

“The impact of the share buyback process on financial performance: An economic and accounting perspective. Evidence from Egypt”

AUTHORS

Hossam Hassan Mahmoud Al Sharawi 

ARTICLE INFO

Hossam Hassan Mahmoud Al Sharawi (2022). The impact of the share buyback process on financial performance: An economic and accounting perspective. Evidence from Egypt. *Investment Management and Financial Innovations*, 19(1), 210-224. doi:[10.21511/imfi.19\(1\).2022.16](https://doi.org/10.21511/imfi.19(1).2022.16)

DOI

[http://dx.doi.org/10.21511/imfi.19\(1\).2022.16](http://dx.doi.org/10.21511/imfi.19(1).2022.16)

RELEASED ON

Thursday, 10 March 2022

RECEIVED ON

Tuesday, 16 November 2021

ACCEPTED ON

Tuesday, 01 March 2022

LICENSE



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

JOURNAL

"Investment Management and Financial Innovations"

ISSN PRINT

1810-4967

ISSN ONLINE

1812-9358

PUBLISHER

LLC “Consulting Publishing Company “Business Perspectives”

FOUNDER

LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

45



NUMBER OF FIGURES

1



NUMBER OF TABLES

10

© The author(s) 2022. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Received on: 16th of November, 2021

Accepted on: 1st of March, 2022

Published on: 10th of March, 2022

© Hossam Hassan Mahmoud Al
Sharawi, 2022

Hossam Hassan Mahmoud Al
Sharawi, Dr., Assistant Professor,
Jeddah International College, KSA;
Assistant Professor, Higher Institute of
Computers, Egypt.



This is an Open Access article,
distributed under the terms of the
[Creative Commons Attribution 4.0
International license](https://creativecommons.org/licenses/by/4.0/), which permits
unrestricted re-use, distribution, and
reproduction in any medium, provided
the original work is properly cited.

Conflict of interest statement:

Author(s) reported no conflict of interest

Hossam Hassan Mahmoud Al Sharawi (Egypt)

THE IMPACT OF THE SHARE BUYBACK PROCESS ON FINANCIAL PERFORMANCE: AN ECONOMIC AND ACCOUNTING PERSPECTIVE. EVIDENCE FROM EGYPT

Abstract

This study aims to investigate the impact of the share buyback process and its motives on financial performance from an accounting and economic perspective. The study sample consisted of 66 firms listed on the Egyptian Stock Exchange from 2009 to 2020 and employed the OLS regression analysis. The results show a positive effect of share buybacks on financial performance, measured by the added economic value (EVA) and the return on equity (ROE). In contrast, the results show an insignificant effect of share buybacks on the return on assets (ROA). The study found that management's motives to buy back shares affect a company's financial performance. The study also found that management's motive to achieve a cash surplus improves the company's financial performance. The study also found that the company's management motive to increase earnings per share is one of the most important motives for the company to buy back shares, which also improves the company's financial performance. The study also showed that the economic value added (EVA) is one of the most important measures of financial performance, in which the repurchase of shares had the most significant impact in improving it over the return on assets or the return on equity. However, the study did not find evidence that the firms repurchase of shares out of increased financial leverage affects the financial performance. Moreover, the study found that increasing earnings per share is the most crucial motive for sharing buybacks in the Egyptian market.

Keywords

share buyback, economic value added, return on equity,
return on assets, Egypt

JEL Classification

M41, M40, G10

INTRODUCTION

Share repurchases mean that the firm is buying its shares in the market or directly from shareholders when the purchase price falls in the stock market, or to reduce the number of shares outstanding in the market (Sun et al., 2014). Share buybacks are typically driven by shareholder value-creating benefits, as evidenced by the increase in share price and earnings per share following share buyback announcements (Wesson & Botha, 2019). However, for shareholder value creation to be sustainable, the relationship between finance, the economy, and society must be considered (Lagoarde-Segot, 2017). To build investor confidence in their policies, companies try to maximize shareholder wealth by distributing dividends to investors or buying back their shares at a higher price than the prevailing market price. As a result, share buybacks have become a prominent institutional practice in developing and developed economies.

Share buybacks have grown tremendously in many global markets, especially after the United States relaxed regulations in 1982, followed by Japan and Germany in 1984 and 1986, respectively. In Egypt, repurchasing shares is a rare event, but due to the economic conditions fol-

lowing the Corona crisis, the repurchase of shares has increased in many Egyptian companies (Habiba, 2021). In addition, the Egyptian government has allowed firms to buy back shares without prior notice three days before, so more than 20 Egyptian rushed to buy back their shares from the market, with the rates ranging from 0.5% to 2.5% of the shares offered, such as Orascom Development Egypt, El Sewedy Electric, GB Auto, Palm Hills, and Nasr Housing (Enterprise. Press, 2020).

Several studies have argued the issue of repurchasing shares from the perspective of its impact on a company's financial performance, and the results of these studies are mixed. Some studies have shown that the repurchase of shares has a sound effect on the economic and financial performance of a company (e.g., Andriosopoulos & Lasfer, 2015; Abraham et al., 2018). While others indicated that the repurchase of shares deteriorates a company's value if the repurchase price is less than the fair value of the share, in addition to the opportunistic behavior of the management to achieve unusual returns benefiting through the availability of information not available to investors. On the other hand, board members can collude with specific investors and buy from them (e.g., Iyer & Rao, 2017; Wang et al., 2020). Some studies have shown no effect of repurchasing shares on a company's financial performance, since a decrease in the number of outstanding shares does not affect if the achieved return is fixed after the purchase process (e.g., Chong & Ab Razak, 2019). The research problem stems from the inconclusive and divergent results of previous studies of the impact of share repurchase on financial performance.

On the other hand, most studies focused on developed countries characterized by an intensely competitive environment and mature and developed financial markets (e.g., Miller & Prondzinski, 2017; Wesson & Botha, 2018). However, a few studies focused on developing countries (Miller & Prondzinski, 2017; Habiba, 2021).

1. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Repurchasing shares is one of the issues that sparked controversy and debate among researchers and academics due to the lack of conclusive results for the impact of this issue on a firm's financial performance. Ikenberry et al. (1995) found that the average market reaction, measured two days before and two days after the announcement, is 3.54%. The higher the percentage of shares announced for repurchase, the greater the market reaction. Kotapati et al. (2013) showed that the relationship between long-term price performance and undervaluation is significantly more substantial for repurchasing firms with higher upper bounds of their announced price ranges. Lin et al. (2011) found that share prices rose in response to share buyback announcements in Taiwanese firms. Chang et al. (2013) also indicated a positive reaction in the stock market due to the announcements of share buyback practices by large US firms during 2001–2005, leading to an increase in abnormal returns. Miller and Prondzinski (2017)

also found an improvement in operational performance due to share buyback practices, especially in low-growth firms. Wang et al. (2020) found significantly higher abnormal returns after buy-and-hold repurchases over one year. In addition, they found an improvement for buyback firms in the fiscal year at the same time as buyback announcements, but found insignificant difference in the subsequent fiscal year.

