

# “CEO power and bank risk in the UAE”

## AUTHORS

Haileslasie Tadele  <https://orcid.org/0000-0001-8821-8589>

Baliira Kalyebara  <https://orcid.org/0000-0002-0978-1304>

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Haileslasie Tadele, Ph.D., Assistant  
Professor of Finance, American  
University of Ras Al Khaimah, Ras  
Al Khaimah, UAE. (Corresponding  
author).

Baliira Kalyebara, Ph.D., Assistant  
Professor of Finance, American  
University of Ras Al Khaimah, Ras Al  
Khaimah, UAE.



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Haileslasie Tadele (UAE), Baliira Kalyebara (UAE)

# CEO POWER AND BANK RISK IN THE UAE

## Abstract

The lessons from the 2008 global financial crisis show that excessive risk taking and governance failures contribute to the failure of several banks. As a result, the relationship between corporate governance mechanisms and risk taking has been the subject of many studies. However, extant studies report inconclusive results. Therefore, this study aims to investigate the relationship between CEO power and bank risk in the UAE using data over the period of 2015–2018 and a sample of 19 UAE banks. The study uses a Pearson pairwise correlation to analyze the relationship between CEO power and bank risk. In addition, a two-tailed t-test is used to examine the differences between conventional and Islamic banks in terms of CEO power and risk-taking. The results of the study show that CEO power measured using CEO duality and CEO tenure reduces risk. Furthermore, the paper indicates that larger boards and higher CEO ownership tend to increase risk. The study also reports that conventional banks have higher return variability, larger boards and powerful CEOs than Islamic banks. However, Islamic banks tend to have higher non-performing finances than conventional banks. The study provides important insights on the relationship between CEO power and bank risk and concurs with earlier studies. The findings can be of interest to policy makers and can be used as input data for the development of corporate governance mechanisms. Shareholders can also use the survey results as input when appointing a CEO for their banks.

## Keywords

commercial banks, governance, Islamic banks,  
managerial entrenchment

## JEL Classification

G21, G32, G34

## INTRODUCTION

The banking sector is of paramount importance to the country's economic development and growth. Specifically, in countries like the United Arab Emirates, where the financial system dominates the banking sector, banks play a significant role in the economy. Naturally, banks are likely to take more risk to generate more cash flows. However, taking excessive risk may lead to a bank failure. Most of the banking transactions involve contracts between two parties (e.g., lender and borrower), where adverse selection and moral hazard is a big concern, and these information asymmetry problems may lead to a failure. A failure of a single bank can have a domino effect that can easily affect other banks in an economy. Moreover, unlike other industries, banks are highly interlinked with the global financial market, and the failure of one global bank may have a spillover effect on banks in other countries (Gebba & Aboelmaged, 2016). A good example is the financial crisis in 2008, which has started in the USA and then spread over to other parts of the globe, including the Middle East. The 2008 financial crisis led to a failure of several banks and recorded significant losses on stock exchanges. After the financial crisis, several studies have focused on the causes of the financial crisis in banks. These studies indicate that excessive risk and inappropriate governance practices lead to the failure of several banks. Since then, policy makers stressed

more emphasis on the stability of the banking industry. In an effort to maintain the stability of the banking sector, policy makers constantly update banking regulations and legislations. The central point of these regulations and legislations is to control excessive risk taking, ensure financial stability, and protect the interest of different stakeholders such as shareholders, depositors, borrowers, etc. (Gebba & Aboelmaged, 2016). Accordingly, enhancing the corporate governance of banks is also one of the priorities of central banks. The abovementioned factors motivate this study to examine the relationship between CEO power and bank risk.

CEO power indicates the extent of managerial entrenchment the CEO of the bank exercises. Several studies argue that if the manager is more powerful, the board of directors will be less effective in monitoring and controlling the actions of the manager. Besides, a powerful manager has a significant influence on the strategic decisions of the bank. Higher autonomy in managerial decision making can increase agency conflicts and agency costs and, as a consequence, lead to lower firm value, lower cash flows, lower credit rating and higher debt costs (Bebchuk, Cremers, & Peyer, 2011). The impact of CEO power on the firm's performance is still an emerging area of research, and results from existing studies are inconclusive. Research examining the impact of managerial power and bank risk is also scarce.

