تأثير إدارة المخاطر المؤسسية في تحقيق الاستدامة المالية في البنوك التجارية الأردنية

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الملخص

تهدف هذه الدراسة إلى تحليل العلاقة بين المتغيرات المستقلة، وهي أبعاد إدارة المخاطر المؤسسية (تحديد الأحداث، وتقييم المخاطر، وأنشطة الرقابة)، والمتغير التابع، وهو الاستدامة المالية للبنوك التجارية الأردنية. وباستخدام المنهج الوصفي التحليلي، اقتصرت عينة الدراسة على 12 بنكًا أردنيًا، بمشاركة 20 مديرًا من كبار المديرين و20 متخصصًا في إدارة المخاطر المؤسسية. وتم تحليل الارتباط بين مكونات إدارة المخاطر المؤسسية والاستدامة المالية باستخدام برنامج SPSS، وذلك من خلال 270 استبيانًا مُعادًا. تشير النتائج إلى أن إدارة المخاطر المؤسسية لها تأثير إيجابي على الاستدامة المالية، حيث يُعد تحديد الأحداث العامل الأهم. ويؤكد هذا على ضرورة تعزيز البنوك الأردنية لإطار إدارة المخاطر المؤسسية لديها للتعامل مع المخاطر بفعالية. وتقدم الدراسة توصيات رئيسية لتحسين تطبيق إدارة المخاطر المؤسسية في ممارسات الإدارة الاستراتيجية، بهدف تحقيق استقرار مالي أفضل في المستقبل.

الكلمات المفتاحية: إدارة المخاطر المؤسسية، الاستدامة المالية، البنوك الأردنية، تقييم المخاطر

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The Impact of Enterprise Risk Management (ERM) in Achieving Financial Sustainability in Jordanian Commercial Banks

Abstract

This research aims to analyze the relationship between the independent variables; ERM dimensions: event identification, risk assessment and control activities and the dependent variable; financial sustainability of Jordanian commercial banks. Adopting a descriptive analytical method for the research, the population is restricted to 12 Jordanian banks with 20 senior level managers and ERM specialists each participating in the study. Two hundred and seventy sets of the returned questionnaires were used to analyze the correlation between components of ERM and financial sustainability utilizing SPSS. The results suggest that ERM has a positive impact on financial sustainability with event identification being the most important factor. This underlines the need of Jordanian banks to enhance the specific framework of ERM to cope with the risks effectively. Key recommendations are made to improve the implementation of ERM in strategic management practices with a view of achieving better future financial stability.

Keywords: Enterprise Risk Management, Financial Sustainability, Jordanian Banks, Risk Assessment.

Introduction:

Banking sectors, in the new financial environment, are always vulnerable to different risks that challenge the existence of the bank as well as its long-term success. The banking risks include operational risks, market risks, compliance, and threat to reputation. On the one hand, the risks are becoming more complicated such that the traditional methods of risk management, over time, have not been highly efficient at securing the sustainability of banks (Abdaljabar et al., 2024). Moreover, there are several facets to the problem of sustainability within the field of financial services. The sustainability strategy's foundation is the understanding of significant effects and the idea of appropriate risk management, especially in the current market, which is increasingly difficult due to increased public scrutiny and failure sensitivity (Lusmeida & Augustine, 2022). The way financial institutions manage operations risk in order to be efficient and reputation risk with compliance with regulations so that the reputation of their goods and services will probably get better shows opportunities for sustainability and the risks that financial sector institutions face. A sustainable operational model can be differentiated, which automatically increases the value of the company (Saputra et al., 2023).

Hence, the introduction of Enterprise Risk Management (ERM) has been the main goal of the system, which offers banks the ability to detect, evaluate, and manage all kinds of risks in a unified approach. In this model (Shatnawi et al., 2022), ERM is integrated into the company's overall strategy, enabling it to be more inclined to business goals such as securing the financial strength and preparation for the risk of a specific threat (Oyewo, 2022).

ERM is being recognized as very effective not only in reducing risks but also in profit-making through the phenomenon of risk identification. It is performed through different dimensions like event identification, risk assessment and control

activities, which are fundamental elements in the management of a bank's exposure to uncertainties (Shatnawi & Eldaia, 2020).

Nevertheless, the relationship between ERM and financial sustainability is not one-dimensional. The different aspects of ERM, including the identification of events and control activities, serve different purposes in ensuring that a bank remains financially viable over its lifetime (Saputra et al., 2023). For example, the event identification capability of banks makes them proactive rather than being reactive towards their risk management approach. Moreover, effective control activities enable banks to avoid potential risks and thus keep them stable financially in volatile markets; this is according to Scholtens & Van't Klooster (2019). The above factors, therefore, exemplify the all-roundedness of ERM and how it impacts financial sustainability.

Knowledge of the impact of ERM in banking aids regulators, policymakers, and even bank management since it puts them at an alert position and presses them on the need to adapt comprehensive risk management frameworks. Notably, the COSO-ERM framework structures ERM in some key dimensions like event identification, risk assessment, and control activities and so allows for a strategic guide to implement effective risk management practices among banks.

In the ever-shifting and growing important domain of finance, the sustainability of banks is always at risk from various internal and external scenarios. Banking institutions recognize financial sustainability as critical to sustainable operation and ability to withstand economic and regulatory changes while delivering maximum profit and balance. However, the uses of these traditional risk management practices have been revealed to fall short of protecting the sustainability of banks over the years especially in the recent global financial crises, hence the emergence of more robust frameworks.