On the other hand, Sue and Lin (2012) showed that firms did not achieve abnormal returns due to buying their shares. Instead, they found the abnormal returns are significantly negative over twelve, twenty-four, and thirty-six months. Andrianopoulos and Laser (2015) found that the average market reaction is lower than that of US firms and is independent of investor protection. There is insignificant difference between Germany and the UK. However, in France, excess returns are lower. They concluded that the market value depends on the frequency of announcements. They also found that the date of the higher reports goes back significantly to the initial statements, indicating that the first announcement greatly reduces any information asymmetry, and thus its

signal carries higher information content than subsequent reports.

Turco (2018) concluded a negative impact on capital investment, which was more robust among large firms located in non-competitive markets. Chen and Liu (2020) showed a negative relationship between the frequency of announcements of share repurchases and earnings management; it negatively affects operational performance. Kim et al. (2021) found that the low-cost repurchase method harms a firm's long-term performance after the buyback. They also showed that share buybacks of firms with a history of falling earnings on time have poor long-term performance. Wang et al. (2021) showed that the share buyback process is not a substitute for dividends. The share buybacks are financed from self-financing sources more than the issuance of external debt, which reduces capital expenditures and R&D expenses. They found that the share buyback practices led to a decline in a firm's value, profitability, growth, and innovation in the long term, despite the increase in the firm's share prices and the decrease in its internal ownership. Share buyback practices were motivated by interim dividend payment and tax advantages. Chee et al. (2021) found a negative effect of share buybacks on price delay measures. However, the findings show that greater intensity of a firm's share buybacks caused minor delay or distortion in reflecting share price to information. Thus, a firm's share buybacks didn't promote financial performance.

Some studies show insignificant effect of the stock buyback on financial performance. For example, Huang et al. (2013) found no evidence of insurance firms improved future operating performance after the announcement. Moreover, changes in future operating performance cannot explain the abnormal return of the announcement period. Manconi et al. (2019) indicated that while buybacks have positive short- and long-term effects, the magnitude of the abnormal return varies with the potential for undervaluation, market efficiency, and liquidity. However, excess returns depend on the potential for undervaluation and the efficiency and liquidity of stock markets.

On the other hand, financial managers make their repurchase decision using residual cash only after

the investment decision (Brav et al., 2005); therefore, share repurchases alleviate overinvestment problems by distributing surplus cash when investment opportunities are scarce (Cho et al., 2016). Excess cash raises agency problems by allowing self-interested managers to transform these assets for personal benefits at low cost or to overinvest the excess cash in harmful net present value projects (Cho et al., 2016). Oswald and Young (2004) showed that firms used share buybacks to distribute excess cash and had an advantage of investment opportunities to buy back their undervalued shares. In addition, firms may prefer share buybacks over dividends to distribute excess cash as it is more flexible than dividends (Jena et al., 2017). One of the reasons for abnormal returns to shareholders after share buyback announcement is decreasing free cash flow and agency cost (Jena et al., 2017). Jena et al. (2017) found that firms prefer to invest in their stocks when no investment opportunities exist. Therefore, it is always better to distribute surplus cash than invest in passive NPV projects. Furthermore, firms are more likely to make buybacks if surplus cash flow and decreased investment opportunities are present.

Otherwise, earnings per share is one of the most crucial accounting elements that are relied upon by investors, and because share buybacks include a decrease in the number of outstanding shares, they will rise even though the earnings level has not changed (Habiba, 2021). Share buybacks can coincide with or follow the periods of temporary increases in earnings. Such temporary changes in earnings make earnings more volatile (Di & Marciukaityte, 2015). Firms are more likely to smooth earnings when facing high earnings variability (Beattie et al., 1994). Several studies showed that firms might buy back their shares to increase earnings per share (e.g., Andriosopoulos & Hoque, 2013; Almeida et al., 2016). Share buybacks contributed significantly to the profitability growth for Standard & Poor's 500 Index between 2011 and 2013, where 60% of earnings were achieved through share repurchases, while 40% returned to operating growth (Habiba, 2021). Several studies showed that a firm's management manages its earnings in an upward direction to meet the remuneration plans of the senior management, relying on shares buyback as an essential mechanism in this regard (e.g., Sun et al., 2014; Punwasi &

Brijlal, 2016; Habiba, 2021). Turco (2018) analyzed the interaction between a stock-based CEO's salary and the probability of share buybacks over 25 years. The results showed that maximizing shareholders' value, driven by managers' remuneration based on shares, prompted American firms to transfer resources from real investment to the tendency to repurchase shares to increase share prices. The results also indicated that determining managers' bonuses based on stock profitability motivates managers to increase shareholder value through share buybacks at the expense of declining real investment and long-term growth.

On the other hand, share buybacks can play a significant role in changing the capital structure. Specifically, share buybacks increase the debt-to-equity ratio for firms with low leverage. An appropriate level of leverage leads to an ideal capital structure. In addition, it strikes a good balance between beneficial tax avoidance and financial insolvency risks, lowering the cost of capital and thus increasing shareholder value (Habiba, 2021). While there is evidence that incorporating debt into the capital structure can increase a company's value, the assumption that leverage is a source of value creation through buybacks is less clear (Almeida et al., 2016).

Moreover, tax regulations made debt relatively less attractive than equity. As a result, firms buy back shares to adjust the debt ratio to the target level, assuming that the optimal debt ratio is determined. Increasing the leverage may also lead to a higher percentage of internal ownership (Habiba, 2021).

Share buybacks help firms change many ratios, including the leverage ratio, which provides investors with insight into debt and equity costs. An increase in a firm's debts leads to tax advantages by reducing income taxes, but it also may result in financial distress, and unlike a low-debt firm, it can have the ability to repay its debts (Habiba, 2021). Lailiyah et al. (2020) investigated the impact of financial leverage on share buybacks in firms listed on the Indonesian Stock Exchange (2010–2017). The results showed that the financial leverage had a negative but not significant effect on share buybacks. The study also clarified that shares buyback indicates a firm's market value and financial position.

So, this study examines the impact of share repurchase motives on financial performance of Egyptian firms, such as achieving excess cash, increasing the average earnings per share, and changing a firm's capital structure. Thus, this study derives the following hypotheses:

H₁: There is a positive effect of share buybacks on financial performance.

H₂: Increasing a firm's cash surplus positively affects the relationship between share repurchase and the firm's financial performance.

H₃: Increasing average earnings per share affects the relationship between share repurchase and a firm's financial performance.

H₄: A firm's financial leverage positively affects the relationship between the share buyback and the firm's financial performance.

2. METHODOLOGY

The study sample focuses on firms listed on the Egyptian Stock Exchanges in various sectors. It had at least one share repurchased event been selected during the study period, excluding banking and insurance sectors due to their different nature, conditions, and characteristics. The data is available from the Misr Firm for Information Dissemination website, Mubasher Information website, the annual financial reports published from the companies' websites, and the Egyptian Stock Exchange website. Bhattacharya and Jacobsen (2016) and Habiba (2021) adopted this annual data matching in different periods.

