as one where all employees have a clear understanding of their responsibilities vis-à-vis management of risk and are held accountable for their performance. In this respect, it will be interesting to find out to what extent bank employees in Iraq particularly, understand what their roles and responsibilities are when it comes to risk.

Future studies may consider using a qualitative approach when examining risk management practices and their effect on the effectiveness of banks. By using qualitative methods such as in-depth interviews or focus groups discussions, managers will be able to better understand the experience, motivations, and barriers to the performance of risk management practices within the banks.

Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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