Enterprise Risk Management (ERM) has recently been determined as a strategic approach to the holistic management of financial and operational risks. However, the special effect of ERM toward attaining financial sustainability in banking industry, particularly with the context of the Jordanian commercial banks has not receive much attention. Earlier works have suggested the overall advantages of ERM implementation but have paid little attention to how each dimension of the ERM process, namely event identification, risk evaluation, and control actions supports the concept of financial sustainability.

This study aims at bridging this gap by specifically investigating role of these ERM dimensions in enhancing financial sustainability of the Jordanian commercial banks. This answers the calls made in prior studies for additional systemic assessments of how parts of ERM help improve financial stability (Abdaljabar et al., 2024; Oyewo, 2022). Through comparing the results of event identification, risk assessment, and control activities, this research intends to fill this gap by offering a better understanding of how ERM can be enhanced to strengthen the financial sustainability of the banking system.

The problem of the study can be described up by referring to the following queries:
Main Research Question: What is the impact of Enterprise Risk Management, with its related dimensions: (Event identification, Risk assessment, and Control activities) on achieving financial sustainability in banks?

The following main sub-questions arise from this main query:

1.Do the ERM applications addressed in event identification affect financial sustainability in banks?

2.Do the ERM applications addressed in risk assessment affect financial sustainability in banks?

3.Do the ERM applications addressed in control activities affect financial sustainability in banks?

Most existing research on ERM's impact on financial sustainability predominantly focuses on global or Western banking sectors, often overlooking the unique economic, cultural, and regulatory environments of Middle Eastern countries like Jordan. This study seeks to fill this significant gap by exploring how ERM dimensions, event identification, risk assessment, and control activities; specifically affect the financial sustainability of banks in Jordan.

Scientific Importance: This research serves scholarship in the area of financial risk management by investigating the extent of ERM in influencing the financial viability of Jordanian commercial banks. To the sciences, the study helps in advancing an appreciation of how the three related but unique ERM dimensions namely, event identification, risk assessment, and the control activities affect the stability of the bank. Although prior research has generally considered the use of ERM in risk management, this research investigates risk management in terms of ERM components; thus, providing a new focus for contemporary risk management scholarship. It provides a particular empirical perspective on the effectiveness of these ERM dimensions within the regional banking environment that has still not been adequately researched.

Practical Importance: In terms of application, therefore, the findings of this study are meant to inform Jordanian banks on the ways of enhancing the soundness of their risk management processes to ensure that the ills of unsound banking emanating from poor risk management are eliminated. Therefore, the type of study presented here can be helpful for bank executives and risk management professionals by making use of empirical data to determine which aspects of ERM should be promoted or dwelled upon to make an important difference during the next few years. Also, it responds to the demand for the cohesive approach to risk management regulation, which will help banks to perform this requirement better.

For the current complex risk environment which banks operate in, strengthening ERM practice results into better financial shock absorptions, compliance to the international risk management standards and therefore competitive advantage in the financial services industry.

The academic contribution: this paper greatly contributes to the literature in the academic field of financial risk management examining the influence of distinct ERM parts on the financial viability of Jordanian commercial banks. In contrast with studies which generally provide outcome of ERM, this research identity the responsibilities of event identification, risk assessment, and control activities. The approach is not only novel in filling such a basic void in the current literature but it also offers a detailed analytical perspective that can be mimicked or modified in similar research in to other regional banking systems. The paper's empirical findings are valuable for improving global knowledge of risk management processes, and thus contribute to the effective enhancement of ERM in the banking industry.

The practical contribution: On a practical level therefore, the study provides rich and valuable findings that can be used to inform the tactics of Jordanian banks in the best way possible. Apart from highlighting the major ERM dimensions driving financial stability, the research provides valuable practical insights to bank executives and risk managers as they customize existing and new strategies with actual data. This is more important for banks in Jordan since the country's economy is characterized by oscillations and high requirements for the management of risks. The recommendations made in this study pertaining to the enhancement of the financial literacy level of the clients and its subsequent effectiveness in formulation of policies essential in evaluation of the financial capacity of the clients will help in improving financial viability of banks so as to pass a higher level than the regulatory standards, hence helping in formulation of a stable banking system.

The strategic contribution to Jordanian banks*:* On a strategic perspective, the study has highlighted the necessity for the integration of ERM into the Jordanian banks' business critical activities. The findings of this research therefore propose a fundamental change of culture from pure risk management to that of anticipation and prevention of financial risks. The approach shift can assist in risk management to enable them capture new opportunities that stem from well-executed risk environment. Moreover, the study insists on the creation of the risk-profiling culture in banks and in this way, improve their position in the managing of the contemporary financial activities and products.

Policy implications: Consequently, the results of this research have the potential of being adopted by policy makers in different aspects of the financial sector with special focus at attempting to formulate policies and guidelines that would seek to control the management of risks in banks. Thus, the study can help regulatory partners by showing how each of the ERM components supports financial sustainability and determine policies that can enhance the delivery of better risk management benchmarks across the banking fraternity. This contribution is equally important for the fact that banks not only remain protected from possible financial turbulence but are ready to contribute to the stabilization of the economy of the region.