This study used SPSS software to verify the study variables and examine the developed hypotheses. The dependent variable in this study is financial performance, measured through three indicators, namely, economic value added, return on assets and return on equity. The explanatory variables (shares buybacks and their motives) contain shares buybacks, excess cash flow, earnings per share, and financial leverage. In addition, the study used various control variables that may have a potential influence on the dependent variables. The control variables in this study include

firm size and growth. Table 2 shows the variables' names and symbols, as well as their definition and measurements.

2.1. Share repurchase (Independent variable)

Share repurchases relate to share repurchases that result in a net cash effect for a firm and therefore include shares repurchased by holding firms from existing shareholders and shares repurchased by subsidiaries of a holding firm. Share buybacks are a percentage level as the absolute value of the annual repurchase, measured by the total amount of assets overdue for the one-year buyback period, similar to the methodology (Almeida et al., 2016).

2.2. Motives for share buybacks (Interactive variables)

There are many incentives to buy back shares, but the study will focus on some of them, namely:

2.2.1. Excess cash flow (CFO)

Many studies have measured a firm's surplus cash flow using different methods, including the net profit after taxes and interest plus depreciation and divided by the firm's total assets for the previous year. Some depend on the firm's total cash flow divided by its total assets. This study relied on the first measure of cash flows, according to Almeida et al. (2016).

Cash flow is (net income + depreciation) / lagged assets

$CFO = (\text{net income} + \text{depreciation}) / \text{lagged assets}$

2.2.2. Increased earnings per share (EPS)

If shares decrease, no one will own the shares. If a firm recognizes them as treasury shares, they will own the shares they can resell later, but they do not carry any voting rights or dividends. Since earnings per share through dividing earnings by a total number of outstanding shares, earnings per share will increase as the total number of shares decreases. Several studies have measured the average change in earnings per share as one of the most important motives for repurchasing shares. This study relied on Jena et al., (2017).

$EPS = \text{Average change in earning per share in last three years immediately before share repurchase.}$

2.2.3. Excess financial leverage (LEV)

Leverage ratio measures how much a firm spends using borrowed funds. The debt-to-equity ratio measures how much or how little debt is used compared to the size of a firm's capital. Many studies have measured the rate of financial leverage, whether through the total debt divided by a firm's total assets or the firm's total debts by the firm's total equity (e.g., Almeida et al., 2016; Jena et al., 2017). This study relied on measuring the financial leverage ratio with a firm's total debts divided by its total equity, according to Jena et al., (2017). Firm leverage ratio = total debt to total equity.

2.3. Financial performance (Dependent variables)

Performance measures play an important role in creating value for firms. However, it is difficult for the management to select an appropriate performance indicator that accurately measures its performance over a specific period. Moreover, some criticize conventional accounting procedures for not considering the total cost of capital. Therefore, EVA is unique in the market as it considers the cost of capital (Behera, 2020). Thus, to overcome such problems, value-based economic indicators such as economic value added (EVA) are considered (Al Mamun et al., 2012).

2.4. Economic value added (EVA)

According to the EVA concept, a firm creates value for shareholders only if it generates returns above its cost of capital. In short, an increase in returns over the cost of capital is called EVA. This concept embodies the concept of residual income that existed earlier (Madhavi & Prasad, 2015). EVA is the best performance measure that approximates the economic profitability of an organization more than any other and is directly related to shareholder wealth formation over time. EVA is the financial measurement tool that can calculate and capture economic profit for a firm. EVA requires three inputs for its calculation, as listed below:

$EVA = \text{Net Operating Profit After Tax} - (\text{Weighted Average Cost of Capital} * \text{Invested Capital})$.

Net Operating Profit After Tax (NOPAT) = the income available to shareholders + interest expenses (after-tax).

Weighted Average Cost of Capital (WACC) = Weight of Equity * Cost of Equity + Weight of Debt * Cost of Debt.

Invested Capital = Total Equity + Long-Term Borrowings + Reserves,

where Cost of Equity Capital (Risk-free rate + Beta * (Market risk premium – Risk-free rate); Cost of Debt Capital (Interest rate*(1-tax rate).

2.5. Return on Assets (ROA)

ROA is a measure that shows the ratio of a firm's profitability to its total assets.

ROA is calculated by dividing net income after tax for a given year by total assets.

2.6. Return on Equity (ROE)

Investors consider ROE to be one of the best performance measurement tools. ROE is calculated by dividing net income after tax for a given year by the book value of equity at the beginning of the year.

2.7. Control variables

Many studies relied on some variables related to a firm that may affect the firm's financial performance, so some control variables were included, namely the firm size and sales growth rate (e.g., Kalacheva, 2015; Habiba, 2021).

Firm size: The natural logarithm of a firm's total assets measured at the beginning of the year.

Growth is measured by the percentage change in the firm's sales (current year's sales – previous year's sales) / previous year's sales.

Table 1 reports the sample size for the entire sample. The study sample consisted of 66 Egyptian firms with 792 observations for twelve years (2009–2020).

Table 1. Distribution of the sample

Sector	Observations	Percentage
Basic Resources	72	9.09
Food, Beverages, and Tobacco	180	22.72
Health Care & Pharmaceuticals	108	13.63
Industrial Goods, Services and Automobiles	60	7.57
IT, Media & Communication Services	48	6.06
Real Estate	84	10.60
Travel & Leisure	108	13.63
Energy & Support Services	60	7.57
Contracting & Construction Engineering	72	9.09
Total	792	100%

Table 2. Measurement of the variables

Variable	Measurement	Supporting literature
Economic Value Added (EVA)	Net operating profit after tax– (weighted average cost of capital * invested capital), scaled by total assets	Subedi & Farazm (2020)
Share repurchase (Repurchase)	The absolute value of the annual repurchases, scaled by total assets	Almeida et al. (2016)
Cash flow (CFO)	Net income plus depreciation, scaled by total assets	Almeida et al. (2016)
The average change in earnings per share(ΔEPS)	The average change in earnings per share in the last three years	Jena et al. (2017)
Financial leverage (Lev)	Total debt to total equity	Almeida et al., (2016); Lailiyah et al., (2020); Wang et al. (2021)
Sales Growth (Growth)	The rate of change of revenue from the current year to the previous year	Wang et al., (2021)
Firm Size (Size)	The natural logarithm of the firm's total assets at the beginning of the year	Lailiyah et al., (2020); Wang et al. (2021)

Note: CFO i,t * Repurchase i,t : The interactive effect of share repurchases and cash flows from operating activities. ΔEPS i,t * Repurchase i,t : The interactive impact of share repurchases and change in earnings per share. LEV i,t * Repurchase i,t : The interactive effect of share repurchases and financial leverage. $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ and β_5 = regression coefficients; ε = the error term.