## 1. LITERATURE REVIEW

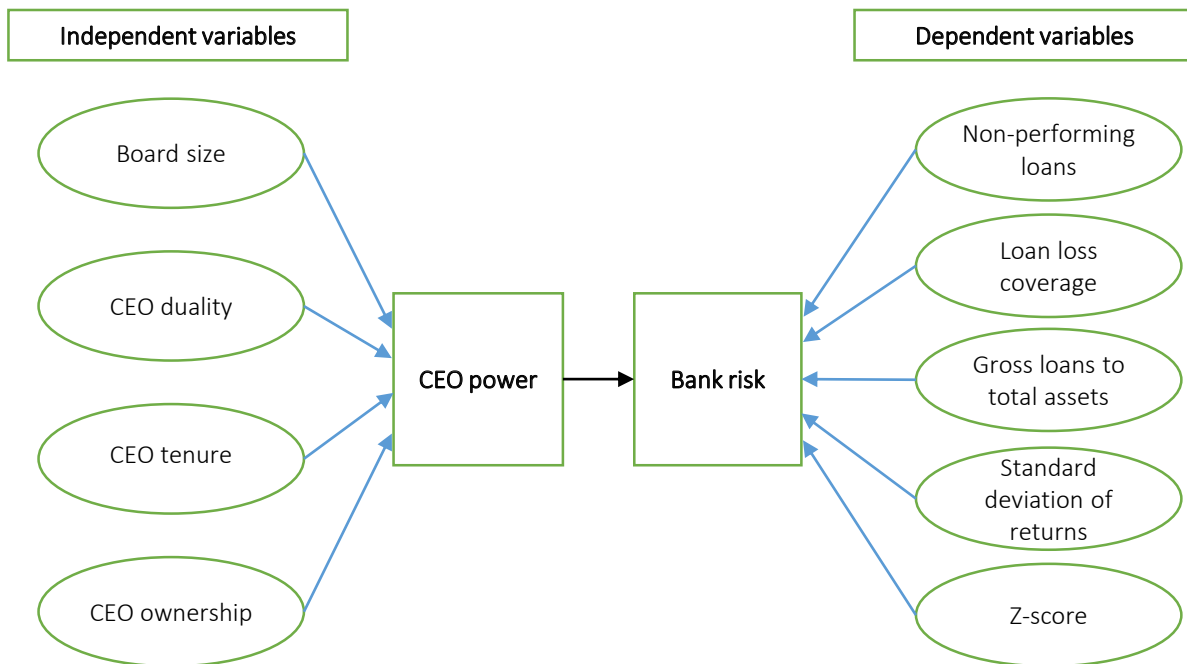
### 1.1. Theoretical framework

The study follows the literature on corporate governance and employs agency theory to explain the relationship between CEO power and bank risk taking. Jensen and Meckling (1976) indicate that agency relationships exist in all forms of organizations where an agent (manager) is expected to maximize the wealth of a principal (shareholder), but sometimes the manager's interests may differ from those of shareholders, which can lead to a conflict of interest (agency costs). Effective corporate governance mechanism is essential to reduce agency costs arising due to the differences between shareholders' and managers' interests. Such differences can be regulated through constant monitoring and control, as well as managerial compensation (e.g., Jensen & Meckling, 1976). Boards of directors are delegated by shareholders to control and monitor managerial decision-makings and are an effective tool for maintaining the separation between shareholders and management (Fama & Jensen, 1983). An effective board of directors helps to monitor and control self-interest managerial behavior and, as a consequence, mitigate managerial opportunism (Boyd, Haynes, & Zona, 2010). However, these monitoring and incentive mechanisms sometimes may fall short in motivating the firm manager to

work in the best interests of shareholders. As a result, the CEO of a firm will tend to have more influence on the decision-making of the firm, and will be more likely to pursue actions and make financial decisions that maximize their financial interests (Pathan, 2009; Sheikh, 2019).

Shareholders can have a diversified portfolio and neutralize their risk by investing in multiple investment securities. In contrast, managers are less diversified, and their risk profile is tied up to the human and financial capital they manage in the company (Sheikh, 2019). Therefore, managers have an incentive to divert company's resources for their personal financial interests and avoid risky projects, leading to a conflict of interest with shareholders. The study argues that this incentive tends to be stronger for powerful CEOs. Therefore, the paper investigates whether the CEO power affects firm risk and addresses the following research questions: Is there a relationship between a powerful CEO and firm risk? Which indicator of managerial power tends to increase risk taking? Is there a difference between conventional and Islamic banks in terms of managerial power and risk?<sup>1</sup> Does the interaction between different types of managerial power indicators lead to excessive risk taking? These research questions are examined using the case of commercial banks in the United Arab Emirates (UAE). This paper considers UAE

<sup>1</sup> Islamic banks' corporate governance is complex compared to conventional banks, including several stakeholders and an additional supervisory board, which is called a Shariah board. The Shariah board is entitled to review the activities of the board of directors and the management team (Gebba, & Aboelmaged, 2016).



**Figure 1.** Conceptual framework of variables

due to the distinct features of UAE banks. UAE banks are characterized by having large shareholders and stronger state influence. Government owns about 60% of shares of the UAE banks, and large institutions, including government organizations and private entities, account for 73% and 85% of conventional and Islamic banks' shares ownership, respectively (Gebba & Aboelmaged, 2016). The study argues that such a concentration of share ownership in the hands of several shareholders may empower the CEO, and this may negatively affect bank performance. Besides, the study provides important insight to policy makers and shareholders in designing appropriate corporate governance mechanisms to reduce excessive risk taking by bank managers.

Figure 1 describes the relationship between dependent variables (bank risk indicators) and independent variables (CEO power indicators).

