Journal of Asian Multicultural Research for Economy and Management Study
ISSN: 2708-9711
Vol. 3 No. 3, 2022 (page 037-047)
DOI: https://doi.org/10.47616/jamrems.v3i3.369

The Role of Financial Risks and Financial Sustainability in the Iraqi Stock Markets during COVID-19 Pandemic

Aymen Raheem Abdulaali Almayyahi[1]

Email: Aymen.abdulali@stu.edu.iq

[1]Lecturer, Southern Technical University, Management Technical College, Accounting Technical Department, Basrah, Iraq

Received: October 10, 2022 Revised: November 12, 2022 Accepted: November 28, 2022

Abstract

This paper compares the company's ability to sustain a diversified resource base for long-term service to its customers without need for external funding sources through two stressful systems of financial markets, the financial crisis aftermath 2008 and the COVID-19 epidemic. Our findings indicate that financial sustainability has been affected by disasters. Banks can impose significant risks on the economy, one of the main concerns about the causes of the current financial crisis is that banks engaged in excessive risk-taking, it has faced during the 2008 crisis liquidity and credit risks, while Through the 2020 crisis which is the COVID-19 pandemic crisis, the most significant financial risks that banks experienced were credit risks due to banks 'dependence on traditional, weak, safe assets, including the dollar, the Swiss franc, and other treasury bonds during the COVID-19 pandemic. This led to a lack of cash reserves held by banks, which led to weak investor tolerance towards financial risks, especially as the nature of crises is changing, as the results have proven that departures from riskiest directorships are more beneficial during the COVID-19 crisis because managers deal with the crisis in the same way as a crisis 2008 On the other hand, departures from riskiest directorships lead to higher administrative costs due to a lack of expertise.

Keywords: Financial Risk For COVID-19, Financial Expertise, Relinquish Directors Riskiest Directorships, Investment Attractiveness, Financial Sustainability

Introduction

Although the COVID-19 pandemic was initially categorized as a health crisis, over time, it quickly became economic as well. Of course, it is not the first global financial crisis. However, it is different this time. The spread of COVID-19 transforming from a regional crisis in China to a global pandemic within three months has caused severe damage to human lives and the global economy. The stock markets around the world have plummeted to their lowest levels since the 2008 Global Financial Crisis Furthermore, COVID negatively impacted stock markets more than any previous infectious disease outbreak, including the 1918 Spanish Flu (Baker et al., 2020). The current Covid-19 pandemic has already created unfavourable economic, social, and financial risks (Kottika, Özsomer, Rydén, Theodorakis, Kaminakis, Kottikas, & Stathakopoulos, 2020). Consequently, COVID-19 pandemic tremendously challenged governments, society, and businesses worldwide (Clark et al., 2020).

Since December 2019, the outbreak of COVID-19 has developed in Wuhan, Hubei Province, China. In the past weeks, The World Health Organization (WHO) assessed that COVID-19 could be characterized as a pandemic (World Health Organization, 2020). Covid 19 continues to spread throughout the world, and the spread of Covid 19 creates an accelerating economic crisis, even though the government around the world is preparing contingency plans to maintain

the stability of its economies (Sohrabi, Alsafi, O'Neill, Khan, Kerwan, Al-Jabir, & Agha, 2020). Remarkably, industrial and commercial countries were affected by the impact of the pandemic on the main joints of their economies. This, in turn, has caused a significant imbalance in the aspects of investment and economic growth in the private sector. Therefore, the financial markets were paralyzed and failed in many of their activities (Norouzi, de Rubens, Choubanpishehzafar, & Enevoldsen, 2020). The rapid spread of COVID-19 has dramatic impacts on financial markets all over the world. It has also sparked fears of an impending economic crisis and recession. Social divergence, self-isolation, and travel restrictions have significantly increased financial risks, with most investments becoming increasingly risky (Conlon, Corbet, & McGee, 2020). This also led to a reduced workforce across all economical sectors and caused many jobs to be lost (Nicola, Alsafi, Sohrabi, Kerwan, Al-Jabir, Iosifidis, & Agha, 2020). All this has created an unprecedented level of financial risk, causing investors to suffer significant losses in a short period (Zhang, Hu, & Ji, 2020). Consequently, the COVID-19 crisis put pressure on investors, policymakers, and the public by inflicting economic damage on an unprecedented scale. Possible COVID-19 pandemic can have a direct global destructive economic impact present in every region of the world (Goodell, 2020).

