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Application of the Dividend Discount Model to Determine the Financial Flexibility of Selected Iraqi Banks

The Dividend Discount Model (DDM) remains a fundamental technique applied in the estimation of a stock's intrinsic value, with lots of advantages along with a few drawbacks. While various studies have been conducted earlier to investigate the financial flexibility of Iraqi banks through different measures, no study has made use of the DDM model to determine the financial flexibility. Thus, the current study is a first attempt to analyse the relationship between the Dividend Discount Model and financial stability in five Iraqi banks listed on the Iraq Stock Exchange during the period 2017–2023. For this descriptive analytical study, the Dividend Discount Model was considered as the independent variable, while financial flexibility (dependent variable) constructs such as the equity multiplier, debt-to-equity ratio, cash balance ratio and deposit to loan ratio were considered. A total of five banks listed on the Iraqi stock exchange were selected based on the availability of the information required for the analysis for seven years, i.e., the study period was between 2017 and 2023. The analysis was conducted to determine the growth rate of the dividend per share, dividend earnings per share, cost of equity, equity multiplier, Debt-to-Equity ratio, Cash Balance Ratio and Deposit-to-Loans ratio. The analytical findings revealed that conservative strategy, expansion strategy and a balanced strategy that maintained stable ratios despite increased financial risks, were followed by the banks to ensure their financial flexibility with varied findings in the discounted dividend model. While the study findings proved that there is a significant relationship between the discounted dividend model and financial flexibility measures. The study provided a few suggestions for future researchers to explore in this domain to fulfil the limitations of the study, such as a limited timeframe and sample size, and the application of new models for estimating the stock returns.

Keywords: dividend discount model, financial flexibility, equity multiplier, cash balance, deposit to loan, Iraqi commercial banks.

Introduction

After COVID-19, the Iraqi economy has suffered a lot in terms of financial sustainability, volatile market conditions, declining foreign direct investment and less reliance upon the banking system owing to factors such as less attention towards risk mitigation, delayed repayments, mounting debts, etc. (Ali et al., 2023). In addition to the above, the direct sanctions imposed by the US Treasury Department in 2022 affected more than 14 banks, including the Middle East Bank, thus making it inaccessible to the US financial system, due to the Iraqi banks' non-compliance

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with AML/CFT international standards (Abdul Wahaab, 2025). Especially, the Iraqi banking sector suffers from a wide range of issues, including financial stability, corruption, fraud, financial fragility, etc., which has led to less reliance upon the formal banking system among the citizens (Ahmed et al., 2021). Despite this, the banking sector performance indicators showed an increased performance of the Arab stock exchange in 2022 by 3.33%, while the banking sector plays a crucial role in shaping the Iraqi financial market (Al Mamoori, Wan Yusoff and Khudari, 2025).

Financial flexibility refers to a company's ability to adapt to economic and financial changes, whether positive or negative, while maintaining its financial stability, ability to meet its obligations, and gain financial options at affordable rates, which eventually result in the generation of a financial structure that enables quick adjustments for debt or equity (Mohammed and Hussein, 2025). In the presence of financial flexibility, firms can protect themselves from financial fragility and financial hardship through calculated risks (Dawood and Shili, 2023). It is a key factor in capital structure decisions and influences the debt decisions of a firm. With high financial flexibility, a firm is said to be capable of analysing all the possible options for its growth before it. It also heavily influences the operational flexibility of the firms and maintains its debt sustainability (Al-Tai & Al-Jubouri, 2017). In the case of banks, Raghad Riyad and Rawaa Ahmed (2023) mentioned that financial flexibility enables the banks to have rapid response, sustainable business operations, high quality and innovative capability, easy access to external financing, strong capital structure and highly competent compared to the counterparts in the market. It also defines the difference between the maximum debt ratio of a bank without losing its financial independence against the actual debt ratio of the bank. It denotes the measures taken by the bank to ensure cash flow time and its volume so as to overcome the financial traps at unavoidable instances (Mohammed, 2020).

Williams and Gordon proposed the Dividend Discount Model (DDM) model in 1938 for dividend distribution and the exchange entity model in order to comprehensively analyse the firms for stock investment. mentioned that in DDM (Williams, 1938), an individual stock's intrinsic value is evaluated in line with the sum of the discount rates of the dividend distribution income of the individual stock each year (Xu, 2023). Dividend Discount Model (DDM), also known as Dividend Growth Model (DGM) or the Discounted Cash Flow model, is applied in determining the cost of equity capital in the context of utility rate setting and unitary appraisal (Cornell and Gerger, 2022). It remains a fundamental technique applied in the estimation of a stock's intrinsic value, and it also empowers investors to forecast a reasonable price for a stock (Zhao, 2022). The Dividend Discount Model works on the basis of the assumption that the value of a stock is determined by the present value of all expected future earnings. The DDM model makes the investors understand the time value of money, i.e., the lower the risk, the lower the discount rate will be, and consequently, the higher the stock's fair value. The DDM model is extensively applied in common stock

valuation since it is theoretically sound and simple to apply to determine the constant growth of the stocks (Gordon, 1962). According to Abdul Zahra et al., (2013), in case of a higher DDM value compared to the current stock price, then the stock can be considered as undervalued and can be purchased. Conversely, when the DDM value is lower, the stock is considered to be overvalued, and so it can be sold. According to Khader Al-Tai (2024), when a bank is financially flexible, it has sufficient liquidity to face any kind of cash flow shocks, while it can handle investment opportunities in a timely manner, owing to its accessibility to external funds. However, the DDM model has a few limitations to be considered, for instance, the investor should have a reliable dividend history of the company and thoroughly observe the stock price fluctuations from time to time. Also, in the case of small companies that refrain from paying dividends, the DDM may not be an appropriate model for investment analysis (Zhao, 2022). In literature, Xu (2023) discussed about the limited scope in terms of revenue-enhancing entity model and the exclusion of non-tradable shares from investment analysis are some of the limitations of the DDM model, while Li (2025) stability, and sensitivity. The DDM, widely used in equity valuation, estimates the present value of expected future dividends. While its theoretical appeal is strong, real-world applications often highlight significant challenges. In the "accuracy" dimension we aggregate evidence from multiple markets that compare intrinsic values derived from DDMs with realised market prices or subsequent returns. The "stability" dimension explores how DDM performance varies across time, markets and firm types, investigating whether the model's error metrics remain consistent. The "sensitivity" dimension analyses how small changes in input assumptions – particularly dividend growth rate (g also mentioned that estimation error and unrealistic assumption for the perpetual growth are some of the DDM's limitations. Further, the DDM model cannot be applied to non-dividend-paying or irregular-dividend firms, which limits its applicability.