Some of the existing studies use a single measure of CEO power. For example, Fahlenbrach (2009)

uses CEO duality, and Bebchuk, Cremers, and Peyer (2011), as well as Chen, Huang, and Wei (2013) use CEO's total financial compensation to measure CEO power. However, Finkelstein (1992) argues that CEO power comes from different sources and emphasizes four categories of power, including structural, ownership, prestige, and expert power.<sup>2</sup> It is believed that the combination of these four power indicators contributes to the overall managerial power in a company. However, due to data limitations, this study considers structural, ownership and expert power indicators. The study uses *the size of the board* and *CEO duality* to measure structural power, *CEO tenure* to measure expert power and *the percentage of share ownership the CEO owns* to measure ownership power.

## 1.2. Hypotheses

The extant literature on the relationship between board size and risk taking behavior is mixed. For example, Adams and Ferreira (2009) and Haider and Fang (2016) report a negative association be-

<sup>2</sup> According to Finkelstein (1992), these four indicators of CEO power reflect managerial power of different dimensions.

- 1) Structural power refers to formal power. Indicators, such as whether the CEO is also the chairperson of the board, are used to measure structure power.
- 2) Ownership power indicates the number of shares owned by a CEO.
- 3) An expert power is measured using a CEO tenure, which equals the number of years the manager of a bank served as a CEO since his first appointment (Pathan, 2009).
- 4) Prestige power refers to the reputation of a manager, educational background from elite schools and the network of the manager with other partners (Diga & Kelleher, 2009; Finkelstein, 1992). Prestige power can also be measured using the number of board memberships a CEO belongs to (Finkelstein, 1992).

tween board size and firm risk, indicating that larger boards improve the effectiveness of supervision and monitoring by bringing diversified skills and experiences together, which are helpful for making better financial decisions and mitigating excessive risk taking. Coles, Daniel, and Naveen (2008) emphasize the significant advisory role of larger boards, which improves a company's financial performance. Altunbaş, Thornton, and Uymaz (2019) also indicate that there is a significant and negative relationship between larger boards and non-performing loans. However, Dong, Girardone, and Kuo (2017), Pathan (2009), and Peni and Vähämaa (2012) report that larger boards are associated with higher firm risk, due to lack of coordination and control. With a large board, where agency costs are higher due to the free rider and coordination and communication issues, the CEO tends to be powerful and makes decisions in line with his personal financial interest as opposed to shareholders' interests (Jensen, 1993). Therefore, based on the above literature, the study puts forward the following hypothesis:

*H1: Larger board size reduces bank risk.*

CEO duality refers to a situation where a person possesses both chief executive officer and board chairperson positions (Hermalin & Weisbach, 1998). In such a dual leadership structure, the CEO will obtain an opportunity to dominate the board of directors and diminish their effectiveness in controlling and monitoring the management (Daily & Johnson, 1997). With little power of the board, the CEO tends to be more influential, thereby increasing managerial entrenchment (Peng, Zhang, & Li, 2007). Agency theory argues that duality increases CEO power and information asymmetry and weakens the independence of the board of directors (Fama & Jensen, 1983). As a result, the CEO may choose risky projects, which results in lower firm value (Jensen, 1993). Thus, the study argues that CEO duality tends to increase risk-taking behavior and suggests the following hypothesis:

*H2: CEO duality increases bank risk.*

CEO tenure is defined as the number of years the manager serves as the company's CEO (Pathan,

2009). Sheikh (2019) indicates that CEOs with higher tenures tend to develop influential power on their boards and, as a result, diminish the controlling power of the board of directors, increase managerial autonomy (Hermalin & Weisbach, 1998) and lower CEOs risk taking behavior to protect their personal financial interests. In contrast, Chen and Zheng (2014) show that CEOs with long tenure are overconfident in their skills and experience to manage uncertainties and take higher risk compared to short-tenure managers. This indicates that CEO's tenure is positively associated with firm risk. Although, the results on the relationship between CEO tenure and bank risk are mixed. Following Sheikh (2019), the study proposes the following hypothesis:

*H3: CEO tenure is negatively related to bank risk.*

One of the ways a CEO maintains power in a firm is by owning some shares of the company. A CEO who owns shares in the company is expected to converge his interests with shareholders' interests (Fama & Jensen, 1983). As a result, the CEO exhibits an incentive to maximize firm value. Allen (1981) also indicates that CEOs with higher share ownership in a company tend to have greater influence on the strategic financial decision making of the company. A recent study by Sheikh (2019) shows that a higher share ownership makes the CEO of the company more concerned about losing firm value due to his less diversified portfolio, and this provides an incentive to lower company risk. Accordingly, the following hypothesis is proposed:

*H4: CEO ownership is negatively related to bank risk.*

## 2. METHODS

### 2.1. Data source

The study focuses on national banks of the UAE. Financial performance and governance data are collected from banks' annual reports and the Bloomberg database. The study combines both governance and financial performance data, and this results in a sample of 19 banks over the period of 2015–2018.<sup>3</sup>

<sup>3</sup> As of July 2019, there were 22 national banks in the UAE. However, the study excludes three banks from the sample due to lack of adequate data, thus 19 banks are included.