In the research field, we found that similar studies focused generally concentrate on the US, European nations, and OECD countries while developing countries are ignored. In our research, we will try to bridge this gap in the existing literature on the effects of COVID-19 and its financial risks by providing and discussing evidence by relying on a data set that includes Iraqi banking markets. Besides, this study - unlike previous studies - examines a vital topic in a highly sensitive market which is the Iraqi banking markets, and tries to answer crucial questions: How does the high-level administrative structure seek to reduce uncertainty in uncertain times in the aftermath of Covid? -19? How will this affect the financial systems of banks? There is no doubt that these and many other questions will be dealt with by financial academics for many years to come because this situation is difficult to estimate the final effects of an unfinished economic crisis especially those that occurred due to Covid-19 (Kahler, 2013). Finally, the existing literature on bank risk assessment primarily analyzes the period during two stressful systems of the market 2008 global financial crisis and the COVID-19 epidemic, and this will focus on the periods during the current Covid-19 global financial crisis. Also, the motivation that prompted us to write this research is there an urgent need to understand the extent of the financial crisis and the nature of the economic and investment risk we face in the current COVID-19 pandemic as well as to adopt the policies that will lead to avoid the economic risks to achieve financial sustainability.

Generally, for most owners of capital, there is an inverse relationship between risk and the attractiveness of an investment. Because the risk increases the likelihood of failure to cover- at least - the costs that have been paid for the investment (Morozova & Popkova, 2014), this means that investors are more attracted to low-risk investments to maintain financial safety and sustainability (Schwab, Gold, & Reiner, 2019; Sosnovska & Zhytar, 2018). In natural conditions, the sustainable company recognizes that its long-term competitiveness and survival depend on the well-being of its stakeholders and the inter-connection of its environmental, social, and economic systems (Karlsson, 2019). In emergencies, it will take a lot of effort and know-how to achieve this. Financial expertise has a definite impact on the choice of successful investments that maintain financial sustainability (Shafi, 2019). As for the current investments, financial sustainability will be better when the riskiest investment is eliminated (Bar-Hava, Gu, & Lev, 2020). This means that the experience of the monetary board of directors in choosing profitable investments and avoiding and disposing of risky ones contributes significantly to financial sustainability through an efficient assessment of the attractiveness of investments (Nizam, Ng, Dewandaru, Nagayev, & Nkoba, 2019).

The institutional emphasis on Financial Sustainability oversight Aftermath of the financial crisis

Financial Sustainability

Sustainability-related concerns and issues are assuming an increasingly prominent place in policy discussions throughout the world. Government, industry, and community groups use the term with ever accelerating vigor. The attempts to address sustainability depends on the subjectivist priorities of the interpreter (Meppem & Gill, 1998). There are many definitions or, better, descriptions of sustainability according to subject one such explanation of sustainability is: Sustainability is the capacity of an organization to maintain its status over a long period (Phillis & Andriantiatsaholiniaina, 2001). Sustainability was initially an environmental concept, though the notion has been adapted to other contexts, especially the context of financial viability (Forsyth, 2011).

On 22 March 2018, in Brussels, the European Commission announced an ambitious action plan for financial sustainability, based on the findings of the High-Level Expert Group. They announced that reorienting capital flows towards sustainable projects would require "changing the investment culture and behavior of all market participants (Lagoarde-Segot, 2019). Financial sustainability is determined by the extent to which financial institutions are efficient in using resources and turning them into services. It implies that the institution generates enough income to at least repay the opportunity cost of all inputs and assets (Piot-Lepetit & Nzongang, 2014). (Osazefua Imhanzenobe, 2020) has defined financial sustainability as the capacity of a firm to develop and sustain a diverse resource base for an extended period that would serve the interest of its customers with or without financial donations or assistance (i.e. without external financing).