Various studies have been conducted earlier (Ahmed et al., 2021; Dawood and Shili, 2023; Raghad Riyad and Rawaa Ahmed, 2023; Abdul Hur Al-Ardi, Jassim Al-Asadi and Hussein, 2024; Khader Al-Tai, 2024) to investigate the financial flexibility of Iraqi banks through different flexibility measures, while no study has considered the application of the DDM model to determine the financial flexibility. This might be due to the fact that in the case of the Iraqi stock exchange, the key issue remains the unavailability of complete information about the stocks, which directly influences the investor's decisions. Further, the investors are unaware of the information regarding strategic plans, risk mitigation strategies, financial flexibility or financial stability of the banks. In this background, **the current study** is a first-of-its-kind attempt to analyse the relationship between the Dividend Discount Model and financial stability in five Iraqi banks listed on the Iraq Stock Exchange during the period 2017–2023.

Literature Review

Dividend Discount Model (DDM)

In literature, Xu (2023) confirmed the efficacy of DDM in predicting the stock prices, though it suffers from unpredictable market fluctuations, different accounting standards being followed and the uncertainty regarding the company's dividend. This study confirmed that the Discounted Cash Flow Model is superior to DDM as the former replaces cash flow for dividends, and the analysis is detailed enough to perform, which are suitable conditions for long-term prediction of a company's stock prices. The study conducted by Senel (2025) assessed the predictive power of Constant Growth Dividend Discount Model (DDM) in forecasting the stock prices of 23 BIST-listed Turkish companies, while the study used Symmetric Median Absolute Percentage Error as well as Wilcoxon Signed-Rank Test for the analysis of the stock prices. The results revealed the efficiency of the DDM model with stable dividend policies, though significant differences were found in a few companies' values owing to fluctuations in dividend growth rates, sector- and period-related specifications. In a comparative study conducted by Dukalang, Koni and Mokoagow (2021), DDM and Fresh Cash Flow to Firms (FCFF) models were compared to determine the fair value of stocks and stock conditions among banking players listed in the Jakarta Islamic Index. The results revealed that the DDM results overvalued the shares. The study further recommended making use of RMSE values to understand the accuracy of the calculations. The study conducted by Ma, Xie and Zhang (2023) listed various extensions of the DDM model, such as the fixed DDM, Gordon growth model, two-stage, three-phase, H-model, geometric and additive model in DDM, along with the modified geometric and additive model. Both the capital asset pricing model (CAPM) and the DDM were used by (Yamagata, 2025) to propose a novel framework to find out the relationship among four indicators, such as fluctuation risks, expected returns, security prices and the realised returns using nine Australian real-estate investments from 2005 to 2024. The results revealed that the expected dividend yield of an individual security remains a factor that determines the price in the stock market. The constant growth DDM model was used in the evaluation of a few stock-listed companies in the Philippine Stock Exchange (Gacus and Hinlo, 2018). While the study results revealed that most companies had had an sMdAPE of less than 30%, the outcomes confirmed that it is possible to forecast common stock prices using information on dividends per share and the constant growth DDM.

DDM in Various Geographical Settings

Muhamad, Ali and Ali Abrahim (2019) applied DDM upon a sample of joint stock companies listed in the Iraq stock exchange during the period 2009–2013 to analyse the disparities between nominal value and the real value of the shares, after adjusting for inflation in case of zero growth. The results revealed that inflation results in higher systematic risks,

owing to the firms that use property-based financing for their projects. The study conducted by Harasheh, Amaduzzi and Darwish (2020) compared different accounting models using the panel regression analysis method on the data from the Palestine exchange from 2009 to 2018. Firstly, the RIM (Residual Income) model was found to outperform the other models in terms of modelling the equity price, while the DDM model outperformed all other models in terms of estimating the returns. The DDM model was used by Tian (2024) to determine the values of the COSCO shipping holding stocks and predict whether the investment is worth the risk. The prediction values were compared with the actual values, and the results revealed that the DDM estimated value was much higher than the actual stock price, i.e., undervalued stocks and higher returns in the future. A comparative study was conducted by Sutjipto, Setiawan and Ghozali (2020) using the Discounted Cash Flow (DCF) models and the DDM model using the data of the companies listed in the Indonesian Stock Exchange between 2014 and 2019. The results revealed that DDM predicted with high accuracy compared to DCF since the Mean Absolute Pricing Error (MAPE) showed that DDM values were lower, i.e., 46%, than the 206% of the DCF. Ivanovski, Ivanovska and Narasanov (2015) evaluated the stocks of the firms listed in Komercijalna Banka stocks, Macedonia, using a two-phase growth model, i.e., the DDM model for the period 2008 and 2010. The results revealed that the Gordon model is highly reliable and provides sufficiently relevant data for stock value prediction and calculation.

Financial flexibility of Iraqi banks

The study conducted by Raghad Riyad and Rawaa Ahmed (2023) analysed five Iraqi private banks listed on the Iraq Stock Exchange to determine the impact of financial flexibility upon the financial performance and long-term stability. The authors used leverage ratios (equity multiplier ratio, debt-to-equity ratio) as well as liquidity ratios (monetary fund ratio, legal liquidity ratio and investment ratio) as the indicators for financial flexibility against financial performance. The results revealed that heavy financial flexibility significantly helps in enhancing the profitability of the banks, that empower it to absorb the economic shocks in the country. The impact of financial flexibility was assessed by Dawood and Shili (2023) in accomplishing financial recovery among five Iraqi commercial banks listed on the Iraqi stock exchange during the financial period, 2009–2020. Multiplier equity and debt to total equity were measured for financial flexibility, while return on assets and return on deposits were measured for financial recovery in the study. The results revealed that the financial flexibility of the banks has a significant impact on the financial recovery. Further, the financial structural strength empowered the banks to have significant financial recovery and overcome the banking risks encountered in the market. Ahmed et al. (2021) analysed the impact of financial flexibility upon the financial stability of eight Iraqi private commercial banks listed in the Iraqi stock exchange for the period between 2006 and 2019. In this study, the net cash flow, financial leverage and

liquidity were measured for financial flexibility, while the Z-score was measured for the financial stability of the banks. According to the results, Iraqi banks maintained high cash, cash equivalents and assets during the study period, i.e., higher financial flexibility, while net cash flow, liquidity and financial leverage have a significant impact on the financial stability of the banks. The influence of financial flexibility upon banking stability was determined by (Abdul Hur Al-Ardi, Jassim Al-Asadi and Hussein, 2024) using 10 years of stock exchange data for 10 banks listed in the Iraqi stock exchange (including National Bank of Iraq and Investment Bank of Baghdad) for the period spanning 2012 to 2021. For this study, net cash flow, financial leverage and liquidity were measured for financial flexibility, while the Z-score was measured for banking stability. The study concluded the significant impact of financial flexibility upon the stability of the banks based on the results obtained using the panel data analysis. The impact of financial balance upon the financial health of Nine Iraqi commercial banks, listed in the Iraqi stock exchange, during the period 2013 and 2022, was analysed by Khader Al-Tai (2024). In this study, liquidity index, financial flexibility and water solvency index were considered as financial indicators, while financial health was calculated on the basis of return on assets. The results revealed that the financial balance and financial solvency have a significant and positive impact on financial health, while financial flexibility negatively impacts the financial health and has no correlation with it. The mediating role played by dividends was analysed by Al Mamoori, Wan Yusoff and Khudari (2025) in the background of the impact of COVID-19 upon cash flows and accordingly, the stock returns among 20 banks listed in the Iraqi stock exchange during 2015 and 2020. Cash flows and dividends were found to have positively influenced the stock returns while the pandemic had a relatively minor impact on this outcome. The results suggested that the banks should improve their cash flows through increased deposits, cash reserves and profits so as to eventually increase the stock returns. Sanaa Hasan Hilo, Khelood A. Mkalaf, and Rami Hikmat Al-Hadeethi (2024) analysed the impact of financial flexibility on increasing the efficiency of the banking operations among five commercial banks listed in the Iraqi Securities Commission. For banking efficiency, two indicators, such as the profitability ratio and net stable financing ratio, were used, while for financial flexibility, financial leverage and liquidity ratio were utilised in the study. The results revealed that the liabilities-to-assets ratio increases the efficiency of the banking system in Iraq, positively influenced by financial flexibility. Financial flexibility remains a key factor in the financing of managers and the employment decisions in a firm. When the financial flexibility of 354 US employers was studied during COVID-19, it was found that the financially non-flexible firms reduced their workforce, while those firms with higher financial flexibility before the pandemic were able to avoid workforce reduction (Lester, Rouen and Williams, 2021).