The study uses two measures of bank risk as dependent variables. (1) Loan portfolio risk is measured using Non-performing loans (*NPL*), Loan loss coverage ratio (*COVERAGE*), and Loans to total asset ratio (*LOANS*). Non-performing loan ratio (*NPL*) is measured using the size of loans or Islamic financing more than 90 days overdue as a proportion of the gross loans or Islamic financing. Non-performing loan ratio is the most commonly used measure of bank risk in the banking literature (e.g., Dong, Girardone, & Kuol, 2017; Pathan, 2009). Loan loss coverage ratio (*COVERAGE*) is measured using the amount of loan loss reserve as a proportion of non-performing loans. This ratio measures the ability of a bank to absorb the risk of loan losses. The study includes the Loans to total asset ratio (*LOANS*) to measure bank risk in terms of the volume of loans distributed as a proportion of total assets of a bank. The paper argues that a higher ratio of loans to assets indicates higher probability of default. (2) Bank failure risk is measured using the standard deviation of Return on assets (*STD.ROA*), Standard deviation of return on equity (*STD.ROE*), and Insolvency risk measured using *Z-score*. These measures are widely used in the banking literature (e.g., Altunbaş, Thornton, & Uymaz, 2019; Houston, Lin, Lin & Ma, 2010). Both *STD.ROA* and *STD.ROE* measure the variability of returns. *Z-score* measures an overall bank risk and indicates the probability of insolvency (Boyd & Graham, 1986).

*Z-score* is computed using a moving standard deviation of ROA over the previous two years, and these values are combined with a current return on assets and capital to asset ratios (Delis, Tran, & Tsionas, 2012).<sup>4</sup> Therefore, *Z-score* is computed as the sum of current year return on assets and the capital to asset ratio divided by the moving average standard deviation over the previous two years, using the following equation:

$$Z - score = \frac{ROA + \left( \frac{Cap}{TA} \right)}{STD.ROA}, \quad (1)$$

where *ROA* is return on assets, *Cap/TA* represents the capital to total assets ratio and *STD.ROA* refers to the standard deviation of return on assets, estimated using a two-year moving average.

Several studies confirm that *Z-score* values are considerably skewed (e.g., Laeven & Levine, 2009), and it is highly recommended to transform *Z-score* values using the natural logarithm. Therefore, *Z-score* values are transformed using natural logarithms to make the data normally distributed.

The study constructs the CEO power variable using four measures, which are widely used in the banking industry:

- 1) CEO duality is one of the widely used measures of CEO power in the governance literature. CEO duality refers to a person who acts as both the manager and chairperson of the board of the company (Adams, Almeida, & Ferreira, 2005; Sheikh, 2019).
- 2) CEO tenure is measured using the number of years the manager serves as a CEO (Altunbaş, Thornton, & Uymaz, 2019; Sheikh, 2019).
- 3) CEO's share ownership is measured using the proportion of shares of the company owned by the CEO (Sheikh, 2019).
- 4) The size of the board is also included as a measure of CEO power. It shows that larger boards face coordination and communication challenges, resulting in higher managerial entrenchment and opportunism that increase the CEO power.

Table 1 provides a description of the variables.

Following the literature, the study uses several control variables to control for bank level differences.

- 1) Bank size, the natural logarithm of total assets is used to measure the size of the bank.
- 2) Bank profitability, measured using return on assets to control for the differences in annual returns, and
- 3) Capital to assets ratio, measured as the capital to assets ratio to control for the capitalization differences between the banks.

<sup>4</sup> *Z-score* is interpreted as an inverse of the probability of insolvency, and a higher value shows the farthest distance to bankruptcy, indicating a lower bank risk (Laeven & Levine, 2009).

**Table 1.** Variable description

Variables	Description
<b>Dependent variables</b>	
Loan portfolio at risk ratio ( <i>PAR</i> )	The amount of loans or Islamic financing more than 90 days overdue as a proportion of gross loans and advances or Islamic financing.
Loan loss coverage ratio ( <i>COVERAGE</i> )	The amount of loan loss reserve as a proportion of non-performing loans.
Gross Loans to total Asset ratio ( <i>LOANS</i> )	The size of loans distributed as a proportion of total assets.
Standard deviation of return on assets ( <i>STD.ROA</i> )	Standard deviation of bank's ROA for the previous two years.
Standard deviation of return on equity ( <i>STD.ROE</i> )	Standard deviation of bank's ROE for the previous two years.
Insolvency risk ( <i>Z-score</i> )	(ROA + Capital to assets ratio)/Standard deviation of ROA.
<b>Independent variables</b>	
Board size ( <i>BSIZE</i> )	The number of people who comprise the board.
CEO duality ( <i>CEOdual</i> )	1, if the CEO of the bank is simultaneously the chairperson of the board of directors, otherwise – 0.
CEO tenure ( <i>CEOfenure</i> )	The number of years since the appointment of the CEO to the position of the bank's CEO.
CEO ownership ( <i>CEOWN</i> )	The proportion of shares owned by the CEO of the bank.
Type of banking ( <i>TYPE</i> )	1, if the bank is an Islamic bank, otherwise – 0.
<b>Control variables</b>	
Bank size ( <i>SIZE</i> )	The natural logarithm of the bank's total assets.
Bank profitability ( <i>ROA</i> )	The ratio of net income to the average total assets of the bank.
Bank capital ratio ( <i>CAPRATIO</i> )	The ratio of owners' equity to the average total assets of the bank.