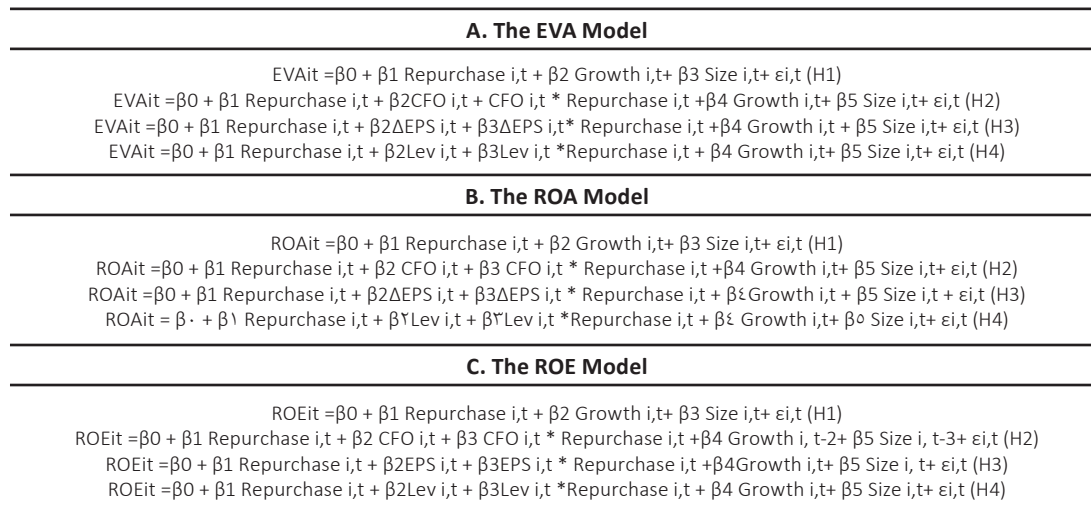


Figure 1. Research models

2.8. Model specification

This study focused on the EVA model, ROA model, and ROE model used to measure financial performance (Madhavi & Prasad, 2015). The three models specified for this study are presented in Figure 1, While the measurement of variables is shown in Table 2.

2.9. Data analysis method

The ordinary least squares (OLS) technique ran the models. This study ensures that the regression conditions are met: linearity, normality, homoscedasticity, and no autocorrelation through the Durbin Watson test. The Variance inflation factor (VIF) was used to test for the presence of multicollinearity. The study utilized the following statistics to test the hypotheses: F-statistic with its associated p-value, the adjusted R², and the t-statistic with associated p-values (Hair et al., 2014). This study used the SPSS statistical analysis software package version 26.

3. RESULTS AND DISCUSSION

Table 3 shows the descriptive data set during the study period. Share repurchase has a mean of EGP 1.427 million, and SD is EGP 0.17 million. There is also a clear upward trend to repurchase shares, as Min is EGP.318 million, while Max is EGP 1.830 million. Table 3 also shows that the mean of economic value added (EVA) is 0.21 with a stand-

ard deviation of 0.11, which indicates a large dispersion among the study sample as it includes 66 firms in different sectors and for different periods. Table 3 also shows that the mean of return on assets (ROA) is 8% with SD 3%, while the max is only 13%, which is a low rate for these firms in the study sample. However, the mean return on equity (ROE) was 7%, with an SD of 4%, while its max was 45%.

Table 3. Descriptive statistics

Variables	Min	Max	Mean	SD
Repurchase	0.318	1.830	1.427	0.170
CFO	0.005	0.851	.084	0.173
EPS	1.64	21.9	6.81	5.34
LEV	5.01	70.23	9.60	11.30
SIZE	0.509	1.73	0.90	0.188
Growth	1.02	10.18	3.12	2.04
EVA	-0.11	0.44	0.21	0.11
ROA	-0.03	0.13	0.08	0.03
ROE	-0.033	0.45	0.07	0.04

Table 4 shows the correlation among the variables, presented as a matrix. The table shows that the correlation between the variables ranges from 11.15% to 82.7%. VIF value does not exceed 2, indicating the absence of multicollinearity.

The following statistics would test the hypotheses: t-values, p-values, and the adjusted R². Table 5 presents the regression analysis results for financial performance predictability using share repurchase to test the first hypothesis (H₁).

Table 5 shows that the F-statistics are significant (p-value = 000). This indicates that the variables,

Table 4. Correlation matrix

Variables	Repurchases	Change in EPS	Cash flow	Lev	Growth	Size
Repurchases	1					
EPS	.551**	1				
CFO	.602**	.205**	1			
LEV	.417**	.160**	.827**	1		
Growth	0.012	.115**	.413**	.644**	1	
SIZE	.493**	.281**	.159**	-.244**	-.334**	1

Table 5. Financial performance predictability using share repurchase

Independent Variables		Dependent Variables		
		EVAit = $\beta_0 + \beta_1$ Repurchase i,t + β_2 Growth i,t+ β_3 Size i,t+ ϵ i,t	ROAit = $\beta_0 + \beta_1$ Repurchase i,t + β_2 Growth i,t+ β_3 Size i,t+ ϵ i,t	ROEit = $\beta_0 + \beta_1$ Repurchase i,t + β_2 Growth i,t+ β_3 Size i,t+ ϵ i,t
Constant	t	-25.449	-.656	-21.346
	Sig	.000	.512	.000
Repurchases	t	25.939	.375	16.115
	Sig	.000	.708	.000
Growth	t	9.329	13.641	1.427
	Sig	.000	.000	.154
Size	t	6.098	7.379	16.630
	Sig	.000	.000	.000
Adj. R ²		61.7%	21.4%	59.4%
F-Statistic		426.526	72.593	387.510
Prob(F-Stat)		.000	.000	.000
Durbin Watson		.269	.526	1.592

repurchases, Growth, and Size, jointly impact financial performance. The three models of EVA, ROA, and ROE explain 61.7%, 21.4%, and 59.4%, respectively, of financial performance variations. On the other hand, Table 5 shows a statistically positive significant effect of the share repurchase variable on (EVA and ROE), respectively, so t-values were 25.939 and 16.115, respectively. However, the study did not find a statistically significant effect of repurchasing shares on ROA (p-value = 0.708), and the t-value was 0.375. Thus, the hypothesis that states a positive effect of repurchasing shares on a firm's financial performance is partially accepted. This result is consistent with Albaity and Said (2016), Miller and Prondzinski (2017), and Habiba (2021). Nevertheless, the results differ from the findings of Turco (2018) and Wang et al. (2020).

Table 6 presents the regression analysis results conducted for the interactive effect of cash flows and share buyback on financial performance to test the second hypothesis (H2). Table 6 shows that the F-statistics are significant (p-value = 000). This result indicates that the variables, repurchases, Cash flow, Share repurchase*CFO, Growth,

and Size, jointly affect financial performance. The three models explain 69.4%, 41%, and 60.2%, respectively, of the variations of financial performance. The Durbin-Watson statistics were all less than 2, which indicates that the regression models' residuals were uncorrelated and independent. However, the interactive variable (Share repurchase*CFO) had a statistically positive effect on EVA and ROA, respectively, where t-values were 6.402 and 7.353, respectively. Nevertheless, this variable has no statistical effect on ROE as t-values were -1.079. This study also found that the repurchase variable has a statistically positive effect on EVA, ROE, and ROA, where t-values were 30.296, 14.155, and 4.545, respectively.