Financial sustainability is essential to both companies and investors. However, due to the uncertainty of the business environment and healthy competition, even companies with perfect operation mechanism have the possibility of business failure and financial bankruptcy. So, financial sustainability can help to predict effectively and timely (Sun & Li, 2008). Financial sustainability in banking remains a significant issue for owners, managers, and the public (Simpson & Gleason, 1999). It is often occurring when financial institutions have a high profit or when it becomes good with liabilities that are proportionate to assets. To make financial sustainability achievable, the financial institutions must include excellent management, Democratic leadership and operating smoothly and successfully in the market a whole (Xu & Wang, 2009); (Huang et al., 2015), To avoid corporate bankruptcy that leads not only to significant losses to the business community but also to society it must achieve sustainability in:

Sustainable growth rate refers to the growth in revenues a firm can achieve given its current operating performance, and financial constraints and stability apply to distance from bankruptcy. Sustainable growth, an outcome that is governed by the competitive process and thereby a proxy of resource and capability efficacy, is generally a reliable measure of the extent to which the resources of a firm are expertly matched with the environment. (Pili et al., 2017). Similarly, a higher distance from bankruptcy, as measured by (Altman's Z) is also a signal of the more reliable strategic fit between a venture's ability to maintain the flow of activities within the context of the task environment (Patel et al., 2020). Altman Z-score has been a well-accepted model of predicting survivals and failures of manufactures since 1968. This model has highly credible applications to various domains including merger and divestment activity, asset pricing and market efficiency, capital structure determination, the pricing of credit risk, distressed securities, bond ratings and portfolios, etc. (Ko et al., 2017).

Financial Risk For COVID-19 and Financial Sustainability

The 2008 financial crisis has triggered a global severe economic recession. While surprised by the tremendous impact on the real economy, regulators have also highlighted the importance of financial institutions' risk management (González-Fernández & González-Velasco, 2020). Financial institutions should pay more attention to risk management not only during a crisis but also in regular times. The effectiveness of risk management relies on accurate and timely risk prediction using sufficient information (Xu et al., 2020).

The COVID-19 may come with a significant new 2020 financial risk, the spread of COVID-19 transforming from a regional crisis in China to a global pandemic within three months has caused severe damage to human lives and the global economy. The stock markets around the world have plummeted to their lowest levels since the 2008 Global Financial Crisis. Furthermore, COVID negatively impacted stock markets more than any previous infectious disease outbreak, including the 1918 Spanish Flu (Cheema et al., 2020), it has a significant role in creating an economic and financial crisis because of the spending rates that governments and people make to prevent and control the spread of the virus. Thus, the governments' focus has been on the health aspect while neglecting the economic situation (Eisenberg et al., 2020).

Financial risks are uncertainties associated with any form of financing, including credit risk, business risk, investment risk, and operational risk (Kou et al., 2014), People make decisions under risk and uncertainty regarding a variety of matters in life. As their risk preferences affect the decision-making process, any systematic changes in their willingness to assume risk would be expected to have wide-ranging consequences on economic outcomes (Kesavayuth et al., 2018). From the standpoint of financial investors, there are concerns about the current financial risks. Stakeholders in the capital market, including credit rating agencies and institutional investors, have gradually considered sustainability and related risks in their investing and financing decisions. The business community is expected to take measures to mitigate financial risks pertinent to sustainability through compliance with relevant international as well as local guides and regulations (Ng, 2018).

In recent years, financial risk management at banks has come under increasing scrutiny because risks are an essential ingredient in bank production. Banks specialize in risk assessment, risk monitoring, and risk diversification (Hughes et al., 2001). Banking is a tough juggling act, by its very nature, banking is an attempt to manage multiple and seemingly opposing needs. Banks stand ready to provide liquidity on-demand to depositors through the checking account and to extend credit as well as cash to their borrowers through lines of credit. Because of these fundamental roles, banks have always been concerned with both solvency risk and liquidity risk. Traditionally, banks held capital as a buffer against insolvency risk, and they held liquid assets – cash and securities – to guard against unexpected withdrawals by depositors or drawdowns by borrowers (Cebenoyan & Strahan, 2004). There are two broad ways in which a bank can control its exposure to risk. First, some risks can be offset by hedging transactions in the capital market. Second, for those risks where direct hedging transactions are not feasible, another way for the bank to control its exposure is by altering its investment policies. Therefore, with illiquid risks, the bank's capital budgeting and risk management functions become linked (Froot & Stein, 1998). That is why we choose to focus on these four financial risks, and we explained to them in detail as follows:

Capital risk: capital structure, is defined using the resource-based view (RBV) of strategy relative to how the firm finances its investment using debt and equity instruments (Chathoth & Olsen, 2007). Banks maintain capital structures with leverage ratios that are much higher than those of virtually all operating firms that are not in financial risk. Many economists accordingly see high bank leverage as puzzling from a positive-theory viewpoint and as normatively

troubling. These reactions arise from viewing bank capital structure through the lens of Modigliani and Miller augmented by consideration of moral hazard, taxes, and other leverage-related distortions (Deangelo & Stulz, 2015). These reactions arise from viewing bank capital structure through the lens of Modigliani and Miller augmented by consideration of moral hazard, taxes, and other leverage-related distortions. The Modigliani and Miller debt-equity neutrality principle states that absent frictions and holding operating policy fixed, all capital structures yield identical value. When leverage-related distortions are added to the debt-equity neutrality baseline, the resultant capital structure model has no efficiency-based motive that can explain why banks generally maintain leverage ratios that are so much higher than those of operating firms (Chen, 2004)

Liquidity risk: the risk arising from unpredictable changes in liquidity over time (Acharya & Pedersen, 2005); (Sadka, 2006). Liquidity risk stems mostly from exposure to undrawn loan commitments, the withdrawal of funds from wholesale deposits, and the loss of other sources of short-term financing, rather than from the loss of demand deposits as in classic models of banking (Cornett et al., 2011). Funding liquidity risk is driven by the possibility that over a specific horizon, the bank will become unable to settle obligations with immediacy. We show that funding liquidity risk has two components: future (random) in- and outflows of money and future (random) prices of obtaining funding liquidity from different sources (Drehmann & Nikolaou, 2013).

Insolvency risk: The recent financial crisis has refocused attention on the general importance, impact, and measurement of banks insolvency (Lepetit & Strobel, 2015). An insolvency risk" is essentially a "counterparty risk" crisis. Investors refuse to extend financing to institutions because they view the credit risk of the institution as being excessive, given their asset portfolios and capital structures (Thakor, 2018).

Credit risk: Empirical studies suggest that the financial sector of most economies facilitates economic growth and development. However, the financial industry, especially banks, are faced with numerous problems and pertinent among these problems is credit risk (Kusi et al., 2017).

Consequently, this study investigates the role of investment attractiveness as a mediator regarding the relationship between financial risk for (COVID-19) and financial sustainability, which leads to the following hypotheses:

H1: Financial Risk for COVID-19 reduces the level of Financial Sustainability.

Sample and Model

To test the hypotheses that financial risks during the virus period lead to limiting profits and that Relinquish Directors Riskiest Directorships and financial expertise lead to an impact on investment attractiveness to reduce benefits during crises, we collected information from the DataStream and Iraqi Securities Commission from 2007 to 2020. The DataStream provides data on all sectors for different countries, While the Iraq Securities Commission consists of two markets, the first is a regular market, which is the market that lists trusted companies to deal with them by investors in return, the other market is called the secondary market, which includes companies under special care where the body advises investors not to deal with these companies because it is not reliable. Where we adopt, 19 banks listed in the Iraqi Securities Commission were chosen under the umbrella of the regular market in Return the secondary market includes 23 banks. On the other hand, the sample period 2007-2020 is defined as a symmetrical window of 14 years, the years in which the financial turmoil of 2007-2020 receded, and when regulatory initiatives related to risk monitoring were presented after the crisis—the results in a sample of 266-year notes corresponding to 19.

Next, run a multivariate test of hypotheses by estimating the following OLS model:

Financial Sustainability = B0 + B1 (Financial Risk for COVID-19) + Ɛit

Ɛ = error terms

i,t = firm i and year t, respectively

We did online interviews with several directors of 19 banks. They expressed that the banks faced a lot of risks. However, four financial risks were the result of covid-19 (Capital Structure Risk, Liquidity Risk, Insolvency Risk, and Credit Risk), This is what previous studies indicate that these risks are the most common during crises (Eisenberg et al., 2020; Shehzad, 2020; Akhtaruzzaman et al., 2020), where the capital structure risk was measured through the following ratios: Debt / Equity Ratio (D / E), Debt / Asset Ratio (D / A), and Equity / Asset Ratio (E / A).