Methodology

For this descriptive analytical study, the independent variable would be the Dividend Discount Model, while the financial flexibility would be the dependent variable, measured using four constructs such as the equity multiplier, debt-to-equity ratio, cash balance ratio and deposit to loan ratio, as per the literature (Dawood and Shili, 2023; Raghad Riyad and Rawaa Ahmed, 2023; Dilshad Habib and Hikmat Rashid, 2024). Table 1 shows the variables, constructs, equations and the respective references for the study.

Research hypothesis and the proposed model

The hypotheses for the study are shown in Figure 1.

Table 1. **Variables, constructs and the equations**

Variable	Equations	References
Dividend Discount Model (DDM) (independent variable)	**Value of Stock by DDM formula**= EDPS1/ (CCE-DGR) where: **EDPS1=expected dividend per share** EDPS1= EDPS0* (1+g) EDPS0= Dividend per share for the current year **CCE=cost of capital equity** CCE= Earnings per share/ Market price per share Earnings per share = Net income/number of shares **DGR=dividend growth rate for 5 years** $DGR(g) = \left(\frac{D_n}{D_0}\right)^{1/n} - 1$	(James,2024)
Financial flexibility (FF) (dependent variable)	**Equity Multiplier** = Total Assets / Total Shareholders' Equity **Debt to Equity** = Debt / Shareholders' Equity **Cash Balance Ratio** = Total Cash Assets (Cash on Hand + Cash at Central Bank + Cash at Other Banks + Any Balances and Commissions + Coins) / Total Liabilities **Deposit-to-loan Ratio** = Deposits / Loans	(Dawood and Shili, 2023; Raghad Riyad and Rawaa Ahmed, 2023; Dilshad Habib and Hikmat Rashid, 2024)

Source: composed by the authors.

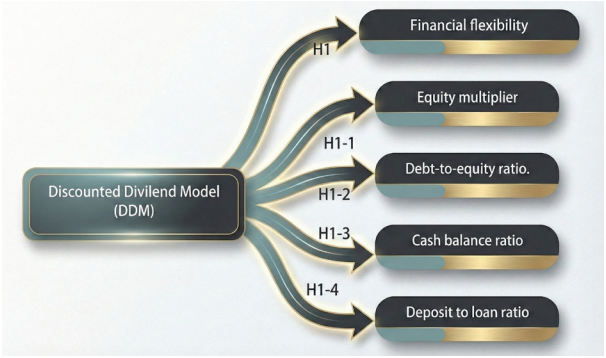

Fig. 1. **Proposed model**

Source: composed by the authors.

Main Hypothesis 1: There is a significant relationship between the discounted dividend model and financial flexibility.

Several sub-hypotheses branch out from this hypothesis as given below.

Sub-hypothesis 1-1: There is a significant relationship between the discounted dividend model and the equity multiplier.

Sub-hypothesis 1-2: There is a significant relationship between the discounted dividend model and the debt-to-equity ratio.

Sub-hypothesis 1-3: There is a significant relationship between the discounted dividend model and the cash balance ratio.

Sub-hypothesis 1-4: There is a significant relationship between the discounted dividend model and the deposit-to-loan ratio.

Population and sampling

For this study, a total of five banks listed in the Iraqi stock exchange were selected, and Table 2 shows the respective banks and their capital value in Million Dinars. As mentioned earlier, the DDM model can be applied with the availability of full dividend information, due to which the current study considered only these five banks that had the required information listed with the stock exchange. The study period was between 2017 and 2023, i.e., seven years.

In this study, the growth rate of the dividend per share was calculated in order to determine the discount rate using the given formula. For calculating the discount rate, the growth rate of the dividend per share for each bank in the study sample was calculated using equation (1). From the output, the use of the historical dividend growth rate equation was measured.

$$DGR(g) = \left(\frac{D_n}{D_0}\right)^{1/n} - 1 \quad \ldots \text{(eqn. 1)}$$

In the next step, the expected dividend earnings per share (EDPS) was calculated using the following equation (eqn. 2)

$$EDPS_1 = EDPS_0 * (1 + g) \quad \ldots \text{(eqn. 2)}$$

The next step is to find the cost of equity (COE) or the Cash and Cash Equivalents (CCE), which represents the return required by the investors to invest

Table 2. **Overview of the banks considered for the study**

No.	Bank Name	Year of Establishment	Shortcode	Capital (in million dinars)
1	Cihan Bank	2008	JIH	300,000
2	Across Iraq Bank	2010	AIB	180,000
3	Ashur Bank	2007	ASH	150,000
4	Mansour Bank	1992	MAN	200,000
5	Al-Tayf Bank	2005	TAI	250,000

Source: The table was prepared by the authors based on the data included in the annual report of the banks from the link https://www.isc.gov.iq/en

in the bank's shares. It reflects the compensation demanded by the investors for bearing the risk of owning the shares. Eqn 3 is used to calculate the COE.

$$CCE\ or\ COE = \left(\frac{D_1}{p_0}\right) + g \quad \ldots \text{(eqn. 3)}$$

Under financial flexibility, four measures are calculated, such as the equity multiplier, debt-to-equity, cash balance ratio and deposit-to-loan ratio. Here is the short description and the formula used to calculate the respective measures.

1. Equity multiplier ratio: It is a ratio that measures a company's financial leverage, which is the amount of money a company has borrowed to finance the acquisition of assets. Eqn 4 is used to calculate a company's equity multiplier:

Equity Multiplier = Total Assets / Total Shareholders' Equity… (eqn. 4)

2. Debt-to-Equity ratio: It shows how far a company relies on debts related to its owners' money and indicates the company's ability to repay its debt in the event of a crisis. Eqn 5 is used to calculate the Debt-to-Equity ratio, while a higher ratio ~ highly reliant on debt ~ high risks.