So, the hypothesis that states that a firm's cash flow positively affects the relationship between the share buyback and financial performance is partially accepted. This finding is consistent with studies by Almeida et al. (2016) and Jena et al. (2017). Nevertheless, the results differ from the findings of Turco (2018) and Wang et al. (2020).

Table 7 presents the regression analysis results conducted for the interactive effect of the average

Table 6. The interactive effect of cash flows and share buyback on financial performance

Independent Variables		Dependent Variables		
		$EVA_{it} = \beta_0 + \beta_1 \text{ Repurchase}_{i,t} + \beta_2 \text{CFO}_{i,t} + \text{CFO}_{i,t} * \text{Repurchase}_{i,t} + \beta_4 \text{ Growth}_{i,t} + \beta_5 \text{ Size}_{i,t} + \epsilon_{i,t}$	$ROA_{it} = \beta_0 + \beta_1 \text{ Repurchase}_{i,t} + \beta_2 \text{ CFO}_{i,t} + \beta_3 \text{ CFO}_{i,t} * \text{Repurchase}_{i,t} + \beta_4 \text{ Growth}_{i,t} + \beta_5 \text{ Size}_{i,t} + \epsilon_{i,t}$	$ROE_{it} = \beta_0 + \beta_1 \text{ Repurchase}_{i,t} + \beta_2 \text{ CFO}_{i,t} + \beta_3 \text{ CFO}_{i,t} * \text{Repurchase}_{i,t} + \beta_4 \text{ Growth}_{i,t} + \beta_5 \text{ Size}_{i,t} + \epsilon_{i,t}$
Constant	t Sig	-28.535 .000	-4.474 .000	-16.463 .000
Repurchases	t Sig	30.296 .000	4.545 .000	14.155 .000
Cash flow	t Sig	5.255 .000	8.614 .000	.728 .467
Share repurchase*CFO	t Sig	6.402 .000	7.353 .000	-1.079 .281
Growth	t Sig	16.186 .000	18.778 .000	3.285 .001
Size	t Sig	6.825 .000	8.484 .000	16.781 .000
Adj. R ²		69.4%	41%	60.2%
F-Statistic		360.209	110.936	240.044
Prob(F-Stat)		.000	.000	.000
Durbin Watson		.435	.813	1.639

change in earnings per share and share buyback on financial performance to test the third hypothesis (H3).

Table 7 shows that the F-statistics are significant (p -value = 000). This result indicates that the variables, repurchases, EPS, Share repurchase*EPS, Growth, and Size, jointly affect financial perfor-

mance. The Durbin-Watson statistics were all less than 2, indicating that the residuals of the regression models were uncorrelated and independent. The three models explain the total impact of all variables on EVA, ROE, and ROA, where Adj. R² is 78.3%, 45.6%, and 62.3%, respectively. However, the interactive variable (Share repurchase*EPS) had the highest effect on EVA, ROA,

Table 7. The interactive effect of the average change in earnings per share and share buyback on financial performance

Independent Variables		Dependent Variables		
		$EVA_{it} = \beta_0 + \beta_1 \text{ Repurchase}_{i,t} + \beta_2 \Delta \text{EPS}_{i,t} + \beta_3 \Delta \text{EPS}_{i,t} * \text{Repurchase}_{i,t} + \beta_4 \text{ Growth}_{i,t} + \beta_5 \text{ Size}_{i,t} + \epsilon_{i,t}$	$ROA_{it} = \beta_0 + \beta_1 \text{ Repurchase}_{i,t} + \beta_2 \Delta \text{EPS}_{i,t} + \beta_3 \Delta \text{EPS}_{i,t} * \text{Repurchase}_{i,t} + \beta_4 \text{ Growth}_{i,t} + \beta_5 \text{ Size}_{i,t} + \epsilon_{i,t}$	$ROE_{it} = \beta_0 + \beta_1 \text{ Repurchase}_{i,t} + \beta_2 \text{EPS}_{i,t} + \beta_3 \text{EPS}_{i,t} * \text{Repurchase}_{i,t} + \beta_4 \text{ Growth}_{i,t} + \beta_5 \text{ Size}_{i,t} + \epsilon_{i,t}$
Constant	t Sig	-30.493 .000	-9.543 .000	-17.362 .000
Repurchases	t Sig	30.655 .000	8.514 .000	14.290 .000
EPS	t Sig	21.505 .000	17.014 .000	7.471 .000
Share purchase*EPS	t Sig	19.813 .000	15.863 .000	7.114 .000
Growth	t Sig	3.561 .000	9.172 .000	-1.242 .215
Size	t Sig	3.467 .001	5.227 .000	15.456 .000
Adj. R ²		78.3%	45.6%	62.3%
F-Statistic		571.875	133.343	262.196
Prob(F-Stat)		.000	.000	.000
Durbin Watson		.428	.501	1.698

and ROE, where t-values were 19.813, 15.863, and 7.114, respectively. It was also found that the repurchase variable has a significant positive effect on EVA, ROE, and ROA, where t-values were 30.565, 14.290, and 8.514, respectively. Thus, the hypothesis that states that the change in earnings per share of a firm positively affects the relationship between the share buyback and the firm's financial performance is accepted. This finding is consistent with studies such as Chan et al. (2010) and Jena et al. (2017).

Table 8 presents the regression analysis results conducted for the interactive effect of financial leverage and share buyback on financial performance to test the fourth hypothesis (H4).

Table 8 shows an insignificant effect of the interactive variable (Share purchase*Lev) on EVA and ROE. In contrast, the result was positive and significant for ROA, with t-values -.690, -1.739, and 4.084. Therefore, the hypothesis that a firm's financial leverage positively affects the relationship between the share buyback and the firm's financial performance is rejected. This result is consistent with the results of studies such as Almeida et al. (2016), Lailiaha et al. (2020), and Habiba (2021).

Table 9 presents the regression analysis results conducted for the interactive effect of share buyback motives and share buyback on financial performance. It shows the combined effect of the motives for repurchasing shares on financial performance, which significantly affects the surplus cash flow (Share repurchase*CFO) on EVA and ROA, where t-values were 3.933 and 4.193, respectively. Therefore, there is insignificant effect on ROE, where the t-value was 0.420. Accordingly, the second hypothesis can be partially accepted.

Table 9 also shows a significant positive effect of the average earnings per share (Share purchase*EPS) on EVA and ROA, where t-values were 6.963 and 4.070, respectively. Therefore, there is insignificant effect on ROE, where the t-value was 1.273. The previous result supports that the third hypothesis is partially accepted.

Moreover, the study found a statistically negative significant effect of the debt-to-equity ratio (Share purchase*Lev) on EVA, ROA, and ROE, where t-values were -3.126, -3.372, -2.017, respectively. This result supports the rejection of the fourth hypothesis of this study.