Study model:

This research distinguishes event identification, risk assessment, and control activities as different factors, providing fresh insights into these particular influences on the financial viability of the banking institutions. The study model is shown in Figure (1), displaying the study variables and their respective dimensions.

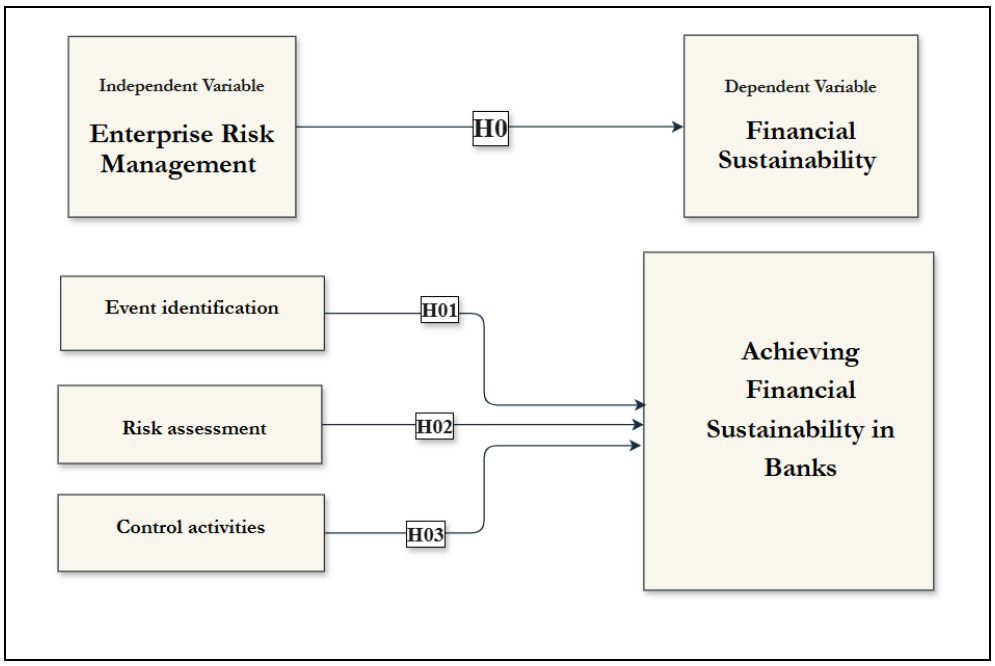

Figure 1: Study Model

Research hypotheses:

This research is predicated on the conceptual framework of Enterprise Risk Management (ERM) put forward by COSO which asserts that optimized management of risks improves organizational efficiency and resilience. The framework created for this study defines the anticipated links between event identification, risk assessment, and control activities on the one hand and banking sector financial results on the other. Stemming from agency theory, information asymmetry is argued to decrease agency cost hence improve firm's value, this research therefore posts that good event identification assists banks avoid adverse financial occurrences. Along the same line, making use of the resource-based view (RBV), the study assumes that risk assessment processes are instrumental in increasing financial sustainability by improving the possibility to organize and manage resources in condition of risk presence.

Finally, the type of activities presented in the figure is placed within the theoretical framework of control systems where it is postulated that suitably designed control systems increase the correspondence between organizational activities and strategic goals thus improving performance. The following theoretical frameworks have laid down rock-solid for hypothesizing the positive effects of the assessed ERM dimensions on the theoretical construct of financial sustainability of Jordanian commercial banks; drawing from the empirical evidence from previous research studies. The COSO-ERM framework was used as the foundation for the study's hypotheses. The primary research hypotheses were developed considering the aforementioned:

H0: There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of Enterprise Risk Management in its dimensions (event identification, risk assessment, and control activities) on achieving financial sustainability in banks.

The primary hypothesis gives the following sub-hypotheses:

H01: There is no statistically significant role at $\alpha \leq 0.05$ for event identification in achieving financial sustainability in banks.

H02: There is no statistically significant role at $\alpha \leq 0.05$ for risk assessment in achieving financial sustainability in banks.

H03: There is no statistically significant role at $\alpha \leq 0.05$ for control activities in achieving financial sustainability in banks.

Theoretical framework and previous studies:

The American Institute of Certified Public Accountants (AICPA), Financial Executives Institute (FEI), Institute of Internal Auditors (IIA), American Association of Accountants (AAA), and Institute of Management Accountants (IMA) comprised the Committee of Sponsoring Organizations (COSO) (Alkubaisi, 2017).

A framework for integrated internal control was released by the COSO Organization in 1992. Its purpose is to offer guidelines for evaluating and strengthening control systems. This framework can be used as a reference by businesses when creating rules, regulations, and policies that modify work activities and is recognized by government laws, such as the SOX law of 2002 (Abdulfattah, 2023).

In order to provide adequate confidence regarding the achievement of entity objectives, the COSO defined ERM as a process that is implemented throughout the enterprise and in a strategy setting by the board of directors, management, and other personnel. The process's purpose is to identify potential events that could impact the entity and manage risk to be within its risk appetite (Alkubaisi, 2017). The ERM framework is designed to help a business achieve its goals, which are divided into four main groups (González et al., 2020):

1. Strategic, high-level objectives that complement and support the organization's mission.
2. Operations: The effective and successful utilization of its resources.
3. Reporting and its dependability.
4. Compliance: Adherence to relevant laws and rules.