Debt-to-Equity (D/E) = Total Debt / Shareholders' Equity…(eqn. 5)

A Debt-to-Equity ratio of less than 1 indicates greater reliance on self-financing (equity) compared to debt. A ratio between 1 to 2 indicates a balance between debt and equity (acceptable in most sectors). A ratio above 2 indicates a heavy reliance on debt. In the banking sector, a ratio of 3 to 4 is considered good due to the need to finance large projects.

3. Cash Balance Ratio: a measure of financial liquidity used to measure a company's ability to meet its short-term obligations (such as debts due within a year) using only cash and cash equivalents (such as cash in the vault, bank accounts, and liquid short-term investments). An increase in this ratio indicates improved financial liquidity. Eqn. 6 is used to calculate the cash ratio.

Cash Ratio = (Cash + Cash Equivalents) / Current Liabilities… (eqn 6)

- A reasonable increase ~ prudent financial management, especially in volatile sectors (such as technology or commodities).
- A sharp and sustained increase ~ investment risk aversion, a lack of attractive investment opportunities, or cash accumulation to finance acquisitions or future projects
- A high ratio ~ increased liquidity and reduced risk, but may reflect missed investment opportunities.
- A low ratio ~ a shift in funds to investments or loans, with increased potential returns and increased risk.

4. Deposit-to-Loans ratio is one of the key financial indicators used to evaluate the performance of banks and financial institutions. This ratio shows the relationship between the total deposits a bank receives from its customers (such as current, savings, and fixed accounts) and the total loans it grants to individuals or businesses. Eqn. 7 is used to calculate the deposit-to-loan ratio.

Deposit to Loan ratio = (Total Loans / Total Deposits) × 100%... (eqn. 7)

- Ratio above 100% ~ deposits are sufficient to cover the loans granted, and the bank relies primarily on depositors' funds to finance loans, with excess liquidity. (A high ratio indicates high liquidity and lower risk.)
- Ratio below 100% ~ loans exceed deposits, and the bank has to rely on external funding sources, increasing the funding costs and risks. (A low ratio indicates higher profitability than interest on loans.)

Results

The current section discusses the study findings under two major sub-headings, such as the dividend discount model and the financial flexibility. Under DDM, the Dividend Growth Rate, earnings per share and cost of equity are calculated based on which the dividend discounts are calculated for all the banks under study during the study period. Then, the second section details the financial flexibility of the banks based on four parameters, such as the equity multiplier, debt-to-equity, cash balance ratio and deposit-to-loan ratio.

Dividend Discount Model (DDM)

Table 3 shows the Dividend Growth Rate (DGR) of the banks under study during the period 2017–2013. In order to know whether these growth rates are good for banks, the inflation rates in Iraq were used for comparison. Table 4 shows the inflation rates for the study period.

As shown in Tables 3 and 4, given the low inflation rate in Iraq during the study period, profit growth can be considered good, as it exceeds inflation and maintains the purchasing power of profits. When compared to the DGR of the banks using inflation rates during the period, the growth rate was found to be higher than the inflation levels, inferring that it is a good indicator. However, there are other cases that must be compared to ensure that the growth rate is good. It must be compared with the average growth rate of the banking sector. If the growth rates of the banks in the study sample are higher than the growth rates of the other players in the banking sector, then it can be inferred as good. However, the authors could not access the data due to the unavailability of the data with high accuracy. So, the study is only

Table 3. **Calculation of DGR**

Bank name	D_{2023}	D_{2017}	G	g%
JIH	14.5	10	0.0638	6.38%
AIB	12.8	9	0.0604	6.04%
ASH	13.5	9.5	0.0603	6.03%
MAN	14	10	0.0576	5.76%
TAI	15.2	10.8	0.0586	5.86%

Source: Prepared by the authors based on the financial data included for the banks from the link https://www.isc.gov.iq/en

Table 4. **Inflation rates**

Year	Inflation rate	Details
2017	0.1%	The reason for this decline is due to weak economic growth and a decline in local demand due to the political and security conditions in Iraq.
2018	0.5%	
2019	0.9%	
2020	0.6%	
2021	6.0%	The reason for the rise in the inflation rate during this year is due to the rise in global commodity prices due to the Covid-19 pandemic, the effects of changes in the exchange rate of the Iraqi dinar against the dollar, and the increase in local demand with the relative improvement of the security situation.
2022	5.17%	
2023	6.6%	Inflation has fallen to around 4.0% due to stable oil prices and improved monetary policies.

Source: Prepared by the authors based on the financial data included for the banks from the https://cbi.iq/, https://www.imf.org/, https://www.oecd.org/, http://cosit.gov.iq/

a comparison of the growth rate of the dividend yield against the growth rate of the gross domestic product, as shown in Table 5.

As shown in Table 2, the dividend growth rate of the banks for every share was found to be better compared to the growth rate of the economic sector in all the years except 2022. This is attributed to the fact that the sector's growth rate was higher during the specific year. So, the results reveal that the dividend per share growth rate is considered to be good for the banks during the study period. Using Eqn (2), the expected dividend earnings per share (EDPS) were calculated for all the study banks during the study period, and the results are shown in Table 6.

Table 5. **Economic growth in Iraq (2017–2023)**

Year	Economic growth rate	Reason
2017	0.1%	1. Partial recovery from internal conflicts. 2. Relative stability in oil production.
2018	0.5%	1. Slow growth due to lower oil prices. 2. Challenges in reconstruction.
2019	0.9%	1. Increased oil production. 2. Slight improvement in security stability.
2020	0.6%	1. Effects of the COVID-19 pandemic. 2. Global oil price collapse.
2021	6.0%	1. Partial recovery from the pandemic. 2. Rising oil prices.
2022	5.17%	1. A significant increase in oil prices due to the war in Ukraine. 2. Increase in oil production.
2023	6.6%	1. Stability of oil prices. 2. Slight improvement in non-oil sectors.

Source: composed by the authors.

Table 6. **EDPS results for the study banks during the study period**

S. No	Years	JIH	AIB	ASH	MAN	TAI
1	2017	10.638	9.544	10.073	10.576	11.433
2	2018	11.702	10.392	10.815	11.422	12.174
3	2019	12.766	11.452	11.663	12.480	13.233
4	2020	13.298	11.664	12.512	13.220	14.291
5	2021	13.829	12.513	13.148	13.960	14.820
6	2022	14.680	12.937	13.678	14.383	15.667
7	2023	15.425	13.573	14.314	14.806	16.091

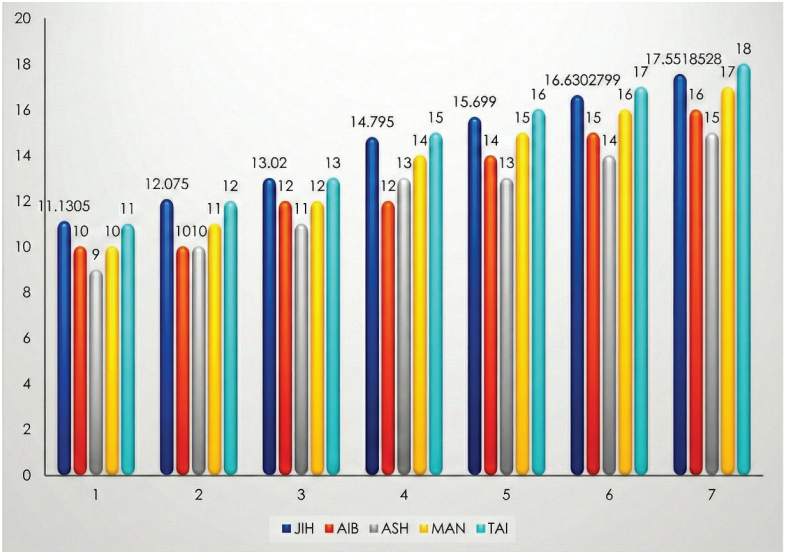

Fig 2. **EDPS results during 2017-2023 for the study banks under consideration**

Source: composed by the authors.

