DETERMINANTS OF MERGER AND ACQUISITION STRATEGIES SUCCESS IN EMERGING MARKETS: EVIDENCE FROM EGX

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ABSTRACT

The current study investigated the determinants of merger and acquisition strategies' success in emerging markets, based on an analysis of the Egyptian market. According to listed corporations at EGX that carried out mergers and acquisitions during the study period from 1999 to 2015, based on Heteroskedasticity-corrected test for twenty cases. The study presents a contribution through four dimensions: Analyzing the impact of distinguishing between successful and unsuccessful acquisitions and mergers, distinguishing between extraordinary returns that can be traced back to the completion of acquisitions and mergers and ordinary returns that are related to the economic situation, discerning the financing returns under acquisitions and mergers. Addition to determining the effect of the pattern of integration between acquisition and merger parties on the returns of that integration. Finally, in Egypt, the compound annual growth rate of revenue is the most important factor in the determinants of merger and acquisition (M&As) strategies' success, where CAGR of revenue explains the improvement in two indicators of merger and acquisition (M&As) success. A decrease in costs, and an improvement in the stability of cash flows. But CAGR of revenue is not the only determinant of merger and acquisition (M&As) strategies' success in Egypt. The improvement in net profits is back to the compound annual growth rate of net profit", "financial leverage ratio,", and "corporate size" under merger and acquisition (M&As) strategies. From that, the study can be said that the growth strategy is the basis of merger and acquisition (M&As) success in Egypt.

Keywords: Merger, Acquisition, Financial Performance, Egyptian exchange

INTRODUCTION

The economic and financial transformations in the modern business environment have imposed challenges on corporations because of the increased intensity of competition, including conglomerates and mergers, and those mergers extended to the international level. Where the economic conglomerates that were built on a set of interests and common goals appeared to be strong entities capable of facing the successive developments that aimed to achieve economies of scale. With the intensification of competition and the high degree of risks and their movement between markets and across countries, corporations turned to mergers and acquisitions as a way to confront sharp competition and high risks, which led to the emergence of large entities to take advantage of economies of scale.

With the acceleration of globalization and financial liberalization, the phenomenon of merger and acquisition has become more interesting and has grown to the extent that financial analysts describe it as the phenomenon of the era and one of the tools of the financial world. In addition, it has become an urgent demand for many practitioners and dealers in the financial markets.

Attention to analysis of mergers and acquisitions has been poor (Infradevco, 2022). However, this type of strategy has a significant impact on both the macro and micro

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economy, so the study was investigated in mergers and acquisitions in Egypt as an emerging market, by examining the critical factors affecting the success of that strategy, in contrast to previous studies that dealt with international markets (Gugler & Yurtoglu, 2004; Nguyen et al., 2012; Anagnostopoulos & Rizeq, 2021). It is this which helps both investors and top management rationalise their decisions to be more rational in the light of determining the factors governing the success of merger and acquisition operations.

In Egypt, as opposed to the two preceding years, in which the number and value of mergers and acquisitions (M&As) announced and completed increased year over year, 2021 witnessed a decrease in these metrics. There were 76 deals involving Egyptian involvement this year, including local and international deals. According to our own Enterprise M&A Tracker, which we update throughout the year, the statistics in this piece are accurate. 38 deals were completed in 2021, eight of them announced in 2020, and the rest announced and completed this year. There is a 40 percent completion rate on this year's anticipated deals, compared to a 56 percent completion rate in 2020 and an 80 percent completion rate in 2019. After all, out of the 76 deals announced in 2021, six of them were abandoned entirely. Some 46 deals have been flagged as seeking regulatory clearance or appearing to be at some point in the process of being completed. Top industries for mergers and acquisitions (M&As) in 2021, by volume: Healthcare is at the top of the game, which has had 12 mergers and acquisitions (M&As) announced this year. The runners-up: energy (6), transport and logistics (6), and FinTech (4).

Mergers and acquisitions (M&As) are not new in Egypt. This goes back to the depths of the twentieth century. The development of the operations that took place in the stock market can be reviewed in the following figure.

The current study presents a contribution through four dimensions: Analyzing the impact of distinguishing between successful and unsuccessful acquisitions and mergers, distinguishing between extraordinary returns that can be traced back to the completion of acquisitions and mergers and ordinary returns that are related to the economic situation, discerning between operating returns and financing returns in light of acquisitions and mergers and determining the effect of the pattern of integration between acquisition and merger parties on the returns of that integration.

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Corporate strategy is the main driver of its investment and operational activities. Merger and acquisition strategies cannot be the result of randomness, but rather a long-term planning process in which many models are used, including PESTEL analysis for host country, Porter's Five Forces for industry, Boston Matrix for products (goods or services), In addition to the financial methods that work on the marginal change of benefits and risks at least to create value for shareholders.

Corporations need to take many elements when adopting a mergers and acquisitions (M&As) strategy. Figure (1) illustrates these elements.