While the other risk is Liquidity Risk, and it was measured as Current Ratio = Current Asset / Liability (CuR), and Cash Ratio = Cash / Liability (CaR). On the other hand, the Insolvency Risk is one of the risks that managers have emphasized, and which has been measured: Equity / Fixed Asset (E / F), and Capital / Fixed Asset (C / F). Finally, credit risk is one of the most common risks experienced by private banks during and after crises and was measured by used the ratio of non-performing loans to total loans is used as an indicator of credit risk. (Kuswanto, 2017; Ekinci & Poyraz, 2019). Finally, to measure the financial sustainability of private banks, we focus on three fundamental measures for listed companies in Iraq. These measures are Return on the asset and were measured by Profit before interest & tax / Total asset (Armeanu & Cioacă, 2015; Imhanzenobe, 2020).

Estimation and Results

Descriptive Statistics and Correlation matrix

Table 1. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Debt-Equity Ratio	266	0.0526136	0.8643221	-2.756311	2.069814
Debt-Asset Ratio	266	-0.7268771	0.5153664	-3.248099	0.8959411
Equity-Asset Ratio	266	-0.8204791	0.7266532	-6.066619	2.021595
Current Ratio	266	0.0762176	0.7883522	-3.376759	2.275869
Cash Ratio	266	-0.6153375	0.9153322	-5.72787	1.933035
Equity-Fixed Asset	266	3.042387	1.092356	-0.2296824	5.914511
Capital-Fixed Assets	266	2.27605	1.304712	-4.420767	6.864869
Credit Risk	266	-2.924637	1.709512	-7.877975	-0.0301479
Returns on Assets	266	-4.431001	1.700098	-9.124163	-0.1081399

The values in Table 1 are descriptive statistics of the several variables which are used in the analysis. Among them, indices of indicators such as capital structure risk index which included three symbols namely debt-equity ratio, debt asset ratio, and equity asset ratio, liquidity risk index which provides for the current rate and cash ratio, and insolvency risk index which has two indicators viz. equity fixed asset and capital fixed asset are showing the performance of the companies in general. From these seven mentioned indicators, current ratio and cash ratio are meagre, which represents liquidity risk indicating that on average companies have very high liquidity risk. Similarly, capital structure risk index comprises of debt-equity ratio, debt asset ratio, and equity asset ratio are very low indicating that on the average companies face

real trouble in generating enough cash to satisfy their obligations and requirements. Other indicators seem to have average values.

Diagnostic Tests

Before estimation, multiple diagnostic tests are applied to check the validity and problems of panel data. Wooldridge test is applied to determine whether the data have an issue of autocorrelation while to correct the problem of multicollinearity Variance Inflation Factor (VIF) is used. For normality Jarque-Bera and for group-wise heteroskedasticity in panel data a Modified Wald Test is used. The results of these tests are presented in table 2 for details (see appendix).

Table 2. Diagnostic Tests results

Test/Check	F/Chi value	P-value	Result
Wooldridge test	15.493	0.0010	Autocorrelation exists
Modified Wald test	205.86	0.0000	GroupWise heteroscedasticity exists
Jarque-Bera	20.48	0.000036	Data is normal
Variance Inflation Factor test	-	-	No presence of multicollinearity

As presented in Table 2, the results of diagnostic results show that data have severe problems of autocorrelation and group-wise heteroskedasticity. At the same time, data do not contain the presence of multicollinearity and is healthy. Since the issues such as autocorrelation and heteroskedasticity make the OLS, fixed effects and random effects estimators inefficient, thus this study makes use of Feasible Generalized Least Square (FGLS) to consider mentioned issues. Table 3 points out the econometric outcomes of our four empirical models. As regards ROA (model 1), liquidity risk is statistically significant and negatively associated with ROA, indicating that higher the liquidity risk lowers the returns on assets. The capital structural risk index is positively rated to a sustainable growth rate. While insolvency risk and credit risk indices are negatively related to the sustainable growth rate. Mediation variable investment attractiveness is highly significant and negative, suggesting that mediation exists for a sustainable growth rate.

