

IMPACT OF CAPITAL STRUCTURE DYNAMICS ON ACQUIRERS' POST M&A PERFORMANCE: EVIDENCE FROM A FRONTIER MARKET

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Abstract

Mergers and Acquisitions (M&A) are a pivotal growth strategy for businesses aiming to realize market dominance and sustainable shareholder wealth maximization. M&A's tend to minimize default risk and lower the cost of capital, resulting in financial synergies that directly influence the acquirers' capital structure. Consequently, the study examines the impact of capital structure dynamics on the acquirer's financial performance in the post-M&A period. The sample consists of 630 firm-year observations from 90 listed acquirer companies in Sri Lanka, across seven years following the acquisition. The dynamic panel system GMM technique was applied to overcome any possible endogeneity, simultaneity, and unobservable heterogeneity concerns. The research outcomes corroborate the significant and negative association between leverage change and acquirer financial performance evidencing that a rise in leverage roots the cost of debt to outweigh debt benefits and deteriorate the acquirer's performance. Further, the Leverage deficit is positively significant with acquirers' financial performance suggesting that weighty deviations from the target pressurize managers to maximize shareholder wealth by ensuring efficient resource allocation. Finally, a negative and significant relationship was found between the Equity Multiplier and acquirer performance suggesting a rise in leverage causes shareholder value to reduce. The study findings are imperative for policymakers, government, and professional bodies to revamp the existing Takeover and Merger codes or enact mandatory rules and regulations. To the best of our knowledge, this is one of the early studies to empirically test the impact of capital structure dynamics on acquirer post-M&A financial performance in a frontier market context.

Keywords: Acquisitions, Acquirer Financial Performance, Mergers, System GMM

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1 Introduction

Mergers and Acquisitions (M&A) are deemed a pivotal element within the realm of corporate finance literature, drawing greater attention from scholars globally (Cumming et al., 2023; Feyisetan et al., 2024; Hossain, 2021; Levine & Wu, 2021; Tian & Wang, 2024). M&A is a strategic tool driven by economies of scale, and financial and operational synergies which aims at strengthening capital structures and achieving target capital structures while providing short-term fixes for financial concerns caused by information imbalances, etc. (Khaw, 2019; Musallam, 2020). Despite the large number of M&As experienced globally, Christensen et al. (2011) asserted that 70per cent-90per cent of M&A transactions failed due to the inability to produce the anticipated financial returns. This can be attributable to the weaknesses of the due diligence exercise, inaccurate business valuation, conglomerate discounts, non-realization of synergy benefits, overpayments for targets in line with the Hubris hypothesis, etc. Thus, the literature questions “Does the financial performance of the acquiring firm (in the long term) really improve following M&A?” (Rani et al., 2013, p. 402).

Amidst voluminous reasons behind post-M&A performance, acquirers’ quest for capital strengthening receives a greater significance (Uysal, 2011). M&A is identified as a means of reducing agency costs, such as transaction costs, monitoring costs, etc., given that the associated debt payments tend to reduce available free cash flows for a company. Thus, the Agency theory which contributes to reducing the agency cost is ultimately expected to translate that benefit to achieve an optimal capital structure (Jensen & Meckling, 1976). Amongst varying financial restructuring strategies, an M&A is considered to be an instrument used by bidders to change their debt-equity ratios. An acquirer absorbs the debt and equity of the target which essentially supports them in achieving their target capital structures (Gugler & Konrad, 2002). Harford et al. (2006) asserted that the acquirers are slightly under-leveraged before engaging in M&A activities and subsequently experience an increase in leverage levels during the post-M&A period as a result of increased debt capacity and co-insurance effect² (Ghosh & Jain, 2000). However, it is noteworthy that “the change in leverage during the post-M&A period is not one-directional, random, or unintended” (Gugler & Konrad, 2002, p. 1). Furthermore, the choice of deal financing facilitates capital structure adjustments enabling bidders to move closer to their target ratios (Vermaelen & Xu, 2014). Harford et al. (2009) substantiated that low-levered acquirer firms use cash offers in terms of

² Co-insurance effect is the Immediate occurrence of a higher debt capacity following a merger.

new debt issuances to finance M&As whereas highly geared firms often utilize seasoned equity to finance deals aligned with the trade-off theory. However, debt-financed acquisitions encourage managers to actively move back to their target leverage levels, retreating more than 75 per cent of the takeover's leverage effect within 5 years. Besides, debt-laden bidders proceed with acquisitions regardless of the limitations they encounter to enjoy the benefits of adjusting towards the target which outweighs the equity issuing cost.