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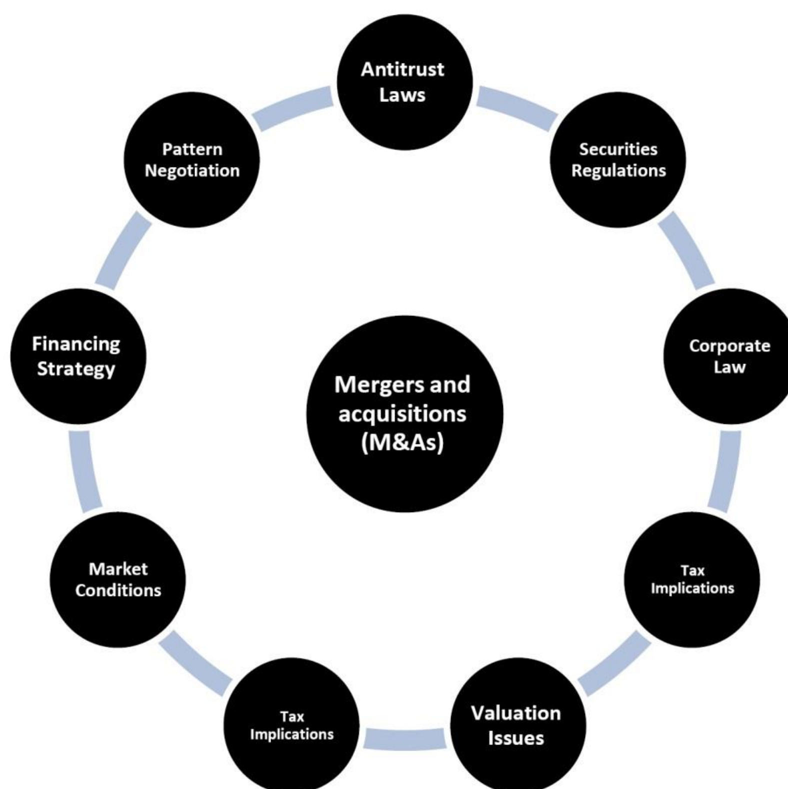

FIGURE
MERGERS AND ACQUISITIONS ELEMENTS

There is a large role for these variables in closing the merger and acquisition. Usually, the legal variables are the variables that represent systematic risks. In Egypt; the key laws relevant to mergers and acquisitions (M&As) are the following:

a. The Companies Law No. 159 for the year 1981 and its Executive Regulations, as amended (the "Companies Law");
b. The Capital Market Law No. 95 for the year 1992 and its Executive Regulations, as amended ("CML") the Listing and Delisting Rules of the Egyptian Exchange and its executive procedures, as amended ("Listing Rules"); and
c. The Egyptian Competition Law No.3 for the year 2005 and its Executive Regulations as amended ("Competition Law") ; and
d. The Investment Law No. 72 for the year 2017 and its Executive Regulations as amended ("Investment Law")

The key regulatory authorities relevant to mergers and acquisitions (M&As) are as follows:

a. The Financial Regulatory Authority ("FRA");
b. The Egyptian Exchange ("EGX");
c. The General Authority for Investment and Free Zones ("GAFI"); and
d. The Egyptian Competition Authority ("ECA").

Mergers and acquisitions (M&As) go through many steps, there are seven main steps are

1. Determining the key business goals from mergers and acquisitions (M&As); It is essential for the corporation to know exactly why they are considering purchasing the target firm in order to develop an effective merger and acquisition plan that will help them achieve their business goals (e.g., expanding product lines or gaining access to new markets).
2. Determining the key criteria for mergers and acquisitions (M&As); Discovering essential criteria for identifying possible target firms (e.g., profit margins, geographic location, or customer base)

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3. Initial contact; it is made with one or more corporations that meet the mergers and acquisitions (M&As) search criteria and look to offer value; the goal of these discussions is to gather additional information and determine how receptive the target corporation is to a merger or acquisition.
4. valuation For this purpose, a corporation requests that the target corporation be a merger or acquisition for considerable financial and nonfinancial information, that will allow it to further investigate and assess the target, both as a business on its own and as a viable merger or acquisition target.
5. Negotiations; the corporations should be able to come up with an acceptable offer after developing multiple valuation models of the target corporation for mergers and acquisitions (M&As). After the initial proposal has been made, the two parties can discuss the details of the deal in further depth.
6. Determining the key criteria of the contract; Assuming negotiations are completed, a final contract for sale must be executed.
7. Determining the key criteria of financing strategy; there are many options, including mix of equity; loans and bonds for the long term versus bridge financing for the short term.

Although the term “merger” is associated with acquisition,” there are significant differences between them. Acquisition may be a preferred strategy to enter the market in two scenarios: a) if the industry in which the corporate operates is strong enough, and b) if the acquired corporate has strong protection against new entrants. In addition, the acquisition may be less risky compared to the development of new projects due to the presence of acquired companies in the market for a long time, which reduces the phenomenon of uncertainty. The acquisition can be viewed from several angles, as follows: In terms of acceptance (Friendly acquisition or Hostile takeover) In terms of funding (Acquisition through equity; debts; share swap) and in terms of the acquirer (External and Internal parties).