## 2.2. Method of analysis

First, the study runs a summary of statistics to analyze the mean, median, standard deviation, minimum and maximum values for CEO power and bank risk indicators. Second, it employs a Pearson pairwise correlation to examine the relationship between CEO power and bank risk. Similar to Altunbaş, Thornton, and Uymaz (2019), this study recognizes that CEO power is multifaceted, so several indicators were used to measure it. However, due to the limited sample size in this study, it is not possible to formulate the composite CEO power variable using principal component analysis. Nevertheless, to further analyze the strength of the relationship between CEO power and bank risk, the study uses Pearson's pairwise correlation between the interaction of CEO power indicators and bank risk variables. Finally, a two-tailed T-test was used to investigate if there are differences between conventional banks and Islamic banks in terms of CEO power and risk taking behavior.

## 3. RESULTS

This section reports the results of the study. First, the descriptive statistics are reported to provide an overview of the variables used in the study,

followed by the Pearson correlation and paired t-test results.

### 3.1. Summary statistics

The mean (median) loan portfolio at risk ratio (*PAR*) for 2015–2018 reported in Table 2 is 5.9% with a standard deviation of 2.2%, indicating that 5.9% of gross loans of UAE banks are overdue for 90 days. The average loan loss coverage ratio (*COVERAGE*) of banks in the UAE is 108.4% with a standard deviation of 24.1%. Table 2 also indicates that the average gross loan to total asset ratio (*LOANS*) is 58.6% with a standard deviation of 10.5%.

The average standard deviation of return on assets (*STD.ROA*) and standard deviation of return on equity (*STD.ROE*) is 0.28% and 2.23%, respectively, and the mean (median) *Z-score* is 87.72 (62.4).

The mean (median) board size (*BSIZE*) reported in Table 2 indicates that UAE banks have eight board members on average. Table 2 also reports that on average about 21% of UAE banks have a CEO who is also a chairperson of the board of directors (*CEOdual*). The average number of years of the managerial experience of a CEO (*CEOfenure*) of a UAE bank in the sample is 6.49 years.

**Table 2.** Summary statistics

Variables	Mean	Median	STDEV	Min	Max
PAR	5.93%	5.91%	2.20%	2.68%	10.08%
COVERAGE	108.4%	107.4%	24.1%	57.7%	153.5%
LOANS	58.6%	62.5%	10.5%	35.2%	75.7%
STD.ROA	0.28%	0.17%	0.29%	0.03%	1.0%
STD.ROE	2.23%	1.03%	2.64%	0.29%	10.3%
Z-score	87.72	62.4	88.5	5.3	368.6
BSIZE	8	9	1.75	5	12
CEOdual	0.21	0.00	0.42	0.00	1.00
CEOTenure(years)	6.49	4.30	8.34	0.1	28.30
CEOWN	2.15%	0.00	7.05%	0.00	29.28%
TYPE	0.37	0.00	0.49	0.00	1.00
SIZE(AED billion)	128.5	58.2	170.3	13.9	677.4
ROA	1.31%	1.50%	0.89%	-0.78%	2.97%
CAPRATIO	14.0%	13.0%	4.35%	9.0%	30.0%

The mean (median) profitability (*ROA*) and size (*SIZE*) of a UAE bank is 1.31% (1.50%) and 128.5 (58.2) billion Dirhams, respectively. The average capital to asset ratio (*CAPRATIO*) of banks in the sample is 14%.

### 3.2. Pearson correlation

As reported in Table 3, *BSIZE* is negatively and significantly related with *PAR* ( $\rho = -0.456$ ) and positively and significantly related with *STD.ROA* ( $\rho = 0.664$ ) and *STD.ROE* ( $\rho = 0.557$ ). *CEOdual* is negatively and significantly associated with *PAR* ( $\rho = -0.534$ ), *STD.ROA* ( $\rho = -0.104$ ) and *STD.ROE* ( $\rho = -0.219$ ). Besides, *CEOdual* is positively and significantly associated with *Z-score* ( $\rho = 0.657$ ). Table 3 also shows the negative and significant relationship between *CEOTenure*, *PAR* ( $\rho = -0.367$ ), *LOANS* ( $\rho = -0.481$ ), *STD.ROA* ( $\rho = -0.120$ ) and *STD.ROE* ( $\rho = -0.203$ ).

Both *CEOTenure* and *CEOWN* are positively and significantly associated with *Z-score* ( $\rho = 0.401$  and  $0.475$ , respectively).