Bidders tend to deviate from their target debt ratios owing to adjustment costs such as agency costs and transaction costs driven by market frictions (Hovakimian et al., 2002; Öztekin & Flannery, 2012). Consequently, the Dynamic trade-off theory (DToT) was introduced which posits that acquirer firms adjust their actual debt levels to target debt levels driven by conducive cost conditions and do not always remain at optimal levels (Rani et al., 2013; Sardo & Serrasqueiro, 2017). Thus, our study applies the DToT which was developed in contrast to the static TOT explaining how acquirer firms deviate from their targets and gradually readjust to optimal levels over time when the adjustment costs are less expensive, causing their Speed of Adjustment (SoA) to vary between firms (Clark et al., 2009; Iyoha et al., 2022; Mukherjee & Mahakud, 2010).

Furthermore, acquirers tend to build up financial slack to have the edge in future takeovers thereby reducing debt-equity ratios to acquire cash-strapped targets. Harford et al. (2009) suggested that acquires tend to incorporate more than two-thirds of the change to the combined firm's new target leverage levels. Nevertheless, in line with the dynamic trade-off theory, when the financing choices deviate the firms further from their targets, the bidders tend to rebalance toward their target capital structures in the short and long run maximizing the shareholder wealth (Bessler et al., 2011; Harford et al., 2009).

Scholars have proposed numerous theories on the best combination of debt and equity highlighting the unresolved "capital puzzle" instigated by the seminal work of Modigliani and Millers' theory (1958) (1963) (Danso et al., 2021; Myers, 1984). Subsequently, voluminous literature in this study context has revolved around two schools of thought i.e., the Pecking order theory (POT) and the Static trade-off theory (ToT) (Agyei et al., 2020). Scholars have extensively focused on the static ToT which assumes that firms balance the costs and benefits of debts striving for an optimal debt ratio (Fama & French, 2002) with unrealistic assumptions of constant speed of adjustments (Glover & Hambusch, 2014; Jong et al., 2011) and that firms are always at their target capital structures (Haron, 2016). On the

contrary, DToT was introduced, buttressing that firms often deviate from their target capital structures owing to adjustment costs such as agency costs and transaction costs driven by information asymmetry, environmental shocks, and market frictions (Fischer et al., 1989; Frank & Goyal, 2009). It is noteworthy that acquirer firms tend to move towards their target capital structures when the benefits outweigh the costs of adjustments (Harford et al., 2009; Haron, 2016). However, the high transaction cost sometimes may not allow firms to achieve their intended levels immediately, reflecting the effect on the leverage rebalancing process. Thus, firms tend to practice a partial adjustment model, where firms do not instantly adjust their capital structures to the optimal leverage, instead the firms partially adjust each period taking key determinants of leverage into account (Flannery & Rangan, 2006). It is noteworthy that firms tend to move towards their target capital structures in the long term albeit short-term deviations (Harford et al., 2009; Oztekin & Flannery, 2012). Thus, dynamic capital structures are a significant determinant of the acquirer's post-M&A financial performance where such capital structure adjustments are costly and challenging (Khoo et al., 2017). Brealey et al. (2019) attested that the acquirer's market leverage rises by an average of 6.6 per cent whereas the book leverage rises by an average of 5.5 per cent by the third year following the M&A which is recognized as a 41 per cent upsurge compared to the preannouncement leverage mean (Levine & Wu, 2021). Thus, driven by several anomalies, such leverage deviations tend to influence the acquisition decision reflecting the role of dynamic capital structures in M&A performance (Flannery & Rangan, 2006).

The existing research has yielded little or mixed results in terms of the effect of dynamic trade-off theory on financial performance with less emphasis on M&As and empirical evidence monopolizing on developed economies (Ramjee & Gwatidzo, 2012; Sardo & Serrasqueiro, 2017; Uysal, 2011; Viviani, 2008) and advanced developing economies in Asia (Mehrotra & Sahay, 2018; Sha et al., 2020). It is noteworthy that there is a dearth of studies conducted in frontier markets owing to the inefficient and volatile capital markets, institutional differences, absence of stringent rules and regulations, high information asymmetry, and the lack of expertise in the M&A context (Goddard et al., 2012; Vagenas-Nanos, 2016).