A Leveraged Buyout (LBO) takes place when a small group of investors acquires the target company, and the acquisition is financed with the use of large debt or by selling some of its assets. The acquiring group generally plans to operate the acquiring company for a number of years, with the aim of increasing its sales and profits. It is expected that the acquiring company will achieve high profits from the LBO. However, the risks are high due to the acute use of debt (Johson, 1999). But a management buyout (MBO) is a special case of leveraged buyout (LBO), where the members of the management are the ones who make the acquisition with reliance on debt to finance that process. (Kaplan & Strömberg 2009).

There are many definitions of "merger"; it is a combination of two or more corporates by aggregating shares together or transferring cash payments to the corporate subject to the takeover or acquisition. (Johnson, 1999). In a broader sense, the acquisition of a corporate by another corporate is a process of blending two corporates together. (Coyle, 2000). A process of agreement between two corporations to join together and pool their resources into a new business entity, whereby the previous entities merge into a new corporate (StoneHouse, et al., 2000). A union of interests between two or more corporations, whereby a new entity appears and the funds of the merged companies are transferred to the new corporate. (Wright et al., 2004).

The study believes that it can be said that a merger or amalgamation is a process of mixing two separate corporations to form one larger corporate, provided that one of them continues (the merging corporate) and the other (the merged corporate) vanishes, leaving its assets and obligations to the merging corporate. These mergers are usually done through a stock swap or liquid funds, which are paid to the target corporation, and shares are often exchanged, allowing the shareholders of the two corporations to participate in the risks involved in the transaction. A merger can occur through a friendly takeover of shares, with the formation of one new corporate with new shares by mixing the names of the two merged corporates, or with the formation of a new brand.

The main difference between a merger and an acquisition is the position of the shareholders in both cases. In the case of a merger, the shareholders of the two corporations retain their shares in the new entity, or in the merging corporate, and thus become shareholders in the new corporate. In the case of acquisition, the acquiring corporate often

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remains in existence and conducts its operations as usual, but the ownership of its shares passes to the shareholders of the acquiring corporate. Either through cash payment or through debt bonds, the acquiring corporate, in this case, is able to control the acquiring corporate's fixed assets, assets, and liabilities? In addition to that, the acquisition is either entirely by purchasing all the assets of the acquired corporate or partially by owning part of the shares of that corporate. Often, when partial purchases are made, corporates look for shares acquired to enable the buying corporate to control the decisions of the board of directors or actively participate in their issuance. In this case, they are called strategic shares.

There is a difference between the mechanisms of financing mergers and acquisitions, as the merger is usually through the exchange of shares between the parties to the merger. As for acquisition, it takes one or more mechanisms through the following: borrowing; Bond; Bridge Financing and Venture capital. Usually, short-term financing mechanisms (bridge financing) are used as temporary financing for the acquisition process until the long-term financing mix is arranged.

In general, mergers can be classified according to several criteria (Ross, et. al., 2011). According to the nature of the activities of the merged units(it includes: A horizontal merger, it takes place between two or more corporates working in the same type of activity or related activities, such as the merger of banks and each other, or business banks with specialised banks. B - Vertical merger, it takes place between small corporates in different regions and large corporates in the main cities or capital on the other hand, or between a corporate and one of its suppliers or distributors or both. C - Mixed merging, it takes place between two or more corporates engaged in dissimilar activities, such as the merger of a commercial bank and a specialized bank). 2- According to the standard of the relationship between the parties to the merger process, (this includes: A- Optional merger, it is done with the approval of both the management of the merging corporate and the merged corporate. B - Obligatory merger, it is a merger in which the management of the target corporate is opposed to this merger or acquisition) 3- According to the merger result criterion (A distinction is made according to this criterion between three basic methods: A- Merger with the disappearance of the legal status of the merged corporate or corporates. B- Buying all or part of the assets of an existing corporate. C- Merger through control, while retaining the legal capacity of the merging corporate).

The motives of the acquisition and merger processes are to increase the return to the shareholders and/or reduce the operational and financial risks. Positive interaction arises from two sources: positive operational interaction (it aims to reduce the business risks like achieving economies of scale, maximising the utilisation of intangible assets and the integration of the activities of the two establishments upon merger), and market size and competitiveness. Increasing the effectiveness of complementary resources in the merging and merged corporate) and positive financial interaction (it aims to reduce the financial risks to which the corporate is exposed by improving financial liquidity, working capital, reducing the imbalance of the financing structure, maximizing profits and the share of the distributed profit, while limiting or reducing the merged corporate's financial risks).

The study finds that the previous factors are one of the determinants of the equilibrium-required return by the shareholders of the acquiring corporate. Therefore, there is no benefit in the acquisition process if it is not of an additional return on the owners. Which usually takes the form of maximizing profitability and maximizing the wealth of the owners (by maximizing the value of the share in the stock market, maximizing the fair value), which requires the acquired corporate to have the aforementioned characteristics in order to minimize the levels of risks to which the acquiring corporate is exposed. Whether these risks are operational or financial, even if these characteristics tend to be largely operational. A number of other factors affect the second type of risk.