There are eight interconnected parts to it (Alkubaisi, 2017).

1-Internal environment: This includes an organization's operating environment, integrity and ethical ideals, risk philosophy, and risk appetite. It also establishes the basis for how its members see and handle risk.

2-Objectives Setting: Before management can recognize any risks that could compromise their accomplishment, objectives must be established. ERM guarantees that management has a goal-setting procedure in place and that the goals selected complement and correspond with the entity's mission while also being in line with its risk tolerance.

3-Event identification: It is necessary to distinguish between risks and opportunities when identifying both inside and outside occurrences that have an impact on an organization's ability to fulfill its goals.

4-Risk assessment: To determine how risks should be managed, they are examined, considering their impact and likelihood. Both inherent and residual risks are evaluated.

5-Risk response Management chooses risk responses, such as avoiding, accepting, lowering, or sharing risk, and creates a plan of action to match risks to the organization's risk appetite and tolerances.

6-Control activities: To help guarantee that risk responses are executed efficiently, control activities, policies, and procedures are created and put into place.

7-Information and communication: People can fulfill their obligations by identifying, capturing, and disseminating pertinent information in a timely manner. Additionally, effective communication happens more broadly, circulating up, down, and throughout business.

8-Monitoring. Every step of the ERM process is tracked, and adjustments are made as needed. Continuous management initiatives, independent assessments, or both can be used for monitoring.

Regarding the definition of financial sustainability: the World Commission on Environment and Development (WCED) first introduced the idea of sustainable development in 1987. It is a process that reorients human activities to the supporting of natural resources, such as the air, sea, and land, as a single unit, thereby greatly increasing the benefits of natural and human resources in a sustainable manner. Accordingly, sustainable development, often known as the triple-bottom line, can be implemented to eventually harmonize the economy, society, and the environment (Saputra et al., 2023). Moreover, it is the role of the organization in generating

finances to bring a long-term effect that helps the organization meet its various obligations and maintain a continued level of operations without sacrificing its future. In the banking industries, financial sustainability is necessary in order to put up with market volatility, changes in regulation, and economic uncertainty (Shaheen et al., 2020).

ERM is central to pursuing financial sustainability because it offers a framework and systematic basis for the identification, measurement, and management of risk. ERM addresses event identification, risk assessment, and control activities as some of the key dimensions in enabling banks to assume active positions vis-à-vis any threats and uncertainties that could damage their financial stability. Integration of ERM within an overall bank strategy simply empowers the management of risk practices along with financial goals and, hence, cushions a resilient framework towards long-term sustainability.

This would imply that alignment between ERM and financial sustainability could enable institutions not only to mitigate risks but also to take advantage of opportunities; this, in turn, would mean contributing to more robust financial health (Olayinka et al., 2017).

The following studies explore the critical role of Enterprise Risk Management (ERM) in enhancing financial sustainability and overall performance within the banking sector, offering insights into various approaches and outcomes across different regions and contexts.

Kerimov (2017) focused on the role that risk management has played in the sustainability of commercial banks. He, however, analyzed the factors affecting the occurrence of risks. The study reviewed various mechanisms on banking risk management in view of global financial instability. He offered a few recommendations for improving the role of risk management in developing countries. His major recommendations were: there is a need to develop risk

governance and ensure that risk management policies are continuously updated so that banks are stable during every financial crisis (Kerimov, 2017).

Shad et al. (2019) developed a conceptual framework to research sustainability reporting as a moderator between ERM implementation and business performance. It was suggested that economic value added (EVA) may be used to measure the performance, and it was also indicated that ERM significantly influences the overall business performance on positive notes. It called for more corporate strategy integrations of sustainability initiatives, proposing that through better risk management, sustainability reporting could improve value creation (Shad et al., 2019).

Issues of sustainability were further analyzed in a study done by Scholtens & Klooster (2019), together with bank risk, anchoring on the level to which sustainability performance diminishes default and systemic risks in the banking sector. Using environmental, social, and governance attributes of banks as proxies, the study made a finding that the higher the score on sustainability issues, the lower the level of default and systemic risk. This study was recommended to combine these sustainability issues into the risk management process as a way of improving stability within the general financial system. It therefore supports the assertion that sustainable banking practices tend to contribute positively towards financial stability (Scholtens & Klooster, 2019).

Jemović & Radojičić (2021) identified issues relating to challenges faced by sustainable finance and its integration into the risk management system in banks. As pointed out from the study, while banks increase their social and environmental responsibilities, it also meant increased exposure to environmental risks. Furthermore, the authors have identified certain initiatives conducted by central banks and supervisors in order to contain the risks and keep financial stability intact.

Conclusion: They feel that the environmental risks should be more systematically integrated into the banks' risk management frameworks (Jemović & Radojičić, 2021).

Oyewo (2022) examined whether the inclusion of Enterprise Risk Management would enhance the long-term viability and sustainability of Nigerian banks. Bank attributes were capitalization, scope of operation, and systemic importance. Data was analyzed for the periods 2008-2017 through trend, content, and quantitative analysis. The Jonckheere-Terpstra and Mann-Whitney were tests conducted. Outcomes indicated that reforms in banking after 2012 improved performance through ERM and supported ERM being a competitive tool for banks in tapping financial turbulence. This study, therefore, suggests that continuous emphasis be given to the capital requirement and proactively seeking ways to convert risks into opportunities in Nigerian banks.