Table 6 and Figure 2 show that the EDPS has significantly increased, a positive factor that impacts the performance of the banks and their ability to distribute higher dividends to shareholders. This might be attributed to the increased growth in revenues from interest on loans and deposits, increased revenues from fees and commissions, and improved operational efficiency. Furthermore, these banks' risk management capabilities, economic recovery, increased repayment capacity of the banks' clients, and fewer non-performing loans are important factors in improving the quality of credit portfolios. This outcome is in alignment with the literature (Singh and Tandon, 2019) in which it was found that the random effect model is highly relevant and dividend policy has a significant impact on the stock price of the firms. In other terms, the dividend earnings per share tend to increase with the increasing financial performance of the firms.

In the background of a highly efficient dividend policy, driven by the study banks' desire to reward the shareholders and management's confidence in the stability of future cash flows, the banks showed high capability to increase their capital efficiency owing to the increased profitability and improved asset and liability management. In recent years, Iraq has witnessed an increase in the demand for loans due to a stable economy, despite rising interest rates and customers' ability to repay on time. Jassim (2025) found a significant positive short- and long-term impact of financial inclusion on Return on Assets across seven Iraqi banks, which implies that the access to financial services in the country has improved, which eventually led to increased operational efficiency. Furthermore, the rise in stock prices, albeit at a low rate, is considered to be positive. Another reason is the increased attractiveness of stocks to investors seeking a steady income from dividends. Banks may increase dividend distributions to attract more investors or to compete with other banks in the market.

An increase in the dividend per share is typically a positive sign for investors, indicating financial strength and improved performance. The study conducted by (Zahraa Qassem Hussein, Al-Marzouk and Mahmood, 2022) found that the bank credit has a direct, positive and significant role on total investment in the country in terms of social, economic and commercial activities, while it also induces short-term, medium-term, and long-term growth in the country. Thus, the investors who seek fixed income, for instance, pension funds, may also be attracted to stocks with high dividends. An increase in the dividend per share enhances a bank's reputation as a company with strong management and good financial performance. It is also important to ensure that an increase in the dividend earnings per share is not a one-time event, but a sustainable one. If the increase remains unsupported by real earnings growth, then it could be a negative signal in the long term. Table 7 shows the COE results obtained for the banks under study during the study period.

Table 7. **CCE calculation**

S. No	Year	JIH		AIB		CCE for bank (ASH)		CCE for bank (MAN)		CCE for bank (TAI)	
		CCE	CCE in %	CCE	CCE in %	CCE	CCE in %	CCE	CCE in %	CCE	CCE in %
1	2017	0.95	95%	1.014	101.40%	1.179	117.90%	1.115	111.50%	1.097	109.70%
2	2018	0.963	96.30%	1.099	109.90%	1.141	114.10%	1.095	109.50%	1.073	107.30%
3	2019	0.975	97.50%	1.014	101.40%	1.12	112%	1.097	109.70%	1.076	107.60%
4	2020	0.894	89.40%	1.032	103.20%	1.022	102.20%	1.001	100.10%	1.011	101.10%
5	2021	0.877	87.70%	0.954	95.40%	1.071	107.10%	0.988	98.80%	0.984	98.40%
6	2022	0.879	87.90%	0.922	92.20%	1.037	103.70%	0.956	95.60%	0.98	98%
7	2023	0.875	87.50%	0.908	90.80%	1.014	101.40%	0.928	92.80%	0.952	95.20%

Source: composed by the authors.

As shown in Table 7, the cost of equity capital has increased, which is considered a negative indicator. This is because an increase in the cost of equity capital can have multiple positive or negative effects on a company, depending on the context and the reasons underlying this increase. It is typically calculated using the capital asset pricing model (CAPM) or the dividend discount model (DDM). An increase in the cost of equity capital implies that the investors are demanding a higher return on their investment in the company's shares. This may be due to an increase in the perceived risk, increasing interest rates and the changes in the stock market. According to Nguyen, Nguyen and Nguyen (2022), the funding decisions badly affect the equity, and it tends to increase the equity risk, whereas working capital decisions positively impact the equity risks in a company. The increasing cost of equity capital brings a few disadvantages, as briefed herewith. If a bank relies on issuing new shares to finance its projects, then the increase in the cost of equity capital makes financing a highly expensive affair. Furthermore, an increase in the cost of equity capital may result in the reduction of the fair value of the stock when applied in valuation models such as the dividend discount model (DDM) or the discounted cash flow model (DCF). Eventually, the bank or the company may be forced to cancel or postpone projects that are no longer profitable due to the high cost of capital. Naoaj and Moyazzem Hosen (2021) argued that if banks increase their capital maintenance, then it is important that the cost of equity reflects this phenomenon. This study found that increasing bank capital is negatively associated with the cost of equity, thus confirming the current study findings as well. On the other hand, when the COE increases, it shows the expectations that predict a strong future growth in earnings. If the expectations are positive, then the increase may be acceptable. A higher cost of equity capital may prompt a company to focus on more profitable, less risky projects. However, when the cost of equity capital is higher, it can have several negative effects (Khedmati et al., 2019).

The final step is to calculate the discounted dividend. Table 8 shows the results, i.e., discounted dividends for the banks under study during the study period.

Table 8. **Discounted dividends during 2017–2023 for the study banks under consideration**

S. No	Years	JIH	AIB	ASH	MAN	TAI
1	2017	11	10	9	10	11
2	2018	12	10	10	11	12
3	2019	13	12	11	12	13
4	2020	15	12	13	14	15
5	2021	16	14	13	15	16
6	2022	17	15	14	16	17
7	2023	18	16	15	17	18

Source: composed by the authors.