Table 8. The interactive effect of financial leverage per share and share buyback on financial performance

Independent Variables		Dependent Variables		
		EVA _{it} = β ₀ + β ₁ Repurchase _{i,t} + β ₂ Lev _{i,t} + β ₃ Lev _{i,t} *Repurchase _{i,t} + β ₄ Growth _{i,t} + β ₅ Size _{i,t} + ε _{i,t}	ROA _{it} = β ₀ + β ₁ Repurchase _{i,t} + β ₂ Lev _{i,t} + β ₃ Lev _{i,t} *Repurchase _{i,t} + β ₄ Growth _{i,t} + β ₅ Size _{i,t} + ε _{i,t}	ROE _{it} = β ₀ + β ₁ Repurchase _{i,t} + β ₂ Lev _{i,t} + β ₃ Lev _{i,t} *Repurchase _{i,t} + β ₄ Growth _{i,t} + β ₅ Size _{i,t} + ε _{i,t}
Constant	t	-14.637	.074	-8.189
	Sig	.000	.941	.000
Repurchases	t	19.050	2.438	8.333
	Sig	.000	.015	.000
Lev	t	-.087	-4.911	-2.026
	Sig	.930	.000	.043
Share purchase*Lev	t	-.690	4.084	1.739
	Sig	.490	.000	.082
Growth	t	15.593	19.867	3.942
	Sig	.000	.000	.000
Size	t	.424	1.761	13.119
	Sig	.671	.079	.000
Adj. R ²		67.7%	36.4%	60.5%
F-Statistic		333.338	91.498	243.707
Prob(F-Stat)		.000	.000	.000
Durbin Watson		.409	.648	1.651

Table 9. The interactive effect for the aggregated share buyback motives and share buyback on financial performance

Independent Variables		Dependent Variables		
		EVAit = $\beta_0 + \beta_1$ Share repurchase*CFO + β_2 Share purchase*EPS+ β_3 Share purchase*Lev + β_4 Growth i,t+ β_5 Size i,t+ $\epsilon_{i,t}$	ROAit = $\beta_0 + \beta_1$ Share repurchase*CFO + β_2 Share purchase*EPS+ β_3 Share purchase*Lev + β_4 Growth i,t+ β_5 Size i,t+ $\epsilon_{i,t}$	ROEit = $\beta_0 + \beta_1$ Share repurchase*CFO + β_2 Share purchase*EPS+ β_3 Share purchase*Lev + β_4 Growth i,t+ β_5 Size i,t+ $\epsilon_{i,t}$
Constant	t Sig	-21.069 .000	-5.684 .000	-14.558 .000
Repurchases	t Sig	21.350 .000	5.531 .000	11.682 .000
Share repurchase*CFO	t Sig	3.933 .000	4.193 .000	.420 .675
Share purchase*EPS	t Sig	6.963 .000	4.070 .000	1.273 .204
Share purchase*Lev	t Sig	-3.126 .002	-3.372 .001	-2.017 .044
Growth	t Sig	13.717 .000	17.928 .000	3.472 .001
Size	t Sig	2.865 .004	3.805 .000	11.195 .000
Adj. R ²		70.5%	37.6%	60.4%
F-Statistic		315.974	80.312	201.946
Prob(F-Stat)		.000	.000	.000
Durbin Watson		.400	.613	1.644

3.1. An additional analysis

An additional analysis was conducted to differentiate the incremental explanatory power of the cash flow as a motive for share repurchase (Inc.R²Cash). The incremental explanatory power of the average change in earnings per share is a motive for share repurchase (Inc.R²EPS) and financial leverage for share repurchase (Inc.R²Lev) is presented in table 10.

Table 10 presents incremental explanatory power for share repurchase motives on financial performance. Column (1) Adj.R² of CFO, repurchase measures the explanatory power of the following regression model estimated by year:

$$EVA_{i,t} = \beta_0 + \beta_1 CFO_{i,t} + \beta_2 Repurchase_{i,t} + \epsilon_{i,t}$$

Table 10. Incremental explanatory ability for share repurchases motives on financial performance

EVA model					
Motive	(1) Adj. R ² CFO, Repurchase	(2) Adj. R ² CFO	(3) Adj. R ² Repurchase	(4) Inc. R ² CFO	(5) Inc. R ² Repurchase
CFO	58.9%	12.3%	57.3%	1.6%	46.6%
Model	(1) Adj. R ² EPS, Repurchase	(2) Adj. R ² EPS	(3) Adj. R ² Repurchase	(4) Inc. R ² EPS	(5) Inc. R ² Repurchase
EPS	64.5%	41.1%	57.3%	7.2%	23.4%
Model	(1) Adj. R ² LEV, Repurchase	(2) Adj. R ² LEV	(3) Adj. R ² Repurchase	(4) Inc. R ² LEV	(5) Inc. R ² Repurchase
LEV	57.9%	5.6%	57.3%	0.6%	52.3%
ROA model					
Motive	(1) Adj. R ² CFO, Repurchase	(2) Adj. R ² CFO	(3) Adj. R ² Repurchase	(4) Inc. R ² CFO	(5) Inc. R ² Repurchase
CFO	4.8%	2%	2.5%	2.3%	2.8%
Model	(1) Adj. R ² EPS, Repurchase	(2) Adj. R ² EPS	(3) Adj. R ² Repurchase	(4) Inc. R ² EPS	(5) Inc. R ² Repurchase
EPS	12.9%	12.9%	2.5%	10.4%	0
Model	(1) Adj. R ² LEV, Repurchase	(2) Adj. R ² LEV	(3) Adj. R ² Repurchase	(4) Inc. R ² LEV	(5) Inc. R ² Repurchase
LEV	2.7%	1%	2.5%	0.2%	1.7%

Table 10. Incremental explanatory ability for share repurchases motives on financial performance

ROE model					
Motive	(1) Adj. R ² CFO, Repurchase	(2) Adj. R ² CFO	(3) Adj. R ² Repurchase	(4) Inc. R ² CFO	(5) Inc. R ² Repurchase
CFO	45.7%	8.2%	43.8%	1.9%	37.5%
Motive	(1) Adj. R ² EPS, Repurchase	(2) Adj. R ² EPS	(3) Adj. R ² Repurchase	(4) Inc. R ² EPS	(5) Inc. R ² Repurchase
EPS	44.4%	18.5	43.8%	0.6%	25.9%
Motive	(1) Adj. R ² LEV, Repurchase	(2) Adj. R ² LEV	(3) Adj. R ² Repurchase	(4) Inc. R ² LEV	(5) Inc. R ² Repurchase
LEV	51.2%	0	43.8%	7.4%	51.2%

- $ROA_{i,t} = \beta_0 + \beta_1 CFO_{i,t} + \beta_2 Repurchase_{i,t} + \epsilon_{i,t}$,
- $ROE_{i,t} = \beta_0 + \beta_1 CFO_{i,t} + \beta_2 Repurchase_{i,t} + \epsilon_{i,t}$.