Table 3. Results of FGSL for Model

	(ROA)
VARIABLES	**Model**
Capital Structure Risk	-0.0332
	(0.0464)
Liquidity Risk	-0.0954***
	(0.0338)
Insolvency Risk	-0.0366
	(0.0566)
Credit Risk	0.0235
	(0.0243)
Constant	-5.133***
	(0.514)
Observations	266
Number of id	19

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

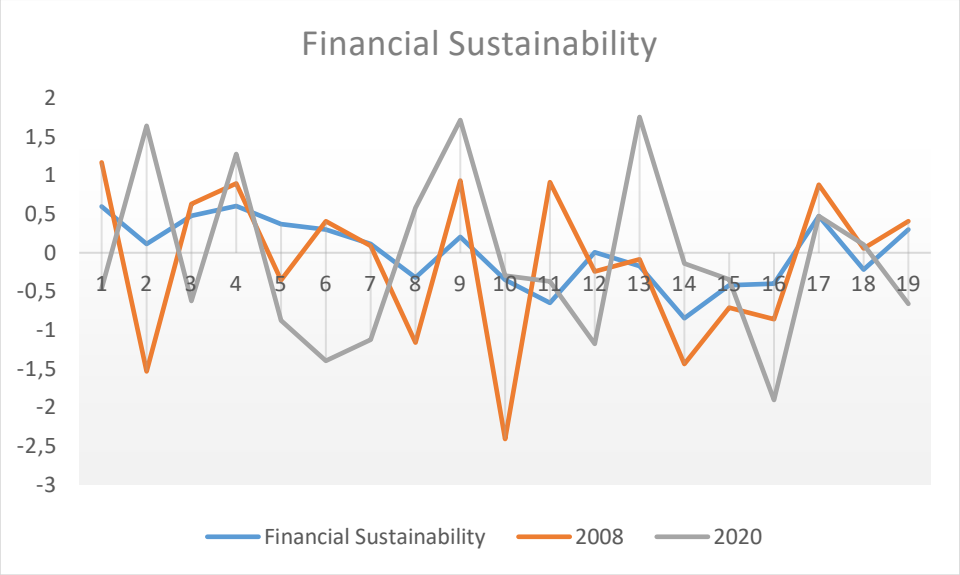

Figure 1. The institutional emphasis on Financial Sustainability oversight Aftermath of the financial crisis.

This figure shows the average total financial sustainability between 2008 and 2020.

The results indicate that financial sustainability was significantly affected in the period 2020 compared to 2008 due to the weak focus of banks on managing credit risk, especially on monitoring bad loans. The weak adoption of modern technologies to reduce credit risk, which leads to allocating much fewer resources to total investment activity, due to the ineffective investment attractiveness during the 2020 crisis compared to the global crisis in 2008 with banks. This paper documents that yen managers show a strong tendency to resign from their most dangerous positions in the year 2020 compared to the tendency to abandon in 2008, which negatively affected the attractiveness of investment in banks due to a lack of experience and increased costs in the year 2020 that led to the restructuring of the board of directors in most banks As shown in the figure (Armeanua & Cioaca, 2015; Ormazabal, 2018; Chena & Wang, 2019).

Discussion and Implications for practice

The findings of the study suggested that financial risks impact the financial sustainability for Iraqi firms in each period. The study revealed that higher liquidity risk would lower the returns on assets of firms while insolvency risk and credit risk harm sustainable growth rate. The study supports the argument that the outbreak of COVID-19 has created an unprecedented level of financial risk, causing investors to suffer significant loses in a brief period (Zhang, Hu, & Ji, 2020). The firms may devise risk control policies to manage their profits during crises. An exciting result the study found is that capital structure risk is not harmful to the sustainable growth rate of Iraqi firms.

Moreover, the study observed that Evaluation of Board Financial Expertise and Relinquish Directors Riskiest Directorships moderate the relationship between financial risks on financial sustainability. Furthermore, the results also suggested investment risk is not found to play an essential role in mediating the relationship between financial risk and financial sustainability. However, in times of uncertain crises, the firms' high-level management should maintain to minimize the financial risks particularly liquidity and insolvency risks, the minimization of these risks will lead to retaining the precise situations in crises.

Wherefore, because of the apparent deterioration in bank budget conditions during the Great Recession, this study attempted to analyze financial sustainability by trying to reduce the financial risks of Covid-19. To this end, it is possible to help banks achieve sufficient profits that enable them to survive in the long run. We have demonstrated that financial conditions and financial risks have a strong relationship with the dangers of leaving senior management and leaving their jobs. Where during periods of prosperity, senior management can predict financial risks and prepare to face them, while on the contrary, their roles in predicting risks during crises are weak, which leads to leaving their jobs despite having great financial experience. As a result, the prediction of risk varies with different economic conditions.