Table 8 shows a significant and constant increase in the discount rate for most of the banks in the study sample. In other terms, with an increase in the discount rate, investors demand a higher return, owing to the increased 'perceived risk' of the company or the market in general. When the discount rate increases, it reduces the fair value of the stock as the future earnings are discounted at a higher rate (Böni and Zimmermann, 2021). In other terms, increasing the discount rate means that the company's perceived risks (such as market risk, sector risk, or company-specific risk) increase, leading to a higher discount rate, which increases the discount rate. These risks may result from adverse economic changes, increasing competition in the banking sector and financial or management issues in the firm. Likewise, if the bank decides to change its dividend policy (such as reducing the dividend ratio), this will impact expected profits, thus increasing the discount rate. External factors such as inflation, interest rate changes, or political changes can also affect the discount rate or growth rate. Similarly, if interest rates rise, the discount rate will rise, increasing the discount rate (Khedmati et al., 2019). Table 9 illustrates the effect of each factor, and how this will be reflected in an increase in the discount rate and a decrease in fair value.

Financial Flexibility

Equity Multiplier

The current section provides a brief about the equity multiplier of the banks under study during the study period. It can be inferred that if a bank's equity multiplier rises, it represents an increased reliance on debt, i.e., increased leverage and accordingly, higher risks. In the case of a declining multiplier, it indicates a reduced reliance on debt and improved financial stability.

Table 10 reveals that JIH Bank achieved a gradual increase from 3.43 (2017) to 3.89 (2023), with a slight decline in 2020 (3.33). This indicates a slight increase in reliance on debt after 2020, perhaps to finance the expansions or new investments, which could increase financial risks. AIB Bank, on the other hand, witnessed a sharp decline from 6.00 (2017) to 4.00 (2023). This explains a significant improvement in the financing structure, as the bank reduced its reliance on debt by 33% over seven years, indicating a switch to conservative

Table 9. **Summary of effects**

Effect on fair value	Impact on the Divisor Discount Model	Factor
Decrease	Increase	Increased discount rate (rr)
Decrease	Increase	Decreased growth rate (gg)
Decrease	Increase	Decreased profits (D1D1)
Decrease	Increase	Increased risk

Source: composed by the authors.

Table 10. **Equity multiplier for the banks in the study sample**

Years	(TAI)	(MAN)	(ASH)	(AIB)	(JIH)
2017	4.33	4.60	5.00	6.00	3.43
2018	4.67	4.17	4.40	5.00	3.71
2019	4.29	4.50	4.00	4.40	4.00
2020	4.13	4.33	4.00	4.40	3.33
2021	4.25	4.67	4.33	4.80	3.56
2022	4.38	4.29	4.00	4.33	3.67
2023	4.50	4.00	3.75	4.00	3.89

Source: composed by the authors.

policy or strengthening its equity. ASH Bank also experienced a steady decline from 5.00 (2017) to 3.75 (2023). This means the bank has systematically reduced the leverage, possibly due to conservative risk management or increased retention of the earnings to strengthen the equity. MAN Bank also experienced a fluctuation between 4.17 (2018) and 4.67 (2021), eventually declining to 4.00. This phenomenon represents a relative stability with a slight increase in leverage during 2021, followed by a correction to reduce the debt in 2023. Finally, TAI Bank witnessed relative stability with slight fluctuations around 4.25–4.50. This explains the presence of a balanced management of debt and equity, with a slight improvement in 2023 (4.50), reflecting an increase in debt-backed assets.

The equity multiplier provides insights into a company's financial leverage and the proportion of assets financed by debt. If debt-financed assets generate a return higher than the cost of borrowing, increased leverage enhances shareholder profitability. This increase may indicate that the bank is using debt wisely to finance its growth without the need to raise capital (such as issuing new shares), thus preserving the existing equity of the shareholders. A high ratio may reflect the confidence of depositors and creditors in the bank, which in turn allows it to obtain financing at low interest rates (Dawood and Shili, 2023). Shareholder equity acts as a 'safety valve' to absorb the losses. If the ratio is high (i.e., low shareholder equity), the bank's ability to withstand the shocks decreases. The ratio may exceed the limits permitted by regulators (such as the Basel III Accords, which set the capital adequacy ratio). Equity multiplier is a risk indicator that measures the portion of a company's assets financed by shareholders' equity rather than debt.

Most of the banks were found to have shifted towards reducing leverage. Especially, the AIB, ASH, and MAN banks reduced their equity multiples, indicating a sectoral trend towards reducing financial risks, especially after 2020, due to the effects of the COVID-19 pandemic. Only JIH Bank gradually increased its reliance on debt. The 2020-2021 period also witnessed significant fluctuations, such as a decline in multiple for most of the banks in 2020 (e.g., JIH: 3.33, MAN: 4.33), which may reflect the precautionary

measures taken, i.e., either increasing the reserves or reducing the loans, during the economic crisis.

Likewise, AIB's relative performance was found to be highly risky in 2017, reaching a multiple of 6.00, but it has improved significantly. ASH Bank was the most conservative by the end of 2023, reaching a multiple of 3.75. TAI is the most stable in the long term. In short, the data shows a general shift toward reducing reliance on debt in the banking sector under study, with variations in financial management strategies among banks.

Debt-to-Equity Ratio

Table 11 infers that an increase in the debt-to-equity ratio implies an increased reliance on debt financing and an increase in the financial risks. A decrease in this ratio indicates an improvement in financial stability and a greater reliance on self-financing.

As shown in Table 11, JIH Bank has witnessed a continuous increase from 0.37 (2017) to 0.53 (2023), with a peak in 2019 (0.49) and a slight decline in 2020 (0.44). This explains the existence of an expansionary policy through increased borrowing over time, which reflects an increase in the financial risks, especially in 2023, when the ratio exceeded 0.5 for the first time. AIB Bank saw a significant decline from 0.73 (2017) to 0.51 (2023), despite a slight increase in 2021 (0.64). This reflects a radical improvement in its financing structure, as the bank reduced its reliance on debt by nearly 30%, indicating a strengthening of equity or debt repayment. The temporary increase in 2021 may reflect a response to investment opportunities during the recovery from the pandemic. ASH Bank also saw a gradual decline from 0.60 (2017) to 0.50 (2023), with limited volatility. This reflects a conservative approach to financing management, striking a balance between debt and equity and indicating a balanced risk management strategy. MAN Bank also saw an increase from 0.52 (2017) to 0.63 (2021), then a decline to 0.55 (2023). This implies increased reliance on debt until 2021 (possibly to finance projects or cover pandemic-related losses), followed by a correction in 2023 to improve financial stability. Finally, TAI Bank experienced a steady increase from 0.47 (2017) to 0.63 (2023),

Table 11. **Debt to equity**

Years	(TAI)	(MAN)	(ASH)	(AIB)	(JIH)
2017	0.47	0.52	0.60	0.73	0.37
2018	0.53	0.50	0.56	0.65	0.43
2019	0.51	0.57	0.50	0.56	0.49
2020	0.50	0.60	0.53	0.56	0.44
2021	0.55	0.63	0.57	0.64	0.47
2022	0.58	0.60	0.54	0.57	0.49
2023	0.63	0.55	0.50	0.51	0.53

Source: composed by the authors.

with an acceleration in 2023. This explains a radical shift in financing strategy, as reliance on debt nearly doubled, which could indicate elevated risks or significant expansionary investments in 2023.