The degree of quality of financial and nonfinancial information affects the success of mergers and acquisitions, as the acquiring corporates do not tend to choose corporates for

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acquisition whose quality of a financial and nonfinancial information is low, and on the contrary, if the acquired corporates enjoy high quality financial and nonfinancial information, this gives them a better negotiating position.

The degree of similarity of that information plays a pivotal role in mergers and acquisitions. And financial and nonfinancial information is used in evaluation processes, as the higher the degree of quality of financial and nonfinancial information, the greater the degree of accuracy in estimating the value of the corporate acquired or merged, and degree of quality of accounting information explained through its ability to reduce the degree of uncertainty. (Biddle & Hilary 2010)

In this regard, the importance of determining the trading margin on equity, which results from generating of additional returns for the acquisition process, in addition to the returns resulting from operational operations, is highlighted.

In order to determine the purpose of acquisitions, which is maximizing the wealth of the owners, the operating rate of return of the target entity must be compared with each of the weighted cost of capital for financing mergers and acquisitions (M&As), along with the internal rate of return of the acquiring corporate. Finally, the rate of return required by the s of merged corporate.

There are many studies concerning mergers and acquisitions, measuring their effects on financial performance and corporate value, such as (Wang 2003), who examined merger-related cost saving in the banking service. The study found a positive effect of the merger process on banks' performance rates besides cost reduction due to economics of scale. Williams (2004) measured the impact of a recent merger between two aerospace corporations on the resulting organizational culture of the newly formed entity. The study showed a positive effect of the merger process on financial performance in the long run. The effect of bank mergers on loan prices in the U.S. market was studied. The study found that merged banks have strong effects on operational cost reduction. (Said et al., 2008) tracked the impact of mergers and acquisitions on the efficiency of commercial banks in many countries. Its findings found a significant effect of the merger process on bank efficiency, such as profitability, asset quality, liquidity, and return on capital. A study by Behr and Heid (2008) found no significant effect on merged banks' profitability. They conducted a study on the determinants of cross-border merger and acquisition performance of Chinese corporations; they found a positive relationship between the acquisition process and better financial performance for Chinese corporations.

The study found that the preceding factors are one of the determinants of the acquiring corporation's shareholders' equilibrium-required return. Therefore, there is no benefit in the acquisition or merger process if it does not result in an additional return for the owners. Which usually takes the form of maximizing profitability and maximizing the wealth of the owners (by maximizing the value of the common share, maximizing the fair value), which requires the acquired or merger corporate to have the aforementioned characteristics in order to minimize the levels of risk to which the acquiring corporate is exposed. Whether these risks are operational or financial, even if these characteristics tend to be largely operational. A number of other factors affect the second type of risk. Therefore, the success measures of merger and acquisition can be determined as follows:

1. Marginal change in stock returns.
2. Marginal change in stock systematic risk.
3. Marginal change in stock unsystematic risk.
4. Marginal change in stock total risk.
5. Change in net profit margin.
6. Change in cost of goods sales (COGS) margin.
7. Improved stability cash flow.

On other hand; for merger and acquisition strategies success an attractive candidate for acquisition via a mergers and acquisitions (M&As) should possess some key attributes:

1. The corporate must have a good position in its industry.
2. The corporate has a profit history and reasonable expectations of growth.

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3. The corporate should have a relatively low level of debt and a high level of bank-able, asset that can be used as loan collateral.
4. The corporate has stable and predictable cash flow.

STUDY METHODOLOGY

Examination Methodology

The study relied on the use of the unconventional measurement method to assess the effect of the returns of mergers and acquisitions. Study considered the additional returns from mergers and acquisitions (M&As) processes, by excluding the returns resulting from non-mergers and acquisitions cases, which usually occur in light of the pattern of economic activity in cases of boom and recession. That according to analyzing the impact of distinguishing between successful and unsuccessful mergers and acquisitions (M&As).

The study relied on regression analysis to estimate the relationship between the returns of corporates and economic activity; according to equation No. (1); this relationship was estimated on the basis of economic growth rates since 1990

$$CP_{JT} = a_{EG,FIJ} + EG_T \times \beta_{EG,FIJ}$$ Equation No. (1)

CP_{JT} The Company (J)'S Performance in Time (T).

$a_{EG,FIJ}$ The Constant of the Relationship between Corporate Performance and Economic Growth.

EG_T Economic Growth Rate in Time (T).

$\beta_{EG,FIJ}$ The Sensitivity Coefficient of the Corporation's Performance to Economic Growth.