Liu & Huang (2022) explored the aspect of sustainable financing and its connection with financial risk management within banks in China. The study was able to identify how the inflow of sustainable finance would impact financial risk management using the structural vector auto-regression model. In this regard, the results indicated that in the short run, the sustainable finances had a negative influence on financial risk management; however, a positive shock in financial risk management improves the sustainability of the banks. This study brought out the trade-off that is between the financing of green projects and financial risk management, especially large state-owned banks (Liu & Huang, 2022).

Lusmeida and Augustine, (2022) explored the combined influence of ERM, innovation, and green intellectual capital on sustainable finance, with Indonesian banking institutions as the focal point. Taking a sample size of 42 banks within the period 2017 to 2020, the research has analyzed the contribution of ERM and innovation towards sustainable financial practice with the green intellectual capital being the moderator. Research showed that ERM and innovation impact positively

on sustainable finance; via these practices, the banks can manage their risks and foster innovation in product and service development. However, the current study did find that IC did not significantly moderate ERM on sustainable finance, meaning even though intellectual resources may be valuable, they do not always amplify the effects of risk management and innovation in their positive effects on financial sustainability. This study suggests that banks need to continue putting in more effort with regard to improving their ERM practices to better manage the risks at the same time by driving innovation with the view to ensuring financial stability in a rapidly changing market (Lusmeida & Augustine, 2022).

Amerta & Soenarno (2022) in investigated the impact of ERM, corporate social responsibility, and sustainability reporting on the firm value of banking firms in Indonesia, Malaysia, and Thailand. It has used multiple regression analysis based on financial and annual report data provided by 54 firms during 2019-2020. It has been found that ERM positively affects the firm value whereas CSR and sustainability reporting failed to make an effect on the same (Chairani & Siregar, 2021). They also have highlighted the role of ERM in firm value development in the banking industry and have suggested that the firms should be giving weightage towards risk management to attract investors too (Amerta & Soenarno, 2022).

Previous studies by Saputra et al. (2023) had already discovered the effects of ERM and DT on the sustainability of banking in Indonesia. Data came from questionnaires distributed to the top managements of the Indonesian banking sectors. The study, through Partial Least Squares-Structural Equation Modeling, can establish that ERM and DT positively affected banking sustainability. Therefore, the authors asked that, using technology, ERM have a bigger impact on banking performance and put forward an integrated approach to risk management and digital at banks (Saputra et al., 2023).

Saputra et al. (2023)) explored the influence of ERM, management control systems, and the shift towards digital banking transformation on the sustainability of Indonesian banks. Using the responses to a questionnaire from 281 bank employees, the authors establish that the management control systems' strengths in IT security, complaint management systems, and whistleblowing mechanisms positively and significantly influenced the bank's sustainability. Such factors show that Indonesian banks should focus more on IT security and stakeholder engagement to improve sustainability (Saputra et al., 2023).

Mukhtar and Rizal (2023) presented a case study of the state government-linked company regarding ERM which could enhance sustainability performance. This study developed a framework which explores how ERM implementations have affected financial performance, social and environmental sustainability. Such ERM practices would, in turn, allow organizations to anticipate and prepare for the majority of risks arising either from the standpoint of environmental and social issues, which would, in essence, require companies' encompassing support for corporate sustainability. Information was gathered from risk management committees and teams from state-related corporations, and that gave a view of the extent of ERM diffusion and its outcomes on the sustainability performance. The authors infer that a more integrated approach to ERM, including also environmental and social dimensions, may significantly increase the likelihood of meeting corporate sustainability objectives. This has practical implications both for policymakers and managers by suggesting that ERM should be aligned with broader objectives of sustainability (Mukhtar & Rizal, 2023).

Study method:

The research method is done by means of a descriptive-analytical approach to achieve the desired goals and to answer questions about the influence of Enterprise Risk Management in relation to the financial sustainability of banks. The approach

suits such applied studies as this, because the implications of certain practices on organizational outputs must be described and systematically analyzed. The method of descriptive analytics is appropriate for such complicated financial systems and provides a structured approach in analyzing the interwoven relationship of risk management components with financial performance in the banking industry. This study uniquely explores the impact of specific dimensions of Enterprise Risk Management; event identification, risk assessment, and control activities on the financial sustainability of Jordanian commercial banks, a focus not extensively covered in previous research. Thus, this research uses linear regression analysis to analyze the effects of the ERM components on the financial sustainability of the Jordanian commercial banks based on its suitability to determine the direction and strength of relationship between variables. Although useful for constructing relations, depending on time-variant dummy, this method may not fully capture all other controlling variables including; size of the bank and general market conditions that could bring biases or reduce external validity of the study results.

Interestingly, the regression analysis carried out in this study does not consider other considerable bank characteristics that may define finically sustainability other than ERM practices, including the size and the liquidity of the bank. Deviating variables such as these may cause simple Ordinary Least Squares (OLS) regression to overstate the true influence of ERM components if the two are related with the omitted variables and the independent variable of interest. To improve the solidity of future studies, it is advisable for researchers to use such techniques as multiple regression models that incorporate these control variables or panel data analytic techniques that would always control for unobserved bank heterogeneity.