Consequently, our paper contributes to research on how uncertainty affects risk for banks and differs from some previous literature that focuses on risk determinants during periods of prosperity and stagnation while neglecting the role of high-level management staff as the high-level administrative structure seeks to reduce uncertainty in uncertain times. The current study found several managers left their jobs during the current year due to the virus crisis compared to the global crisis during the year 2008 as the spread of COVID-19 increased the costs of administrative positions, which led to the restructuring of the Board of Directors. Thus, the managers leave those who are more experienced compared to the manager's Alternatives, and our results confirmed that the main reason for this is increased financial risk and a loss of ability to control expected economic indicators. Banks have a significant role in supporting global economies, so banks are a critical factor for the growth and development of countries. So, the changes that occur in the markets in which these banks operate will have a significant impact on what is expanding or contracting their business (Dritsakis, 2004; Fayissa et al., 2008; Lee & Chang, 2008; Proenca & Soukiazis, 2008; Chen, 2010). In this way, the financial sustainability of banks is expected to depend on the conditions and the macroeconomic environment in which they are introduced (Wong & Eng, 2018; Chen et al., 2019; Qin et al., 2020; Sadeh & Kacker, 2020; Chen & Du, 2020).

References

Abdoh, H., & Varela, O. (2020). What lies behind the asset growth effect? *Global Finance Journal*, 100541.

Akhtaruzzaman, M., Boubaker, S., & Sensoy, A. (2020). Financial contagion during COVID–19 crisis. *Finance Research Letters*, 101604.

Andreou, C. K., Lambertides, N., & Savvides, A. (2020). Sovereign Credit Risk and Global Equity Fund Returns in Emerging Markets. *Journal of International Money and Finance*, 102218.

Armeanu, D. S., & Cioacă, S. I. (2015). An assessment of the bankruptcy risk on the Romanian capital market. *Procedia-Social and Behavioral Sciences*, 182, 535-542.

Balsmeier, B., Fleming, L., & Manso, G. (2017). Independent boards and innovation. *Journal of Financial Economics, 123*(3), 536-557.

Bar-Hava, K., Gu, F., & Lev, B. (2020). Market Evidence on Investor Preference for Fewer Directorships. *Journal of Financial & Quantitative Analysis*, *55*(3).

Bolton, P., Chen, H., & Wang, N. (2013). Market timing, investment, and risk management. *Journal of Financial Economics, 109*(1), 40-62.

Clark, C., Davila, A., Regis, M., & Kraus, S. (2020). Predictors of COVID-19 voluntary compliance behaviors: An international investigation. Global Transitions.

Conlon, T., Corbet, S., & McGee, R. J. (2020). Are Cryptocurrencies a Safe Haven for Equity Markets? An International Perspective from the COVID-19 Pandemic. *Research in International Business and Finance*, 101248.

Cooper, I., & Priestley, R. (2011). Real investment and risk dynamics. *Journal of Financial Economics*, *101*(1), 182-205.

Cornett, M. M., McNutt, J. J., Strahan, P. E., & Tehranian, H. (2011). Liquidity risk management and credit supply in the financial crisis. *Journal of financial economics*, *101*(2), 297-312.

Dangl, T., & Zechner, J. (2004). Credit risk and dynamic capital structure choice. *Journal of Financial Intermediation*, *13*(2), 183-204.

DeAngelo, H., & Stulz, R. M. (2015). Liquid-claim production, risk management, and bank capital structure: Why high leverage is optimal for banks. *Journal of financial economics*, *116*(2), 219-236.

Dierkes, M., Erner, C., & Zeisberger, S. (2010). Investment horizon and the attractiveness of investment strategies: A behavioral approach. *Journal of Banking & Finance*, *34*(5), 1032-1046.

Drehmann, M., & Nikolaou, K. (2013). Funding liquidity risk: definition and measurement. *Journal of Banking & Finance*, *37*(7), 2173-2182.

Eisenberg, M. D., Barry, C. L., Schilling, C., & Kennedy-Hendricks, A. (2020). Financial Risk for COVID-19-like Respiratory Hospitalizations in Consumer-Directed Health Plans. *American Journal of Preventive Medicine*.