The study relied on the average performance of corporates during the five years before and after the merger or acquisition process, in order to estimate the additional return resulting from that mergers and acquisitions (M&As) process. The study distinguished between extraordinary returns that can be traced back to the completion of acquisitions and mergers and ordinary performance that are related to the economic situation. Alpha is a measure of the active performance of corporate based on the performance of that investment compared with an economic growth.

$$\alpha_J = CP_{JT} - \left[\left(a_{EG,FIJ} + EG_T \times \beta_{EG,FIJ}\right)\right]$$ Equation No. (2)

α_J The Alpha Coefficient of Average Extra Performance of Corporate (J) Without Economic Growth.

CP_{JT} The Actual Performance of Corporate (J) in Time (T).

EG_T Economic Growth Rate in Time (T).

$\beta_{EG,FIJ}$ The Sensitivity Coefficient of the Corporation's Performance to Economic Growth.

The study distinguishing financing returns under acquisitions and mergers according to equations no. 3, 4 and 5.

$$FL = \frac{D}{E}$$ Equation No. (3)

FL Financial Leverage Ratio.
D Debt.
E Equity.

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$$DFL = ROA - [i(1-t)]$$ Equation No. (4)

DFL Differential of Financial Leverage.
ROA Return on Assets Rate.
i Interest Rate on Debt.
t Tax Rate.

$$FLE = (ROA - [i(1-t)]) \times \left(\frac{D}{E}\right)$$ Equation No. (5)

FLE Financial Leverage Effect
ROA Return on Assets Rate.
i Interest Rate on Debt.
t Tax Rate.
D Debt.
E Equity.

The Financial leverage effect (FLE) may have positive or negative values based on arbitrage on owner's equity within debt, so that generating a positive or negative effect on corporate performance.

Data Sources

The data sources can be viewed as follows:

A. The Financial Regulatory Authority – Egypt (FRA)
B. The Egyptian Exchange (EGX)
C. Misr for Central Clearing, Depository and Registry (MCDR)
D. Corporates (from financial reports, which launched merger and acquisition)

Study Sample

The current study includes twenty mergers and acquisitions deals as follows:

Table 1
THE STUDY SAMPLE

No.	Corporate	Merger/ Acquisition	Date
1	Pioneers Holding (current name: Aspire Capital Holding for Financial Investments)	Acquisition	Mar-15
2	Orascom for Telecommunication, Media and Technology	Acquisition	Dec-11
3	National Development Bank (current name:)	Acquisition	Dec-10
4	Sharm Dreams Holding for Tourism & Hotles	Acquisition	Aug-10
5	Commercial International Bank -Egypt	Acquisition	Jul-08
6	Sharm Dreams Holding for Tourism & Hotles	Acquisition	May-08
7	Orascom Construction Industries	Acquisition	Mar-08
8	Talat Mostafa Group Holding (TMG Holding)	Acquisition	Oct-07
9	Orascom Construction Industries (Orascom Building Materials Holding that is member of Orascom Construction Industries group)	Acquisition	Sep-07
10	Telecom Egypt	Acquisition	Oct-06
15	Oriental Weavers	Acquisition	July -06
16	Misr Hotels	Merger	Mar-00
17	Electro Cable Egypt	Merger	Mar-00
18	Egyptian Financial & Industrial	Merger	Feb-00
19	El Nasr for Clothes (Kabo)	Merger	Jan-00
20	Alexandria Spinning and Weaving	Merger	Dec-99

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Study Variables

Although there are seven variables to measure the success of mergers and acquisitions, the study will be limited to "change in net profit & Hensher (2004); Rahman & Limmack (2004).

However, the study excludes four measurement methods are Marginal change in "stock hold returns", "stock systematic risk", "stock unsystematic risk" and "stock total risk". This can be justified according to "capitalization", "market turnover", and institutional characteristics of the Egyptian Exchange (EGX). The characteristics of the lower Corporate in sales were relied upon to estimate the independent variables and control versus the largest Corporate in sales for estimating the dependent variables. The study includes three classifications of variables as following.

Study Independent Variables

The Corporate's Position in Its Industry (CMS)

The value of the variable can be estimated through the following equation

$$CMS_J = \left[\left(\sum_{i=n}^{1} \frac{CR_{Jt_n}}{MR_{t_n}} \right) \div n \right] \quad \text{Equation No. (6)}$$

Where

The average of market share for corporate (j)
Total revenue for corporate (j) in year (t)
Market size or total revenue for market in year (t)

Compound Annual Growth Rate of Revenue (CAGRR)

The value of the variable can be estimated through the following equation

$$CAGRR_{J(t_0-t_n)} = \left[\left(\sqrt[(t_0-t_n)]{R_{Jt_n} / R_{Jt_0}} \right) - 1 \right] \quad \text{Equation No. (7)}$$

Where

$CAGRR_{(t_0-t_n)}$ Compound annual growth rate of revenue for corporate (j) from year (0) to year (t).
R_{Jt_n} Revenue for corporate (j) in year (n).
R_{Jt_0} Revenue for corporate (j) in base year.