The choice of Sri Lanka for the study is driven by several factors. Sri Lanka as a frontier market has experienced 737 M&A transactions from 1987 to the present with 443 completed M&A transactions during the last two decades (S&P Capital IQ database, 2021). The

relatively higher number of transactions in Sri Lanka compared to other South Asian countries (e.g., Pakistan: 332 completed deals, Bangladesh: 68 deals, Maldives: 25 deals, Indonesia: 35 deals) reflects the significance of exploring the M&As and their effects on corporate financial performance (S&P Capital IQ database, 2021). Notably, the M&A deal activity has approached its pre-Covid levels, with publicly stated deal value reaching LKR 33 billion which has become one of the most significant inorganic growth strategies employed by Sri Lankan firms (PwC Sri Lanka deals insight, 2022). Moreover, the “Masterplan” for consolidation of Non-Bank Financial Institutions was introduced by the Central Bank of Sri Lanka in 2014 to help resolve the industry's long-standing problems. Further, the high impetus given by the government on M&As through its amended Takeover and Merger (TOM) Code of 1995, Part VIII of the Companies Act No. 07 of 2007, etc indicates the prominence of studying this area in the Sri Lankan context. Nonetheless, the study area of dynamic capital structures in light of M&As is silent in the South Asian region, especially in the Sri Lankan context, despite the large number of M&As experienced as a country. Thus, the study aims to address “What is the impact of the capital structure dynamics on the acquirer’s financial performance during the post M&A period?”.

The study offers several contributions. First, to the best of our knowledge, this is one of the early studies to investigate the impact of capital structure dynamics on the listed acquirer’s financial performance in Sri Lanka. Second, the study expects to contribute to the extant literature on capital structure theories by extending a branch in terms of dynamic capital structures in the context of M&As. Albeit the presence of studies incorporating the traditional static ToT, the DToT which provides the basis for dynamic capital structures, is still at a nascent stage, especially in the context of M&As. Therefore, this study expects to apply the DToT to the context of M&As which remains unresolved in the literature, giving ample scope for further research. Third, the study adopts the Generalized Method of Moments (GMM) technique, a dynamic panel research design to address the endogeneity concerns by addressing the gaps inherited from static panel datasets in the research methodologies. Finally, the study contributes to the corpus of knowledge in corporate finance literature by shedding light on the dynamic capital structure application in M&A, considering a frontier market which has rarely been the context in M&A studies.

The remaining part of the paper is structured as follows. The next section represents the extant literature from past studies. The third section discusses the methodology, and the data

analysis is discussed in the fourth section. Finally, the conclusion and the directions for future studies are given in the final section.

2 Review of Literature

Studies on M&A in corporate finance literature have gradually flourished, garnering increased interest among academia (Garzella & Fiorentino, 2014; Harford et al., 2006; Hiltunen & King, 2025; Kumar & Bansal, 2008). M&As have evolved through a series of merger waves which has now become the most prevalent strategy employed by firms to elevate their performances (Yaghoubi et al., 2016). Prior studies have produced mixed results when analyzing the acquirer's post-M&A performance where positive (Datta et al., 1992; Kaplan, 1989), negative (Pawaskar, 2001), and inconclusive (Azwat & Rikumahu, 2016) impacts on annual returns were identified. However, Martin (2016), in a Harvard Business Review report has validated the presence of a 70%-90% failure rate for M&As, a substantial percentage considering global M&A activities. This implies that despite the multiple benefits of M&As, the acquirer's performance does not always improve in the aftermath of an M&A. Moreover, Roll (1986) proposed the Hubris hypothesis, which asserted that "decision makers in acquirer firms pay too much for their targets...." (p. 212). This suggests that overconfidence and irrational managerial behavior, which results in value-destroying acquisitions as the acquiring firms pay more than the target's intrinsic value, leading to poor post-merger performance. Therefore, our study addresses the gap, "Will a particular acquisition deal improve the long-term performance of an acquirer firm?" (Yaghoubi et al., 2016, p. 169).