The debt-to-equity ratio shows a company's reliance on debt relative to its owners' money and indicates the company's ability to repay its debt in the event of a crisis. A higher ratio means the company is more reliant on debt (which may increase returns or risks) and more obligations to meet (instalment and interest payments), which could expose the company to bankruptcy if revenues decline. A debt-to-equity ratio of less than 1 indicates greater reliance on self-financing (equity) compared to debt. A ratio of between 1 and 2 is considered balanced in terms of debt and equity and is acceptable in most sectors. A ratio above 2 indicates a heavy reliance on debt. In the banking sector, a ratio of 3 to 4 is considered good due to the need to finance large projects. In some cases, a higher ratio is positive: if a company uses debt to finance projects that generate returns that exceed the interest cost (such as expanding into profitable markets), a higher ratio may be beneficial. Between 2019 and 2021, the ratio increased for most banks (especially MAN and TAI), possibly due to economic pressures during the pandemic and increased borrowing to enhance liquidity. Similarly, in 2022 and 2023, some banks (such as AIB and ASH) began reducing their ratios, while others (JIH and TAI) continued to increase their reliance on debt. However, if debt increases while profits or cash flows decline, the company may face difficulty meeting its obligations. Therefore, banks must be cautious and invest these funds appropriately. Investors prefer companies with reasonable debt, as high debt increases stock volatility. At the same time, a high debt ratio restricts future investments, forcing the company to allocate most of its profits to debt repayment rather than expansion or development (Butt et al., 2023; Dawood and Shili, 2023; Dilshad Habib and Hikmat Rashid, 2024).

Cash balance ratio

Table 12 shows the cash balance ratio for the banks under study during the study period.

Table 12. **Cash balance ratio**

Years	(TAI)	(MAN)	(ASH)	(AIB)	(JIH)
2017	0.09	0.08	0.09	0.08	0.09
2018	0.08	0.08	0.08	0.08	0.08
2019	0.08	0.08	0.09	0.09	0.08
2020	0.08	0.09	0.09	0.09	0.09
2021	0.08	0.08	0.09	0.08	0.09
2022	0.08	0.09	0.09	0.09	0.09
2023	0.09	0.09	0.09	0.09	0.09

Source: composed by the authors.

For JIH Bank, a near-complete stability can be observed in the table at around 0.08–0.09, with a slight increase in 2020 and 2023 (0.09). This indicates conservative liquidity management, with marginal increases in crisis years (such as the 2020 pandemic) as a precautionary measure. Similarly, for AIB Bank, stability can be observed at 0.08 for most years, with an increase to 0.09 in 2019, 2020, 2022, and 2023. This indicates a slight improvement in liquidity during periods of economic instability (such as the pandemic), while maintaining a balanced policy. ASH Bank's ratio remained stable at 0.08–0.09 throughout the period, remaining at 0.09 from 2020 to 2023. This indicates a strict commitment to safe liquidity, especially after 2020, reflecting prudent risk management. MAN Bank's ratio remained stable at 0.08–0.09, rising to 0.09 from 2020 onwards. This could be explained by a slight increase in cash reserves starting in 2020, perhaps in response to global crises. Finally, TAI Bank saw a decline from 0.09 (2017) to 0.08 in most years, then a return to 0.09 (2023). This suggests a shift in funds to investments between 2018 and 2022, with liquidity being strengthened in 2023 to address potential risks.

All banks maintained similar ratios (0.08–0.09) without significant fluctuations, indicating a conservative sectoral liquidity management policy. Furthermore, the ratio increased to 0.09 in 2020 for most banks (JIH, AIB, ASH, MAN), reflecting increased cash reserves as a precautionary measure during the COVID-19 pandemic. Therefore, it is highly recommended that the banks operating in Iraq monitor their liquidity ratios in light of economic changes (such as rising interest rates or inflation) that may affect the cost of holding cash.

Deposit-to-Loan Ratio

Table 13 shows the Deposit-to-Loan ratio for the banks under study during the study period.

At JIH Bank, a gradual increase can be observed from 2.39 (2017) to 2.59 (2023), with a peak in 2021 (2.65). This indicates an improvement in the use of deposits to finance loans, which may reflect efficient liquidity management or

Table 13. **Deposit-to-Loan ratio**

Years	(TAI)	(MAN)	(ASH)	(AIB)	(JIH)
2017	2.48	2.64	2.50	2.50	2.39
2018	2.48	2.40	2.39	2.38	2.50
2019	2.41	2.41	2.50	2.52	2.41
2020	2.56	2.50	2.58	2.58	2.50
2021	2.58	2.50	2.69	2.79	2.65
2022	2.56	2.58	2.55	2.80	2.66
2023	2.57	2.67	2.68	2.77	2.59

Source: composed by the authors.

increased deposit attraction. However, this contrasts with its high debt-to-equity ratio, which indicates reliance on multiple financing sources. As for AIB Bank, a significant increase from 2.50 (2017) to 2.77 (2023) can be observed, with a jump in 2021 (2.79). This indicates the bank's success in promoting a reliance on deposits rather than debt, consistent with its low debt-to-equity ratio. This may reflect a conservative policy to reduce financial risks. ASH Bank experienced limited fluctuations around 2.50–2.69, with a peak in 2021 (2.69) and relative stability in 2023 (2.68). This explains the balanced management of deposits and loans, with a slight improvement in financing efficiency during crisis years (such as 2020–2021). MAN Bank experienced fluctuations between 2.40 (2018) and 2.67 (2023), with a decline in 2021 (2.50) and a recovery (2.58). This indicates an increased reliance on deposits in 2023, perhaps to offset the high debt-to-equity ratio in previous years. Further, it also reflects an attempt to improve the financial stability. TAI Bank showcased a period of relative stability around 2.48–2.58, with a slight increase in 2023 (2.57). This indicates that the bank followed a stable policy in using deposits, but the increase in the debt-to-equity ratio in 2023 indicates an increasing reliance on external financing despite the increase in deposits.

During 2020–2021, the deposit-to-loan ratio increased for most banks (especially AIB, JIH, and ASH), possibly due to increased deposits during the pandemic (as a result of government stimulus policies) or reduced loan issuance to mitigate credit risks. Also in 2023, a continued increase can be observed for most banks (AIB, JIH, MAN), reflecting a sectoral trend towards increased reliance on deposits.

In summary, the data shows a general improvement in the efficiency of using deposits to finance loans for most of the banks, especially AIB, JIH, and MAN, with varying strategies. Some banks, such as AIB and ASH, followed a conservative strategy, focusing on increasing deposits and reducing reliance on debt. As for both JIH and MAN banks, they adopted an expansion strategy that increased the use of deposits while diversifying funding sources. TAI Bank followed a balanced strategy that maintained stable ratios despite increased financial risks (debt ratio) (Khan and Krithika, 2025). This reflects a diversity of funding management policies, with some banks opting for efficiency through deposits, while others rely on a mix of internal and external funding to achieve growth (Wu, Nguyen and Nguyen, 2022).