Pound Annual Growth Rate of Net Profit (CAGRP)

The value of the variable can be estimated through the following equation.

$$CAGRP_{J(t_0-t_n)} = \left[\left(\sqrt[(t_0-t_n)]{P_{Jt_n} / P_{Jt_0}} \right) - 1 \right] \quad \text{Equation No. (8)}$$

Where

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$CAGRP_{(t_0-t_n)}$ Compound annual growth rate of net profit for corporate (j) from years (0) to (t).

$P_{J\,t_n}$ Revenue for corporate (j) in year (n).

$P_{J\,t_0}$ Revenue for corporate (j) in base year.

Standard deviation of free cash flow to equity

The value of free cash flow to equity can be estimated through the following equation.

$$FCFE_{J,t} = CFOP_{J,t} + CE_{J,t} + NDI_{J,t}$$ Equation No. (9)

Where

$FCFE_{J,t}$ Free cash flow to equity for corporate (j) in year (n).

$CFOP_{J,t}$ Cash flow from operating activities for corporate (j) in year (n).

$CE_{J,t}$ Capital expenditures for corporate (j) in year (n).

$NDI_{J,t}$ Net debt issued for corporate (j) in year (n).

But standard deviation of free cash flow to equity can be estimated through the following equation.

$$SDFC_J = \sqrt{\Sigma_{i=n}^{1}\left[\frac{\left(FCFE_{J,t} - (\Sigma_{i=n}^{1} FCFE_{J,t} \div n)\right)^2}{n-1}\right]}$$ Equation No. (10)

Where

$SDFC_J$ Standard deviation of free cash flow to equity for corporate (j) between years (0) to (n).

$FCFE_{J,t}$ Free cash flow to equity for corporate (j) in year (n).

n The number of data points in the data set.

Financial Leverage

The Financial Leverage can be estimated through the following equation

$$FL_{jt} = \frac{D_{jt}}{E_{jt}}$$ Equation No. (11)

Where

FL_{jt} Financial leverage ratio for corporate (j) in year (n).

D_{jt} Debt for corporate (j) in year (n).

E_jt Equity for corporate (j) in year (n).

The study is based on the average financial leverage, which can be estimated through the following equation.

$$AFL_j = \frac{\left(\sum_{i=n}^{1} FL_{jt}\right)}{n}$$ Equation No. (12)

Where

AFL_j Average Financial leverage ratio for corporate (j).

FL_{jt} Financial leverage ratio for corporate (j) in year (n).

n The number of data points in the data set.

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Study Dependent Variables

Change in Net Profit Margin: The net profit margin is estimated after excluding abnormal profits and losses for five years before and after the deal; the value of the variable can be estimated through the following equation.

$$CNPM_j = \left[\frac{\sum_{i=ybt}^{1} NPM_{J,yat}}{5}\right] - \left[\frac{\sum_{i=yat}^{1} NPM_{J,ybt}}{5}\right]$$ Equation No. (13)

Where

$CNPM_j$ Change in net profit margin for corporate (j).

$NPM_{J,yat}$ Net profit margin of the period after the deal for corporate (j) in year (n).

$NPM_{J,yat}$ Net profit margin of the period before the deal for corporate (j) in year (n).

Change in Cost of Goods Sales Margin: The cost of goods sales margin for five years before and after the deal; the value of the variable can be estimated through the following equation.

$$CCOGS_j = \left[\frac{\sum_{i=ybt}^{1} COGS_{J,yat}}{5}\right] - \left[\frac{\sum_{i=yat}^{1} COGS_{J,ybt}}{5}\right]$$ Equation No. (14)

Where

$CCOGS_j$ Change in cost of goods sales for corporate (j).

$COGS_{J,yat}$ Cost of goods sales of the period after the deal for corporate (j) in year (n)

$COGS_{J,yat}$ Cost of goods sales of the period before the deal for corporate (j) in year (n).

Change in Stability Cash Flow: The stability cash flow for five years before and after the deal based on standard deviation of free cash flow to equity; the value of the variable can be estimated through the following equation.

$$CSCF_j = SDFCFE_{j,yat} - SDFCFE_{J,ybt}$$ Equation No. (15)

Where

$CSCF_j$ Change in stability cash flow for corporate (j).

$SDFCFE_{j,yat}$ Standard deviation of free cash flow to equity of the period after the deal for corporate (j).

$SDFCFE_{J,ybt}$ Standard deviation of free cash flow to equity of the period before the deal for corporate (j).

Study Control Variables

In light of the effect of volume on performance rates, the sales volume was relied upon as a control variable from estimating the logarithmic value of the corporate's sales.