Table 4 reports the correlation between measures of risk and the interaction of CEO power variables. Using an interaction helps understand the effect of a combination of several measures of CEO power on bank risk. The interaction between *BSIZE* and *CEOdual* is negatively and significantly associated with *PAR* ( $\rho = -0.471$ ) and positively and significantly associated with *COVERAGE* ( $\rho = 0.418$ ) and *LOANS* ( $\rho = 0.246$ ). The interaction between *BSIZE* and *CEOTenure* is negatively and significantly associated with *STD.ROA* ( $\rho = -0.409$ ) and *STD.ROE* ( $\rho = -0.396$ ). In addition, the interaction between *BSIZE* and *CEOTenure* is positively and significantly associated with *Z-score* ( $\rho = 0.324$ ). On the other hand, the interaction between *BSIZE* and *CEOWN* is positively and significantly asso-

**Table 3.** Pearson correlation analysis of the relationship between dependent and independent variables

Variables	PAR	COVERAGE	LOANS	STD.ROA	STD.ROE	Z-score
BSIZE	-0.456** (0.015)	0.271 (0.262)	-0.065 (0.791)	0.664*** (0.006)	0.557*** (0.008)	-0.179 (0.465)
CEOdual	-0.534*** (0.003)	0.335 (0.162)	-0.001 (0.998)	-0.104** (0.013)	-0.219** (0.017)	0.657*** (0.006)
CEOTenure	-0.367** (0.023)	0.477** (0.039)	-0.481** (0.019)	-0.120** (0.024)	-0.203** (0.015)	0.401** (0.018)
CEOWN	0.225 (0.355)	0.335** (0.013)	-0.449** (0.021)	0.037 (0.880)	-0.063 (0.798)	0.475** (0.026)

Note: Significance levels at 10% (\*), 5% (\*\*) and 1% (\*\*\*).



**Table 4.** Pearson correlation analysis of the interaction between dependent and independent variables

Variables	PAR	COVERAGE	LOANS	STD.ROA	STD.ROE	Z-score
BSIZE # CEOdual	-0.471** (0.042)	0.418** (0.035)	0.246** (0.023)	-0.135 (0.581)	-0.212 (0.384)	0.065 (0.793)
BSIZE # CEOtenure	-0.108 (0.660)	0.486** (0.035)	-0.146 (0.550)	-0.409** (0.018)	-0.396** (0.020)	0.324** (0.022)
BSIZE # CEOWN	0.256 (0.291)	0.211 (0.387)	-0.123 (0.615)	0.246** (0.041)	0.354** (0.025)	-0.179** (0.018)
CEOdual # CEOtenure	-0.475** (0.039)	0.530** (0.019)	-0.281** (0.025)	-0.153** (0.032)	-0.176** (0.011)	0.248** (0.035)
CEOWN # CEOtenure	0.222 (0.361)	0.237 (0.329)	-0.154 (0.529)	0.037 (0.882)	-0.064 (0.795)	-0.074 (0.763)
CEOdual # BSIZE # CEOWN	-0.526*** (0.001)	0.580*** (0.009)	-0.227 (0.351)	-0.173** (0.019)	-0.188** (0.042)	0.052** (0.032)
CEOdual # CEOtenure # CEOWN	-0.346 (0.147)	0.390* (0.099)	-0.352 (0.140)	-0.103 (0.675)	-0.130 (0.596)	-0.227* (0.051)
BSIZE # CEOdual # CEOtenure	-0.330 (0.167)	0.377 (0.111)	-0.355 (0.137)	-0.099 (0.688)	-0.126* (0.067)	-0.352 (0.140)

Note: Significance levels at 10% (\*), 5% (\*\*) and 1% (\*\*\*).

ciated with *STD.ROA* ( $\rho = 0.246$ ), *STD.ROE* ( $\rho = 0.354$ ) and negatively and significantly associated with *Z-score* ( $\rho = -0.179$ ).

Table 4 also reports that the interaction between *CEOdual* and *CEOtenure* is negatively and significantly related with *PAR* ( $\rho = -0.475$ ), *LOANS* ( $\rho = -0.281$ ), *STD.ROA* ( $\rho = -0.153$ ), *STD.ROE* ( $\rho = -0.176$ ) and positively and significantly associated with *COVERAGE* ( $\rho = 0.530$ ) and *Z-score* ( $\rho = 0.248$ ). The results of the interaction between

*CEOdual*, *BSIZE* and *CEOWN* is negatively associated with *PAR* ( $\rho = -0.526$ ), *STD.ROA* ( $\rho = -0.173$ ), *STD.ROE* ( $\rho = -0.188$ ), and positively associated with *COVERAGE* ( $\rho = 0.580$ ) and *Z-score* ( $\rho = 0.052$ ).