Study community and sample:

By focusing specifically on Jordanian commercial banks, this study addresses a gap in the existing research, providing valuable insights into a sector that has been largely underrepresented in previous ERM literature. The study community for this research comprises senior risk managers, financial officers, compliance officers, and ERM specialists practicing across various global banking institutions. In this regard, the researcher has chosen to issue a total of 300 questionnaires to obtain an overall view concerning the importance of Enterprise Risk Management in enhancing financial sustainability for a wide range of banks that differ in size, market reach, and regulatory environment. Distribution was done through electronic mode by using a secured online survey platform that can maintain the integrity of the data to be obtained, and the access will also be easy worldwide. Collaboration with the risk management departments of the banks was made to raise the response rate high and collect valid data.

This type of approach of using a questionnaire to establish the state of financial sustainability in this study provides only self-interpretation of the function of ERM by the experts, and, therefore, may not have a correct picture of the often-numerical position of an organization's financial status or the result of ERM. This often raises reliance on respondents' impressions and seldom gathers quantifiable evidence, in form of Return on Assets, Capital Ratios, or Liquidity Positions, which would offer a richer evaluation of the firm's position. Future research should consider using bank financial reports or industry data to support survey data to get more precise, reliable financial sustainability assessment.

Out of the questionnaires distributed, the researcher retrieved 270 completed responses, which is a retrieval rate of 90%. All these responses were validated and thus suitable for statistical analysis. The demographic characteristics of the respondents are summarized in the following descriptive table, detailing their

academic qualifications, job titles, years of experience, and number of professional certifications held, hence reflecting the diversity and expertise of the study sample. From Table 1, it can be observed that higher education and experiences prevail in a large part of the sample. This means that a high level of expertise has been ensured within the participants. This kind of diversified and experienced sample will provide a sound base for the analysis of the impacts of ERM dimensions on the financial sustainability of banks that are aligned with the objectives of this study, including knowledge development and practice concerning effective risk management strategies at banks.

Table (1): Demographic Characteristics of the Participants.

Variable/ Description	**n=270**	**Percentage**
Academic Qualification		
Bachelor's Degree	90	33.3%
Master's Degree	135	50.0%
PhD	45	16.7%
Job Title		
Senior Risk Manager	54	20.0%
Financial Officer	81	30.0%
Compliance Officer	63	23.3%
ERM Specialist	72	26.7%
Years of Experience		
Less than 5 years	54	20.0%
5 to 10 years	108	40.0%
More than 10 years	108	40.0%
Number of Professional Certificates		
None	81	30.0%
One certificate	108	40.0%
More than one certificate	81	30.0%
Total	270	100%

Table (1) reveals that the academic background of respondents in the study is 50.0% at the master's level, followed by a bachelor's degree with 33.3%, while Ph.D. holders are 16.7%. This suggests an extremely high level of education indicative of the participants being correctly equipped with proper knowledge and skills associated with appropriate risk management and compliance roles in banking. The fact that most respondents hold a master's degree underpins that advanced education is key in banking management of risk and compliance fields.

This can also be further depicted by the job title distribution of the sample. From this population, 20.0% were identified as senior risk managers, financial officers comprised 30.0%, compliance officers comprised 23.3%, and ERM specialists took 26.7%. The variance in these representations allows for wide coverage of functions involved in enterprise risk management and therefore provides a wide view of the impact of ERM across different functional roles within banks.

The distribution of the working experience of the respondents is evenly spread between participants with over 10 years of experience, at 40.0%, and between 5 to 10 years, also at 40.0%, indicating that a matured view of banking operations and risk management processes exists among the majority. This significant balance of experienced professionals underlines the reliability of insights related to the implementation and effectiveness of ERM practices.

Finally, professional certifications saw a relatively even distribution, with 30.0% having none, 40.0% reporting one certificate, and the remaining 30.0% reporting more than one. This level of commitment to professional development, ongoing skills improvement, and a high degree of qualification on the part of the respondents is what one would expect in as dynamic an environment as that of risk management.

Data collection sources:

Material collection targeted the analysis of the impact of ERM on the financial sustainability of banks and thus was done through both primary and secondary means of data collection. Secondary sources of data for this study included a literature review of the available materials on ERM frameworks, financial sustainability, and risk management practices in the banking industry. These include such materials as peer-viewed journal articles, industry reports, and the so-called authoritative texts discussing ERM from both theoretical and practical perspectives. This informed the establishment of a critical theoretical framework that has been used as a guiding principle throughout this research and assisted in formulating the research instrument.

Primary sources of information were largely based on a specially designed questionnaire, largely adapted to the specific dimensions of ERM as outlined in the study-event identification, risk assessment, and control activities. This would directly capture their perceptions and insights on the effectiveness of ERM practices in view of banking professionals.

The survey questionnaire contained two major parts, namely:

1.Demographic Information: This included questions about academic qualifications, job titles of the respondents, number of years of experience, and number of professional certifications. This sets background understanding and professional levels of participants to contextualize their responses.

2.Study Variables: Items in this section were suitably specified as measuring the impact of three important dimensions of ERM on financial sustainability. Thus, a sum of 25 items was spread between the dimensions and dedicated to each of the various subjects that ERM entails. The scale for responses was a five-point Likert scale, ranging from strongly agree (5) to strongly disagree (1); this was important for a

nuanced analysis of the participants in regard to the respective views held on every dimension of ERM.