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Descriptive Statistics of Egyptian Economic Growth

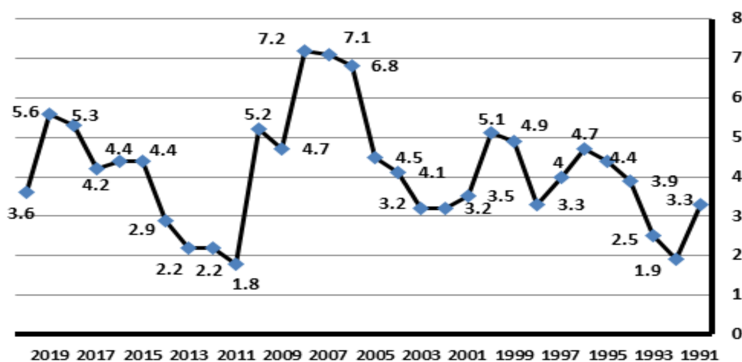

FIGURE 2
EGYPTIAN ECONOMIC GROWTH RATE FROM 1991 TO 2020

Source: Ministry of Planning and International Cooperation in Egypt

According to Figure (2); the study found that the economic growth rates were between (1.8%) as a minimum rate at 2011 but (7.2%) as a maximum at 2008 for the economic growth rates in Egypt during the period 1991-2020. It is possible to survey the economic cycle estimated at twenty years in Egypt, where the economic cycles are estimated according to the bottoms from 1992 to 2011.

Examining the Impact of Key Attributes of Mergers and Acquisitions (M&As) On Change in Net Profit Margin

This section examining the first hypothesis; this hypothesis examining key attributes of mergers and acquisitions (M&As) on Change in net profit margin based on Heteroskedasticity-corrected test.

This hypothesis was based on table no. (2), which illustrates that it was omitted due to exact collinearity for stability cash flow (SDCF) within it, and there was an impact of some key attributes of mergers and acquisitions (M & As) on the change in net profit margin, and this was significant at the 0.01 level. But other key attributes of mergers and acquisitions (M&As) don’t have a significant impact on the change in net profit margin.

Table 2
OUTPUT OF THE FIRST HYPOTHESIS EXAM

Model 1: Heteroskedasticity-corrected, using observations 1-20
Dependent variable: CNPM
Omitted due to exact collinearity: SDCF

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
Const.	25.7340	10.0623	2.557	0.0228	**
CMS	−0.0218580	0.0124517	−1.755	0.1010	
CAGRR	0.0462094	0.277013	0.1668	0.8699	
CAGRP	0.324792	0.155432	2.090	0.0554	*
AFL	−9.78060	4.89990	−1.996	0.0658	*
LR	−0.844775	0.355998	−2.373	0.0325	**

Statistics based on the weighted data:				
Sum squared resid	23.36447		S.E. of regression	1.291856
R-squared	0.995604		Adjusted R-squared	0.994034
F(5, 14)	634.1128		P-value(F)	5.62e-16
Log-likelihood	−29.93361		Akaike criterion	71.86723
Schwarz criterion	77.84162		Hannan-Quinn	73.03349
Statistics based on the original data:				
Mean dependent var	19.71990		S.D. dependent var	7.248491
Sum squared resid	21.75769		S.E. of regression	1.246644

Source: Gnu Regression, Econometrics and Time-series Library

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The statistical results in table no.2 show that (F) was 634.11, which is significant at the level of 1%, so there was a significant impact of the "Compound annual growth rate of net profit", "Financial leverage ratio" and "corporate size" on the change of net profit margin under mergers and acquisitions (M&As) and this was significant at the 0.01 level. Where "Compound annual growth rate of net profit", "Financial leverage ratio", and "corporate size" are interpreted (99.4%) from the change of net profit margin after mergers and acquisitions (M&As) according to adjusted R-squared.

Examining the Impact of Key Attributes of Mergers and Acquisitions (M&As) on Change in COGS Margin

This section examining the second hypothesis; this hypothesis examining key attributes of mergers and acquisitions (M&As) on Change in COGS margin based on Heteroskedasticity-corrected test.

This hypothesis was based on table no. (3), which illustrates that there was an impact of some key attributes of mergers and acquisitions (M & As) on the change in COGS margin, and this was significant at the 0.01 level. But other key attributes of mergers and acquisitions (M&As) don’t have a significant impact on the change in COGS margin.

Table 3
OUTPUT OF THE SECOND HYPOTHESIS

Model 2: Heteroskedasticity-corrected, using observations 1-20
Dependent variable: CCOGS

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
Const.	−5.35683	3.71964	−1.440	0.1735	
CMS	0.0285569	0.0273882	1.043	0.3161	
CAGRR	−0.180402	0.0511791	−3.525	0.0037	***
CAGRP	−0.126806	0.120169	−1.055	0.3105	
SDCF	0.00962184	0.0138823	0.6931	0.5004	
AFL	0.701320	2.92393	0.2399	0.8142	
LR	−0.0205460	0.0579755	−0.3544	0.7287	

Statistics based on the weighted data:

Sum squared resid	10.13644		S.E. of regression	0.883021
R-squared	0.922021		Adjusted R-squared	0.886030
F(6, 13)	25.61849		P-value(F)	1.74e-06
Log-likelihood	−21.58281		Akaike criterion	57.16563
Schwarz criterion	64.13575		Hannan-Quinn	58.52627

Statistics based on the original data:

Mean dependent var	−5.625000		S.D. dependent var	2.316630
Sum squared resid	95.05760		S.E. of regression	2.704094

Source: Gnu Regression, Econometrics and Time-series Library

The statistical results in table no.3 show that (F) was 25.61, which is significant at the level of 1%, so there was a significant impact of the "Compound annual growth rate of revenue on the change of COGS margin under mergers and acquisitions (M&As) and this was significant at the 0.01 level. Where "Compound annual growth rate of revenue" is interpreted (88.6%) from the change of COGS margin after mergers and acquisitions (M&As) according to adjusted R-squared.