Column (2) Adj. R²CFO measures the explanatory power of the following regression model estimated by year:

- $EVA_{i,t} = \beta_0 + \beta_1 CFO_{i,t} + \epsilon_{i,t}$.
- $ROA_{i,t} = \beta_0 + \beta_1 CFO_{i,t} + \epsilon_{i,t}$.
- $ROE_{i,t} = \beta_0 + \beta_1 CFO_{i,t} + \epsilon_{i,t}$.
- Column (3) Adj. R²repurchase measures the explanatory power of the following regression model estimated by year:
- $EVA_{i,t} = \beta_0 + \beta_1 Repurchase_{i,t} + \epsilon_{i,t}$.
- $ROA_{i,t} = \beta_0 + \beta_1 Repurchase_{i,t} + \epsilon_{i,t}$.
- $ROE_{i,t} = \beta_0 + \beta_1 Repurchase_{i,t} + \epsilon_{i,t}$.

Column (4) Inc. R².CFO (measured as Adj. R²CFO, Repurchase - Adj. R² Repurchase) refers to the incremental explanatory power of cash flows.

Column (5) Inc. R². Repurchase (measured as Adj. R²CFO, Repurchase - Adj. R² CFO) refers to the incremental explanatory power of share repurchase.

Table 10 shows that the incremental explanatory power of the average change in earnings per share (EPS) is considered the strongest motive for repurchasing shares influencing a firm's financial performance (ROA and EVA), as it represents 10.4% and 7.2%, while it represents 0.6% for ROE. Table 10 also shows that the incremental explanatory power of financial leverage as a motive to repurchase shares is the least clear motive on a firm's financial performance measured by EVA and ROA as it represents 0.6% and 0.2%, respectively. In contrast, it is the most explicit motive on financial performance measured by ROE, representing 7.4%. The table also shows that the incremental explanatory power of the surplus cash flows as a motive to buy back the shares almost has a similar effect on the financial performance of a firm (EVA, ROE, and ROA) as it presents 1.6%, 2.3%, and 1.9%. On the other hand, the share repurchase process (Repurchase) has the highest incremental explanatory power on EVA, ROE, and ROA as it represents 52.3%, 51.2%, and 1.7%, respectively.

CONCLUSION

The study examined the impact of the share buyback process on financial performance and the interactive impact of share repurchase motives on the relationship between share buybacks and firm financial performance. The study found an effect of share buybacks on financial performance. However, this effect differs according to the tool used to measure financial performance. The impact of share buybacks was significant on economic value added and return on equity, but was insignificant on return on assets. The study also concluded that motives for share repurchases were different, which affected the financial performance, since the motive for increasing earnings per share was the most motive for share repurchases affecting financial performance. This study proposes more mandatory disclosure of share repur-

chases in the annual financial reports of firms listed on the stock exchange. Also, it is suggested that additional research be undertaken to explore the relationship between share repurchases and financial reporting quality. There is also a need to expand empirical research to study the motives for buying back shares and whether this affects the sustainability of firms that buy back shares. The study also investigates the relationship between share repurchases and strategic risk management.

AUTHOR CONTRIBUTIONS

Conceptualization: Hossam Hassan Mahmoud Al Sharawi.

Formal analysis: Hossam Hassan Mahmoud Al Sharawi.

Funding acquisition: Hossam Hassan Mahmoud Al Sharawi.

Investigation: Hossam Hassan Mahmoud Al Sharawi.

Methodology: Hossam Hassan Mahmoud Al Sharawi.

Writing – original draft: Hossam Hassan Mahmoud Al Sharawi.

Writing – review & editing: Hossam Hassan Mahmoud Al Sharawi.

ACKNOWLEDGMENTS

I thank Jeddah International College for funding this research and continuous support from the Dean, Dr. Tariq Hamdi, and the general manager, Mr. Yazid Al Tunisi.

I thank Professor Dr. Mohamed Tahoun, Professor of Financial Accounting at Alexandria University, for reviewing this research before sending it to the journal.

REFERENCES

1. Abraham, R., Harris, J., & Auerbach, J. (2018). Determinants and consequences of share repurchase decisions. *Modern Economy*, 9(05), 966.
2. Al Mamun, A., Entebang, H., & Mansor, S. A. (2012). EVA as Superior Performance Measurement. *Modern Economy*, 3(3), 310-318. <https://ro.uow.edu.au/buspapers/1702/>
3. Albany, M., & Said, D. S. (2016). Impact of Open-Market Share Repurchases on Long-Term Stock Returns: Evidence from the Malaysian Market. *SAGE Open*, 6(4). <https://doi.org/10.1177%2F2158244016670199>
4. Almeida, H., Fos, V., & Kronlund, M. (2016). The actual effects of share repurchase. *Journal of Financial Economics*, 119(1), 168-185.
5. Alquhaif, A., Al-Gamrh, B., & Latif, R. A. (2020). An overview of share buybacks: A descriptive case from Malaysia. *Journal of Behavioral and Experimental Finance*, 100415. <https://doi.org/10.1016/j.jbef.2020.100415>
6. Andriosopoulos, D., & Hoque, H. (2013). The determinants of share repurchase in Europe. *International Review of Financial Analysis*, 27, 65-76. <https://doi.org/10.1016/j.irfa.2012.12.003>
7. Andriosopoulos, D., & Lasfer, M. (2015). The market valuation of share repurchases in Europe. *Journal of Banking & Finance*, 55, 327-339. <https://doi.org/10.1016/j.jbankfin.2014.04.017>
8. Beattie, V., Brown, S., Ewers, D., John, B., Manson, S., Thomas, D., & Turner, M. (1994). Extraordinary items and income smoothing: a positive accounting approach. *Journal of Business Finance & Accounting*, 21(6), 791-811. <https://doi.org/10.1111/j.1468-5957.1994.tb00349.x>
9. Behera, S. (2020). Does the EVA valuation model explain the market value of equity better under changing required return than constant required return? *Financial Innovation*, 6(1), 1-23. https://ideas.repec.org/a/spr/fininn/v6y2020i1d10.1186_s40854-019-0167-8.html
10. Bhattacharya, U., & E. Jacobsen, S. (2016). The share repurchases announcement puzzle: Theory and evidence. *Review of Finance*, 20(2), 725-758. <http://dx.doi.org/10.1093/rof/rfv020>
11. Brav, A., Graham, J. R., Harvey, C. R., & Michaely, R. (2005). Payout policy in the 21st century. *Journal of Financial Economics*, 77, 483-527. <https://doi.org/10.1016/j.jfineco.2004.07.004>
12. Chang, H., Lin, S., Mishra, S., & Shankar, S. (2013). Voluntary disclosures in the share repurchase announcements: Does it matter to investors? *The International Journal of Finance*, 25(3), 25-67.
13. Chee, C., Razak, N., & Noordin, B. (2021). Do Share