Ekinci, R., & Poyraz, G. (2019). The Effect of Credit Risk on Financial Performance of Deposit Banks in Turkey. *Procedia Computer Science*, *158*, 979-987.

Elyasiani, E., & Zhang, L. (2015). Bank holding company performance, risk, and "busy" board of directors. *Journal of Banking & Finance*, *60*, 239-251.

Forsyth, P. (2011). Environmental and financial sustainability of air transport: Are they incompatible? *Journal of Air Transport Management*, *17*(1), 27-32.

Froot, K. A., & Stein, J. C. (1998). Risk management, capital budgeting, and capital structure policy for financial institutions: an integrated approach. *Journal of financial economics*, *47*(1), 55-82.

García-Sánchez, I. M., García-Meca, E., & Cuadrado-Ballesteros, B. (2017). Do financial experts on audit committees' matter for bank insolvency risk-taking? The monitoring role of bank regulation and ethical policy. *Journal of Business Research*, *76*, 52-66.

González-Fernández, M., & González-Velasco, C. (2020). An alternative approach to predicting bank credit risk in Europe with Google data. *Finance Research Letters*, *35*, 101281.

Goodell, J. W. (2020). COVID-19 and finance: Agendas for future research. *Finance Research Letters*, 101512.

Gray, P., & Johnson, J. (2011). The relationship between asset growth and the cross-section of stock returns. *Journal of banking & Finance*, *35*(3), 670-680.

Güner, A. B., Malmendier, U., & Tate, G. (2008). Financial expertise of directors. *Journal of financial Economics*, *88*(2), 323-354.

Halteh, K., Kumar, K., & Gepp, A. (2018). *Financial distress prediction of Islamic banks using tree-based stochastic techniques*. Managerial Finance.

Huang, C., Dai, C., & Guo, M. (2015). A hybrid approach using two-level DEA for financial failure prediction and integrated SE-DEA and GCA for indicators selection. *Applied Mathematics and Computation, 251*, 431-441.

Hughes, J. P., Mester, L. J., & Moon, C. G. (2001). Are scale economies in banking elusive or illusive? Evidence obtained by incorporating capital structure and risk-taking into models of bank production. *Journal of Banking & Finance, 25*(12), 2169-2208.

Jeanjean, T., & Stolowy, H. (2009). Determinants of board members' financial expertise—Empirical evidence from France. The International Journal of Accounting, 44(4), 378-402.

Kahler, M. (2013). Economic crisis and global governance: The stability of a globalized world. *Procedia-Social and Behavioral Sciences, 77*, 55-64.

Karlsson, N. P. (2019). Business models and business cases for financial sustainability: Insights on corporate sustainability in the Swedish farm-based biogas industry. *Sustainable Production and Consumption, 18*, 115-129.

Kesavayuth, D., Ko, K. M., & Zikos, V. (2018). Locus of control and financial risk attitudes. *Economic Modelling, 72*, 122-131.

Ko, Y. C., Fujita, H., & Li, T. (2017). An evidential analysis of Altman Z-score for financial predictions: Case study on solar energy companies. *Applied Soft Computing, 52*, 748-759.

Ko, Y. C., Fujita, H., & Li, T. (2017). An evidential analysis of Altman Z-score for financial predictions: Case study on solar energy companies. *Applied Soft Computing, 52*, 748-759.

Kottika, E., Özsomer, A., Rydén, P., Theodorakis, I. G., Kaminakis, K., Kottikas, K. G., & Stathakopoulos, V. (2020). We survived this! What managers could learn from SMEs who successfully navigated the Greek economic crisis. *Industrial Marketing Management, 88*, 352-365.

Kou, G., Peng, Y., & Wang, G. (2014). Evaluation of clustering algorithms for financial risk analysis using MCDM methods. *Information Sciences, 275*, 1-12.

Kozlova, M., & Collan, M. (2020). Renewable energy investment attractiveness: Enabling multi-criteria cross-regional analysis from the investors' perspective. *Renewable Energy, 150*, 382-400.

Kusi, B. A., Agbloyor, E. K., Ansah-Adu, K., & Gyeke-Dako, A. (2017). Bank credit risk and credit information sharing in Africa: Does credit information sharing institutions and context matter? *Research in International Business and Finance, 42*, 1123-1136.