### 3.3. Paired t-test analysis

Table 5 presents a statistical comparison between two independent samples – the Islamic and conventional banks, and assesses if they have differ-

**Table 5.** Test of the significance difference between conventional and Islamic banks

Variables	Conventional banks		Islamic banks		P-value
	Mean	Median	Mean	Median	
PAR	5.21%	5.35%	6.60%	5.91%	-1.268*** (0.002)
COVERAGE	106.42%	106.25%	111.87%	110.0%	-1.014** (0.023)
LOANS	56.79%	62.16%	61.75%	62.52%	-0.9921 (0.833)
STD.ROA	0.36%	0.19%	0.16%	0.1%	1.724*** (0.001)
STD.ROE	2.57%	1.33%	1.65%	0.87%	0.719 (0.241)
Z-score	63.93	53.98	128.51	101.71	-2.599*** (0.003)
BSIZE	8.92	9	7	7	2.664*** (0.008)
CEOdual	0.25	0.00	0.14	0.00	0.527 (0.303)
CEOtenure (years)	8.05	4.9	3.81	1.6	2.072** (0.039)
CEOWN	3.40%	0%	0.0%	0.0%	1.315* (0.062)

Note: Significance levels at 10% (\*), 5% (\*\*) and 1% (\*\*\*).

ences in their CEO power structure and risk taking behavior. Islamic banks differ from conventional banks mainly in the way they generate their revenue, which is mainly from different financial services based on the virtue of sharing costs and benefits. The study argues that these differences affect the risk taking behavior of CEOs in conventional and Islamic banks.

The average *PAR* for conventional banks is 5.21%. Islamic banks' *PAR* accounts for 6.6%. Column 5 of Table 5 shows that there is a significant difference between conventional and Islamic banks, indicating that Islamic banks have higher *PAR* than conventional banks. However, the *COVERAGE* ratio for Islamic banks (111.87%) is greater than for conventional banks (106.42%).

Table 5 also shows that conventional banks have higher *STD.ROA* (0.36% vs 0.16%), larger *BSIZE* (8.92 vs 7) and longer *CEOTenure* (8.05 years' vs 3.81 years). On the other hand, conventional banks tend to have lower bankruptcy risk (*Z-score*) than Islamic banks (63.93 vs 128.51). In addition, Table 5 indicates that there is no significant difference between conventional banks and Islamic banks in terms of loans to assets ratio (*LOANS*), standard deviation of return on equity (*STD.ROE*) and CEO duality (*CEODual*).

## 4. DISCUSSION

### 4.1. Summary statistics

The summary statistics reported in Table 2 show that UAE banks have relatively lower non-performing loans (5.9%), and the quality of loan portfolios of UAE banks is improving from year to year, with a declining non-performing ratio of 6.2% in 2015 to 5.6% in 2018 (UAE Central Bank, 2016, 2017, 2018). The over 100% coverage ratio indicates that on average banks in the UAE maintain optimal reserves to mitigate loan losses. For example, the average loan loss provision for UAE banks in 2018 was 114.7% (UAE Central Bank, 2018).

Table 2 also indicates that almost 60% of banks' assets are allocated as loans to customers, suggesting that most of the assets are for lending. The average standard deviation of return on assets (*STD.*

*ROA*) and standard deviation of return on equity (*STD.ROE*) presented in Table 2 indicate that UAE banks report low return variability. These results are supported with a lower mean (median) *Z-score* of 87.72 (62.4), which shows that UAE banks have low insolvency risk, suggesting a relatively low level of failure risk.

The average board size of UAE banks in the sample is eight, which is comparable to the findings of Gebba and Aboelmaged (2016). Overall, the summary statistics show that UAE banks' profitability is lower compared to their size. However, UAE banks perform more than the average return on assets for GCC countries' banks (KPMG, 2018).

### 4.2. Correlation analysis

The negative and significant relationship between *BSIZE*, *CEODual*, *CEOTenure* and *PAR* reported in Table 3 indicates that banks with powerful CEOs tend to have lower non-performing loans, indicating that a powerful CEO improves loan portfolio quality of a bank in contrast to previous results (e.g., Adams, Almeida, & Ferreira, 2005; Altunbaş, Thornton, & Uymaz, 2019; Cheng, 2008). The positive and significant relationship between *CEOTenure*, *CEOWN* and *COVERAGE* shows that experienced CEOs and CEOs with share ownership in a UAE bank tend to maintain adequate loan loss reserve to mitigate loan losses. A negative and significant association between *CEODual*, *CEOTenure* and *LOANS*, *STD.ROA*, *STD.ROE* and *Z-score* suggests that experienced CEOs and managers, who hold both CEO and board of directors chairmanship, tend to lend fewer loans and are associated with lower return variability and bank failure risk. Overall, all CEO power indicators, except the board size, are negatively associated with bank risk. This is consistent with the notion that firm CEOs are less diversified, and therefore they avoid taking risky projects (e.g., Sheikh, 2019). A larger board size is associated with higher return variability and insolvency risk, which is consistent with the agency theory that larger boards have a communication and coordination problem, resulting in extreme decisions (e.g., Pathan, 2009; Peni & Vähämaa, 2012).