- Repurchases Distort Stock Prices? Evidence from the United States and Malaysia. *Studies in Microeconomics*. <https://doi.org/10.1177%2F23210222211024380>
14. Chen, Y., & Liu, C. (2021). Share repurchases and market signaling: Evidence from earnings management. *International Review of Finance*, 21(4), 1203-1224. <http://dx.doi.org/10.1111/irfi.12321>
 15. Cho, H., Han, H., Kim, H., & Kim, M. (2016). *Excess Cash and Share Repurchase Effects*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2880353
 16. Chong, M., & Ab Razak, H. (2019). Effect of Stock Price Information on Timing of Share Repurchases. *J. Fin. Bank. Review*, 4(1), 36-46. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3362338
 17. Comment, R., & Jarrell, G. (1991). The relative signaling power of Dutch auction and fixed price tender offer and open market share repurchases. *Journal of Finance*, 46(4), 1243-1271. <https://doi.org/10.2307/2328858> v
 18. Di, H., & Marciukaityte, D. (2015). Earnings smoothing around open-market share repurchases. *Review of Accounting and Finance*, 14(1), 64-80. <https://doi.org/10.1108/RAF-10-2012-0111>
 19. Enterprise – Essential business, finance and policy news from Egypt | Enterprise. (2020). Retrieved from <https://enterprise.press/>
 20. Fried, M. (2005). Informed trading and false signaling with open-market repurchase. *California Law Review*, 93(5), 1326-1386.
 21. Grullon, G., & Michaely, R. (2004). The information content of share repurchases programs. *The Journal of Finance*, 59(2), 651-680.
 22. Habiba, M. (2021). The Relationship between Shares Repurchases Decision and Firm Value from Accounting Perspective in the Light of “Covid-19” Pandemic An Applied Study on Egyptian Stock Exchange Listed Firms. *Alexandria Journal of Accounting Research*, 5(1), 1613-1674.
 23. Hair, F., Black, C., Babin, J., & Anderson, E. (2014). *Multivariate Data Analysis: Global Edition* (7th Edition). Retrieved from <https://www.pearson.com/uk/educators/higher-education-educators/program/Hair-Multivariate-Data-Analysis-Global-Edition-7th-Edition/Pg>.
 24. Huang, G. C., Liano, K., Manakyan, H., & Pan, M. S. (2013). Open-market stock repurchases by insurance companies and signaling. *Open-Market Stock Repurchases by Insurance Companies and Signaling - Huang - 2013 - Risk Management and Insurance Review - Wiley Online Library*.
 25. Iyer, R., & Rao, P. (2017). Share repurchases and the flexibility hypothesis. *Journal of Financial Research*, 40(3), 287-313.
 26. Jena, S., Mishra, C. S., & Rajib, P. (2017). Factors influencing share buyback decisions of Indian firms. In *The Eighth Conference on Financial Markets and Corporate Governance (FMCG)*. Retrieved from <https://www.proquest.com/openview/306890ff87bdba5f9f52d4c30c24b4ea/1?pq-origsite=gscholar&cbl=46967>
 27. Kalacheva, A. (2015). The development of a model for assessing the investment attractiveness of an industrial enterprise. *Scientific and Technical Bulletin of SPbSPU. Economic Sciences*, 6(233). (In Russian).
 28. Kim, S., & Park, W. (2021). Korean evidence is long-term performance following share repurchase, signaling costs, and accounting transparency. *Review of Accounting and Finance*, 20(2), 143-166.
 29. Kotapati, S. R., Nangia, V. K., & Agrawal, R. (2013). *Share repurchases, signaling effect and implications for corporate governance: Evidence from India*. University Library of Munich, Germany.
 30. Lagoarde-Segot, T. (2017). Financialization: Towards a new research agenda. *International Review of Financial Analysis*, 51, 113-123. <https://doi.org/10.1016/j.irfa.2016.03.007>
 31. Lailiyah, L. H., Purwanti, I., & Sulton, M. (2020). Misprice, leverage and stock buyback: Evidence in Indonesia. *Jurnal Ekonomi Bisnis dan Kewirau sahaan (JEBIK)*, 9(2), 98-108.
 32. Lin, H., Lin, H., & Liu, A. (2010). Stock repurchase announcements and stock prices evidence from Taiwan. *Global Conference on Business and Finance Proceedings*, 5(2), 1-12. <https://ideas.repec.org/a/ibf/ijbfr/v5y2011i1p1-12.html>
 33. Madhavi, E., & Prasad, M. V. (2015). An Empirical Study on Economic Value-Added and Market Value-Added of Selected Indian FMCG Firms. *IUP Journal of Accounting Research & Audit Practices*, 14(3).
 34. Manconi, A., Peyer, U., & Vermaelen, T. (2019). Are buybacks good for long-term shareholder value? Evidence from buybacks around the world. *Journal of Financial and Quantitative Analysis*, 54(5), 1899-1935. <https://www.cambridge.org/core/journals/journal-of-financial-and-quantitative-analysis/article/abs/are-buybacks-good-for-longterm-shareholder-value-evidence-from-buybacks-around-the-world/4006D9DB64B8CB12086858D9DBF0A2B5>
 35. Maxwell, W. F., & Stephens, C. P. (2003). The wealth effects of repurchases on bondholders. *The Journal of Finance*, 58, 895-920. <https://doi.org/10.1111/1540-6261.00550>
 36. Miller, M., & Prondzinski, D. (2017). Stock repurchases: Do they add to shareholder value over time? *Journal of Accounting and Finance*, 17(4), 231-253.
 37. Oswald, D., & Young, S. (2004). What role are taxes and regulations? A second look at open market share buyback activity in the UK.U.K.

- Journal of Business Finance & Accounting*, 31(1-2), 257-292. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=350460
38. Punwasi, K., & Brijlal, P. (2016). An event study is the market reaction to share repurchase announcements on the JSE. *Investment Management and Financial Innovations*, 13(1), 191- 205. [https://doi.org/10.21511/imfi.13\(1-1\).2016.06](https://doi.org/10.21511/imfi.13(1-1).2016.06)
39. Su, H., & Lin, J. (2012). The impact of open-market share repurchases on long-term stock returns: evidence from the Taiwanese market. *Emerging Markets Finance and Trade*, 48(2), 200-229.
40. Subedi, M., & Farazmand, A. (2020). Economic Value Added (EVA) for Performance Evaluation of Public Organizations. *Public Organization Review*, 20(4), 613-630. https://ideas.repec.org/a/kap/porgrv/v20y2020i4d10.1007_s11115-020-00493-2.html
41. Sun, K. Yung, & Rahman, H. (2014). Aborted stock repurchases and earnings quality. *Managerial Finance*, 40(9), 846-863. <https://doi.org/10.1108/MF-04-2013-0101>
42. Turco, E. (2018). Are stock buybacks crowding out real investment? Empirical evidence from US firms. *The European Union's Horizon 2020 Research and Innovation Program*.
43. Wang, B., Nguyen, C., & Dinh, N. (2020). Operating performance and long-run stock returns following share repurchase: Evidence from an emerging market. *Journal of Corporate Accounting & Finance*, 31(3), 32-47. <https://doi.org/10.1002/jcaf.22450>
44. Wang, Z., Yin, Q. E., & Yu, L. (2021). Real effects of share repurchase legalization on corporate behaviors. *Journal of Financial Economics*, 140(1), 197-219. <https://doi.org/10.1016/j.jfineco.2020.10.008>
45. Wesson, N., & Botha, J. (2019). The effect of share repurchases on corporate investment policies: The South African experience. *Acta Commercii*, 19(1), 1-11.