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Examining the Impact of Key Attributes of Mergers and Acquisitions (M&As) on Improving the Stability of Cash Flows

This section examining the second hypothesis; this hypothesis examining key attributes of mergers and acquisitions (M&As) on Improving the stability of cash flows based on Heteroskedasticity-corrected test.

This hypothesis was based on table no. (4), which illustrates that there was an impact of some key attributes of mergers and acquisitions (M & As) Improving the stability of cash flows, and this was significant at the 0.01 level. But other key attributes of mergers and acquisitions (M&As) don't have a significant impact Improving the stability of cash flows.

Table 4
OUTPUT OF THE THIRD HYPOTHESIS

Model 3: Heteroskedasticity-corrected, using observations 1-20
Dependent variable: CSCF

	Coefficient	*Std. Error*	*t-ratio*	*p-value*	
Const.	24.5793	6.16526	3.987	0.0016	***
CMS	−0.0225639	0.0489527	−0.4609	0.6525	
CAGRR	0.255279	0.0671783	3.800	0.0022	***
CAGRP	−0.00204922	0.178208	−0.01150	0.9910	
SDCF	−0.0213896	0.0245931	−0.8697	0.4002	
AFL	−4.09987	4.95308	−0.8277	0.4228	
LR	0.0167192	0.0936027	0.1786	0.8610	

Statistics based on the weighted data:				
Sum squared resid	6.936080		S.E. of regression	0.730441
R-squared	0.956757		Adjusted R-squared	0.936799
F(6, 13)	47.93796		P-value(F)	4.02e-08
Log-likelihood	−17.78882		Akaike criterion	49.57763
Schwarz criterion	56.54776		Hannan-Quinn	50.93827
Statistics based on the original data:				
Mean dependent var	26.55200		S.D. dependent var	5.070411
Sum squared resid	425.6457		S.E. of regression	5.722061

Source: Gnu Regression, Econometrics and Time-series Library

The statistical results in table no.3 show that (F) was 47.9, which is significant at the level of 1%, so there was a significant impact of the "Compound annual growth rate of revenue on Improving the stability of cash flows under mergers and acquisitions (M&As) and this was significant at the 0.01 level. Where "Compound annual growth rate of revenue" is interpreted (93.6%) from Improving the stability of cash flows after mergers and acquisitions (M&As) according to adjusted R-squared.

CONCLUSIONS AND RECOMMENDATIONS

After World War II, a policy of mergers and acquisitions (M&As) between corporates emerged in order to ensure their continuity and save them from bankruptcy in order to create strong entities capable of achieving satisfactory financial returns for their owners. As for the modern era - and after globalization and the communications revolution, the goal of merger became the formation of strong entities capable of competing with global giant corporates that are trying to dominate the markets. Mergers and acquisitions (M&As) occupies a large part of the financial world, as they are considered the fastest way to exponential growth for corporates. In theory, there is a difference between merger and acquisition (M&As).

The study investigated the mergers and acquisitions that took place on the Egyptian Stock Exchange from 1990 to 2020, where the study found a complete economic cycle for

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twenty years from 1992 to 2011. To determine the factors success of this strategy, it was necessary to isolate the impact of the economic cycle on the corporation's performance. There are many elements to be considered under mergers and acquisitions (M&As); that includes: "antitrust laws", "securities regulations", "corporate law", "rival bidders", "tax implications", "valuation issues", "market conditions", "financing strategy" and "pattern negotiation".

In Egypt, the compound annual growth rate of revenue is the most important factor in determining the success of merger and acquisition (M&As) strategies, where CAGR of revenue explains the improvement in two indicators of merger and acquisition (M&As) success. a decrease in costs, and an improvement in the stability of cash flows. But CAGR of revenue is not the only determinant of merger and acquisition (M&As) strategies success in Egypt, the improvement in net profits is back to the compound annual growth rate of net profit", "financial leverage ratio", and "corporate size" under merger and acquisition (M&As) strategies. From that, the study can be said that the growth strategy is the basis of merger and acquisition (M&As) success in Egypt.

Based on the foregoing, the study recommends the following:

A. For Egyptian corporation: Acquisition or merger decision could be considered after determining the impact on each of the revenue creation and cost centers in the merged and acquired parties, to determine their impact on the level of corporate's performance after completion, which requires existence of a plan that covers the financial, accounting and legal aspects.
B. For Future research: Conducting a comparative study for the determinants of acquisitions effectiveness in different environments. Testing new variables to increase the capacity of the proposed framework for evaluating acquisitions, including the timing of completion of the process and type of sector. Testing the impact of mergers and acquisitions on the market value of the acquisition and merger parties.

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