Table (2): Levels of Relative Importance Based on Arithmetic Mean Scores

Relative Importance Level	**Arithmetic Mean Limits**
Low	1.00 to less than 2.33
Medium	2.33 to less than 3.66
High	3.66 to 5.00

Study instrument reliability test:

The reliability test of the study instrument is thus to test the consistency and coherence of the responses across items in the questionnaire, an important ingredient in ensuring data integrity. To this effect, Cronbach's Alpha Coefficient was employed because it is one of the most recognized measures of reliability. Alpha can range from 0 to 1, and a value greater than 0.70 indicates that it is a reliable measure. With higher internal consistency, item responses are well intercorrelated and constitute a reliable scale.

In the present study, each dimension of the ERM framework was tested in terms of its reliability, and the results could be seen in the table below. The Cronbach's Alpha values for all components comprising the current study surpassed the threshold level of 0.70, confirming that the questionnaire was highly reliable.

Table (3): Cronbach's Alpha Coefficient Values for the Study Tool.

No.	**Variable**	**Number of Items**	**Alpha Value**
1	Enterprise Risk Management	5	0.921
2	Event Identification	5	0.923
3	Risk Assessment	5	0.846
4	Control Activities	5	0.911
5	Financial Sustainability	10	0.923

Data Analysis and Hypothesis Testing:

Description of Study Variables:

The calculation of the arithmetic means, and standard deviations are performed to explore the influence of the variables of the study-the dimensions of ERM-on the financial sustainability of banks and to know the level of relative importance of those dimensions. Measurements of the variables are made with a view to assessing the perceived effectiveness and implementation of the key components of ERM: event identification, risk assessment, control activities, and their collective influence on financial sustainability.

Table (4): Description of Study Variables.

No.	Variable/Dimension	Arithmetic Mean	Standard Deviation	Relative Importance
1	Enterprise Risk Management	3.950	0.620	High
2	Event Identification	3.982	0.610	High
3	Risk Assessment	3.900	0.680	High
4	Control Activities	3.920	0.670	High
5	Financial Sustainability	3.935	0.630	High

Results from Table 4 above show a very high consensus about the importance of the ERM components in achieving Financial Sustainability in Banks. It can be noticed that "Event Identification" has recorded an arithmetic mean as high as 3.982 with the lowest standard deviation of 0.610, indicating unanimous agreement among the respondents on its criticality. It is followed closely by "Financial Sustainability", with a mean of 3.935 with a standard deviation of 0.630, reflecting a high degree of consensus on the importance of this aspect. "Enterprise Risk Management" and "Control Activities" obtain a mean of 3.950 and 3.920, with standard deviations of 0.620 and 0.670, respectively, showing strong but slightly broader views of their relative importance. The "Risk Assessment" has the highest variance, having a

standard deviation of 0.680 and the lowest mean of 3.900, which therefore indicates that though considered key by the group, its effectiveness or implementation may have more variance than other ERM components.

Hypothesis Test Results:

The hypotheses were formulated to test the effect of all elements of ERM, Event Identification, Risk Assessment, and Control Activities, on the financial sustainability of banks. Accordingly, the general hypothesis and the sub-hypothesis were subjected to a linear regression test.

The primary research hypotheses were developed in light of the aforementioned:

H0: There is no statistically significant effect at the significance level ($\alpha \leq 0.05$) of Enterprise Risk Management in its dimensions (event identification, risk assessment, and control activities) on achieving financial sustainability in banks.

Table (5): Relationship and Impact of ERM on Financial Sustainability

Independent Variable	Non-standard Transactions		Standard Transactions			Degrees of Linear Correlation	
	Coefficient (B)	Standard Error	Beta (β)	T-Statistic	Sig. T	VIF	Allowable variance
Event Identification	0.285	0.039	0.281	7.308	0.000	4.651	0.215
Risk Assessment	0.240	0.045	0.238	5.333	0.000	3.846	0.260
Control Activities	0.265	0.042	0.263	6.310	0.000	4.255	0.235
Model Summary							
R	0.840						
R^2	0.7056						
F	231.157						
Sig. F	0.000						

The values in Table 5 reflect the effects of different elements of Enterprise Risk Management on financial sustainability in banks and show that the associations are relatively strong, hence indicating good ERM practices. Event Identification, having the highest T-statistic of 7.308 with a significant p-value of 0.000, thus indicates strong influence on financial sustainability and is supported by the highest coefficient of the variables, 0.285. Almost at par is Control Activities and Risk

Assessment also tends to have significant positive impacts with T-statistics of 6.310 and 5.333, respectively, further showing their key roles.

From the summary of the regression model, a very high R-value of 0.840 explains 70.56% of the variance in financial sustainability, which is highly contributive. This impresses the strength of the predictive model. Also, the F-statistic of 231.157 with a significant p-value of Sig. F = 0.000 ascertains the overall reliability of the model and, thus, points out that ERM practices have a great effect on increasing financial sustainability.

These results confirm that the dimensions of ERM, such as Event Identification, Risk Assessment, and Control Activities, are significantly related to enhancing financial sustainability in banks. It confirms the hypothesis that effective implementation of ERM is critical in sustaining financial stability; hence, banks should focus their attention on enhancing these areas of their risk management frameworks.