As reported in Table 4, the interaction between *BSIZE* and *CEODual* is associated with lower loan

portfolio at risk (*PAR*) ratio and higher coverage ratio (*COVERAGE*), indicating that banks with larger board size and CEO duality tend to improve their asset quality by lowering non-performing loans and maintaining adequate loan loss reserves. Banks with larger boards and experienced CEOs are associated with lower return variability (*STD. ROA* & *STD. ROE*) and insolvency risk (*Z-score*). In addition, banks with larger boards and with CEOs owning significant number of shares of a bank tend to increase return variability and insolvency risk. While Sheikh (2019) indicates that a higher share ownership makes the CEO of a company more worried about losing firm value, the results of this study contend agency theory expectations. This may be due to the increased power of the CEO that comes from the inconclusive large board and ownership power, which forces the CEO to make extreme financial decisions.

Table 4 also shows that a bank with an experienced manager (*CEOtenure*) who is the chairperson of a board (*CEOdual*) tends to reduce bank risk. In addition, banks with a larger board (*BSIZE*), whose CEO owns a large proportion of shares (*CEOWN*) in the

bank and who is also a chairperson of the board (*CEOdual*), tend to reduce bank risk. The results of this study are consistent with previous studies such as Haider and Fang (2018), Hermalin and Weisbach (1998) and Pathan (2009), which report a negative association between CEO power and firm risk.

### 4.3. Paired t-test analysis

Column 5 of Table 5 shows that Islamic banks have higher loan portfolio at risk (*PAR*) than conventional banks. However, Islamic banks maintain more loan loss reserve (*COVERAGE*) compared to conventional banks. This may be due to higher non-performing loans associated with Islamic banks.

Conventional banks have higher return variability and lower insolvency risk than Islamic banks. They also have larger boards and experienced managers. In addition, CEOs of conventional banks tend to own more shares than CEOs of Islamic banks. Overall, conventional banks have powerful CEOs and report lower non-performing loans and failure risk than Islamic banks.

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## CONCLUSION

This paper examines the relationship between CEO power and bank risk using the data from 19 banks in the UAE over the period of 2015–2018. Overall, UAE banks have lower bank risk, lower variability of returns and lower bankruptcy risk. The results indicate that conventional banks have more powerful CEOs that are associated with higher performance variability and lower insolvency risk compared to Islamic banks. However, Islamic banks have higher non-performing loans compared to conventional banks. The paper also provides evidence that CEO duality and CEO tenure are negatively associated with bank risk. The results provide little evidence to support the impact of board size and CEO ownership on bank risk taking.

Several stakeholders could benefit from this paper. First, the results may be of interest to policy makers and can be used as input in designing corporate governance regulations and legislations. It is important to emphasize that the structure and extent of CEO power need to be taken into account when assessing the risk taking behavior of UAE banks. Second, shareholders can also use the results of this study as input while appointing a CEO for their banks. Identifying the features of different CEO power indicators and their potential impact on risk taking behavior is essential in appointing a CEO who fits in with the interest of shareholders to maximize their wealth.

This study is limited to UAE banks, and it is recognized that the results obtained cannot be generalized. Future research is suggested to expand the findings in a broader context by conducting a multi-country analysis to examine the impact of CEO power on bank risk-taking and contribute to the ongoing debate about the impact of CEO power on bank risk.

## AUTHOR CONTRIBUTIONS

Conceptualization: Haileslasie Tadele, Baliira Kalyebara.

Data curation: Haileslasie Tadele, Baliira Kalyebara.

Formal analysis: Haileslasie Tadele, Baliira Kalyebara.

Investigation: Haileslasie Tadele.

Methodology: Haileslasie Tadele

Software: Haileslasie Tadele.

Writing – original draft: Haileslasie Tadele.

Writing – reviewing & editing: Baliira Kalyebara.

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## APPENDIX A

**Table A1.** List of banks included in this study as of July 31, 2019

Country	No. of branches	Total assets (AED millions)	Total equity (AED millions)
Abu Dhabi Commercial Bank	58	257,847.5	31,083.5
Emirates NBD	103	456,319.8	56,997
First Abu Dhabi Bank	82	677,415.4	99,354
National Bank of R.A.K	37	46,079.5	7,581.5
Commercial Bank of Dubai	23	66,614.8	8,801.9
Bank of Sharjah	5	28,551.4	4,267.3
Abu Dhabi Islamic Bank	84	122,284.7	16,210.9
Emirates Islamic Bank	63	58,172.8	6,575.9
Mashreq Bank	36	125,772.7	19,965.8
National Bank of Fujairah	16	35,535.2	4,717.8
National Bank of U.A.Q	28	13,930.8	4,154.6
Dubai Islamic Bank	71	188,971.8	28,274.3
Sharjah Islamic Bank	34	36,613	5,116.9
Union National Bank	74	105,075	18,500
United Arab Bank	11	52,610	5,888.7
Commercial Bank International	9	65,069.8	2,372
Al Hilal Bank	13	43,737.9	5,490.5
Noor Bank	16	43,358.7	5,180.9
Ajman Bank	11	18,248.9	1,949.9
Total	800	2,442,210.6	332,483.6