Discussion

The aim of this study is to analyse the relationship between the Dividend Discount Model and the financial stability of five Iraqi banks listed on the Iraq Stock Exchange during the period 2017–2023. Based on the data analysis, the dividend growth rate of the banks for every share was found to be better than the growth rate of the economic sector in all the years except 2022 (Al Mamoori, Wan Yusoff and Khudari, 2025). This is attributed to the fact that the sector's growth rate was higher during the specific year, and so, it can be understood that the higher growth rate for the dividend

per share is considered to be good for the banks. The expected dividend earnings per share have significantly increased for the study period, which denotes the increased growth in revenues for the banks from different sources and through improved operational efficiency. In addition to this, the banks have successfully mitigated the risks and recovered from economic shocks during the period (Ali et al., 2023).

The study conducted by Nguyen, Nguyen and Nguyen (2022) confirmed that funding decisions badly affect equity, and in this study, the findings revealed that the cost of equity capital increased for all the banks during the study period, which is considered a bad indicator, though expectations predict strong future growth in earnings. A significant and constant increase can be observed in the discount rate for most of the banks. (Dawood and Shili, 2023) confirmed that a significant and constant increase in the discount rate for most of the banks may result in higher demand from the investors seeking higher demand, owing to the increased 'perceived risk' of the company or the market. This might be due to various scenarios such as changes in dividend policy (such as reducing the dividend ratio), inflation, interest rate changes, or political changes, etc. (Khedmati et al., 2019). For the financial flexibility parameters, the major findings are listed herewith.

- In terms of equity multiplier ratio, the AIB, ASH, and MAN banks reduced their equity multiples after 2020, while JIH Bank gradually increased its reliance on debt. AIB's relative performance was found to be risky in 2017, reaching a multiple of 6.00, but it has improved significantly. ASH Bank was the most conservative by the end of 2023, reaching a multiple of 3.75. TAI was found to be the most stable player in the long term.
- Debt to equity ratio: Between 2019 and 2021, the ratio increased for most banks (especially MAN and TAI), possibly due to economic pressures during the pandemic and increased borrowing to enhance liquidity. In 2022 and 2023, some banks (such as AIB and ASH) began reducing their ratios, while others (JIH and TAI) continued to increase their reliance on debt.
- Cash balance ratio: All banks maintained similar ratios (0.08–0.09) without significant fluctuations, indicating a conservative sectoral liquidity management policy. Furthermore, the ratio increased to 0.09 in 2020 for most banks (JIH, AIB, ASH, MAN), reflecting increased cash reserves as a precautionary measure during the COVID-19 pandemic.
- Deposit-to-loan ratio: A general improvement for most banks, especially AIB, JIH, and MAN, with varying strategies. AIB and ASH banks followed a conservative strategy, while JIH and MAN banks adopted an expansion strategy, and TAI Bank followed a balanced strategy that maintained stable ratios despite increased financial risks (debt ratio).
- From the study findings, it can be proven that there is a significant relationship between the discounted dividend model and financial flexibility measures.

Financial flexibility is crucial to address the economic collapses, external pressure from other market players,

pandemic-like natural calamities and so on. It provides the banks with a competitive edge in the market and seizes the correct opportunities at the correct time (AL-Luhaibi, and AL-Mizori, 2022). For instance, when comparing the performance of the sanctioned and non-sanctioned banks in Iraq, it can be understood that the sanctions had a direct impact in Iraqi banking market. For instance, the National Bank increased its customer base and market share due to high flexibility and adaptability towards systematic and economic changes (Abdul Wahaab, 2025). Likewise, it is important for the banks to shape their strategies in line with the market conditions and the ongoing geopolitical climate, without compromising the Central Bank of Iraq's mandate on banking processes. Sanaa, Khelood and Hikmat Al-Hadeethi (2024) recommended that it is the responsibility of the banks to shift towards electronic financial control systems, in line with the technical developments that occurred across the globe. Likewise, the banks should invest in developing advanced technical infrastructure to ensure financial flexibility. Financial flexibility of the banks can be improved through various measures, as listed in the literature, such as developing a strong cash reserve (Al Mamoori, Wan Yusoff and Khudari, 2025), diversification of income resources (Kwaku Mensah Mawutor et al., 2023), enhanced adherence to appropriate and standardised cash flow management practices (Nadhira, 2021), reduction, debt and enhanced inventory management (Zhu and Liu, 2024), strong relationships with lenders (Butt et al., 2023) and technology and innovation efficiency (Sun and Zhang, 2025).

Policy implications

According to Khader Al-Tai (2024), financially flexible banks can withstand financial pressures as well as gain profits. So, it is important for the banks to be financially flexible in order to overcome the external and internal financial pressures. Further, Ali et al. (2023) mentioned that financial risk poses a serious negative influence on the financial sustainability of Iraqi banks, and so, benchmarking techniques like CRITIC and RAFSI should be used to rank the banks in line with their financial sustainability. These benchmarking techniques should be developed by regulatory bodies along with the Iraqi finance ministry so as to guide the banking players in the market. The argument presented by Xu (2023) confirms that, instead of using dividends, cash flow can be used to predict the stock price for the long term. The policymakers in the country should consider and promote indicators that are unique to the Iraqi banking environment. The future studies should also focus on this perspective, i.e., consider cash flow instead of dividends. Further, (Li, 2025) recommended that the DDM may be applied based on the dividend profile of the firm. For instance, constant-growth DDM is to be applied for firms with predictable long-term dividends, while two-stage or multi-stage DDM is required for firms in the transition phase. When Senel (2025) found that the constant growth dividend discount model (DDM) was effective in predicting stock prices for 23 listed Turkish companies with stable dividend policies, future researchers should consider making use of the constant growth DDM model. This

is important for academia and decision-makers/investors, as understanding how the performance of the model is heavily influenced by dividend growth volatility, sector characteristics, the business environment, government policies, and macroeconomic dynamics is crucial.

Conclusion

The current study found the presence of a positive correlation between the dividend discount model and financial flexibility indicators, as increased sustainable dividends contribute to enhancing investor confidence and improving resilience to economic fluctuations. Most of the banks studied tended to reduce reliance on debt and increase reliance on self-financing after 2020, reflecting conservative financial policies to promote stability. The increase in the cost of capital led to a decrease in the fair value of shares, indicating higher perceived risks or changes in the macroeconomic environment, such as interest rates. Banks maintained stable liquidity ratios (0.08–0.09), reflecting prudent liquidity management, especially during crises such as the COVID-19 pandemic. Iraqi banks should also enhance transparency in financial disclosure to improve equity valuation in the Iraqi market, adopt sustainable dividend policies to support financial resilience and attract investment, diversify funding sources to reduce reliance on external debt, and leverage financial technology to improve the efficiency of cash flow and risk management. The study's limitations were its limited sample size due to the lack of data from other banks, and its focus on the period (2017–2023) without covering subsequent challenges. The study recommends future research involving other models, such as the Keda model, to forecast the expected returns along with the risks associated with investments, as the model was found to be efficient in predicting financial failures in a rapid, structured and efficient manner. The future studies should also include broader financial sectors and analyse the impact of external factors such as inflation and monetary policies.

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