Sub-hypothesis Test Results:

The primary hypothesis gives the following sub-hypotheses:

H01: There is no statistically significant role at $\alpha \leq 0.05$ for event identification in achieving financial sustainability in banks.

From the table above, it is observed that event identification is 0.285 B, T = 7.308, and Sig. T=0.000. This portrays a very strong positive influence on financial sustainability, while the statistical significance of event identification to the improvement in the financial sustainability of banks supports the fact that event identification is important to the financial sustainability of banks. We, therefore, reject H01, which states that event identification is not important for financial sustainability.

H02 There is no statistically significant role at $\alpha \leq 0.05$ for risk assessment in achieving financial sustainability in banks.

The coefficient according to Table (5) is 0.240 for risk assessment with a T-statistic of 5.333 and a significance level of 0.000. These results indicate significant positive effects on financial sustainability and, therefore, evidence that risk assessment is effectively involved in sustaining financial health. Thus, H02, which negates the significant effect of risk assessment on financial sustainability, is consequently rejected.

H03: There is no statistically significant role at $\alpha \leq 0.05$ for control activities in achieving financial sustainability in banks.

The data for control activities indicate that the coefficient (B) is 0.265, the T-statistic is 6.310, and the Sig. T is 0.000, showing a significant influence on financial sustainability. The foregoing evidence that control activities are making significant contributions to the financial robustness of banks. As a result, H03 refuses recognition of how important control activities are in ensuring that financial sustainability is maintained.

The results from Table (5) strongly indicate that each of the components of ERM-event identification, risk assessment, and control activities-is significantly contributing towards financial sustainability in banks. Such an analysis clearly indicates that proper implementation of these ERM dimensions enhances the financial stability of banking institutions and hence supports the overall hypothesis that ERM is essential to achieve financial sustainability. Each of the sub-hypotheses has been rejected, establishing the importance of the practice of ERM in the banking sector.

The implications of this research are crucial for setting up the analysis of the ERM policies of Jordanian banks to enhance their financial spaces and performance. To

ensure that the findings of the study improved risk identification and assessment activities in the banks, the following recommendations were made: Banks should incorporate more effective risk identification approaches in the assessment and risk control activity.

From a policy maker perspective, the findings imply a need to establish policies that could in effect encourage sound risk management, hence the possibility of offering incentives to the banks that present good ERM practices. The foregoing recommendations are useful in a direct sense to attain a better balance of the banking system in Jordan for both the banks and the regulators.

The following table highlights the unique contributions of the current study compared to prior research, showcasing the added value of focusing on a regional context, specific ERM components, and using a distinct methodological approach.

Table (6): Comparative analysis of the current study and previous research on ERM's impact on financial sustainability.

Aspect	Previous Studies	This Study
Geographic Focus	Focuses primarily on developed markets (e.g., U.S., Europe) with advanced regulatory frameworks like Basel III.	Focuses on Jordanian banks, operating in a unique economic and regulatory environment, providing insights into regional dynamics.
Regulatory Environment	Stringent regulations are shown to enhance ERM effectiveness and financial sustainability.	Explores the influence of Jordan's regulatory environment on ERM practices, highlighting challenges specific to emerging markets.
Methodological Approach	Quantitative methods using secondary financial data, such as ROI, ROE, and market value, to assess ERM's impact.	Questionnaire-based approach capturing direct insights from senior risk managers and financial officers on ERM effectiveness.
ERM Components Studied	Examines ERM as a unified framework or focuses on singular areas like risk assessment.	Analyzes specific ERM components, event identification, risk assessment, and control activities, providing a detailed component-level impact.
Key Findings	Broadly confirms the positive role of ERM in reducing risk and enhancing financial performance.	Confirms the significant role of ERM in financial sustainability, with event identification being the most impactful dimension.

Conclusion:

The present study examines the influence of the ERM in terms of its involved components in the study: event identification, risk assessment and control activities, on financial sustainability within banks. The investigation shows that in the banking sector, improving risk management frameworks is critical to maintaining good financial health as well as operational stability.

Based on the comprehensive analysis conducted, the following conclusions and recommendations are drawn to guide improvements in Enterprise Risk Management practices within Jordanian commercial banks:

- ERM enhancement greatly enhances financial sustainability in Jordanian commercial banks, evidence for integrated risk management.
- It has shown that the identification of events is crucial through demonstrating the value of managing risks in advance and increasing the stability of a bank.
- Risk assessment and control activities, thus, become basic and establish their positions on risk management and compliance.
- ERM's integration with strategic management practices should be as smooth as possible to make sure that any challenges in the long-term financial health and operation are addressed.

In light of these conclusions, the following actionable recommendations are proposed to enhance Enterprise Risk Management practices and financial sustainability in Jordanian commercial banks:

- Improving ERM frameworks should be complemented by focusing on the strengthening of more sophisticated event generation systems that would help in identifying the risks and prevent their occurrence.

- One must also provide frequent comprehensive training sessions on the application of risk assessment methods to guarantee that all field employees in the risk management department employ modern techniques of risk evaluation.
- Establish strong control activities in response to specific risks that are recognized and enhance control activities for banking operations.
- Integrate ERM processes well with business strategy to ensure risk management becomes a part of the strategic direction of any organization.

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