Our study posits the multi-theoretical connectivity particularly financial synergy, agency theory, and dynamic trade-off theory, in examining the acquirers' optimum capital structures and their impact on firm performance. Acquirer post-merger performance is demarcated as the amount of value created through the merger which can be reflected through synergy "2+2=5 effect" (Berriategortua et al., 2018, p. 39). Our study focuses on the financial synergy theory which includes tax shield benefits, reduced default risk, bankruptcy risk, and agency cost changes during the post-M&A period due to higher leverage which tends to minimize the Weighted Average Cost of Capital (WACC) thereby maximizing the total worth of the combined entity (Jensen, 1986; Lewellen, 1971). Literature also entails that elements of the WACC, i.e., financial leverage, the resulting cost of debt, and acquirers' effective tax rate, fluctuate significantly after acquisitions (Devos et al., 2009; Harford et al., 2009). Prior

studies evidence that acquirers are less leveraged prior to an acquisition and tend to increase their debt level subsequent to an acquisition due to such reductions in default risk and bankruptcy risk (Leland, 2007; Uysal, 2011). Further, the rise in debt capacity as a result of the unused debt accumulated from the pre-merger period (Bruner, 1988), contributes to an increase in overall leverage and thereby leads to greater tax savings. This in turn generates financial synergies, useful in maximizing the firm value (Welch, 2004).

Capital structure studies can be traced back to the renowned theory initiated by Modigliani and Miller (1958) on “Capital structure irrelevance” which emphasizes the absence of an impact from leverage on the firm value. Later, this path-breaking study was revised (1963) by an improved theory based on the argument that the presence of a tax shield on debt in the capital structure, creates a significant influence on the value of the firm. Subsequent to the seminal work of Modigliani and Miller (1958), numerous theories have been introduced, which can be predominantly divided into two schools of thoughts as Pecking order Theory (PoT) and Static Trade-off Theory (ToT).

The static ToT demarcates the target/optimal capital structure as a trade-off between the costs and advantages of leverage in a perfect market environment (Fama & French, 2002). The tax shield benefit, the lower informational cost, and the disciplinary role of debt are recognized as the debt benefits whereas interest payments and capital payments may increase the default risk thereby leading to bankruptcy costs and agency costs, and are identified as the cost of higher leverage (Bradley et al., 1984; Bajaj et al., 2021).

On the contrary, the existence of different economic shocks and market frictions in the turbulent corporate environment along with information asymmetries, and adjustment costs such as transaction cost and agency cost has resulted in creating deviations from the target debt ratios (Esghaier, 2024; Kayhan & Titman, 2007; Titman & Tsyplakov, 2007). The static ToT elucidates that acquirers do indeed achieve target leverage ratios at a constant speed of adjustment (Haron, 2015) whereas the subsequent studies identified asymmetries in the target adjustment process thereby introducing the “Dynamic ToT” (Fischer et al., 1989; Flannery & Rangan, 2006). Thus, the Dynamic ToT asserts the presence of a gap between the target leverage level and the actual leverage level due to the adjustment cost and the market friction. The theory highlights how firms allow leverage to deviate from their target optimal levels as long as the transaction costs outweigh the benefits of reverting to the target capital structures (Dang et al., 2012). The study applies the dynamic ToT as the approach is particularly

relevant to the frontier market context, as the firms experience friction due to high transaction costs, issuance costs, underdeveloped capital markets, regulatory constraints, and inadequate access to long-term financing, making gradual adjustment behavior more observable (Flannery & Rangan, 2006). Moreover, Booth et al. (2001) have asserted that PoT has limited explanatory power in less developed markets due to severe information asymmetry and inadequate internal financing sources. Further, the Market timing theory is less persistent in frontier markets as their equity markets are thin and illiquid (Hovakimian, 2006). Nevertheless, despite accommodating the gradual adjustment process, the Dynamic ToT has its own limitations, such as being challenging to identify the true target capital structure, behavioural biases in making decisions on moving to optimal capital structures, and limited predictive power in frontier markets (Booth et al., 2001).

It is noteworthy that deviations from these targets are costly for the acquirers. However, the high transaction cost sometimes may not allow firms to achieve their intended levels immediately reflecting the effect on the leverage rebalancing process. Therefore, firms tend to engage in a partial adjustment model (Adeneye et al., 2023; Flannery & Rangan, 2006). Thus, this theory plays a vital role in the M&A decisions of a company and gives rise to the “Dynamic capital structure theory” (Fischer et al., 1989). A change that shocks an adjustment cost of a firm would offer an ideal situation to test the application of the dynamic ToT, thus, M&A deals are a source of such a major shock with considerable consequences on the acquirer's performance (Flannery et al., 2020).

The Agency theory was presented by Jensen and Meckling (1976) emphasizing the potential conflicts in goal congruence between equity holders (Principal) and managers (Agents) due to the unfavorable use of resources by managers for their own interest. Jensen (1986) has asserted that balancing agency costs and the benefits of debt will lead to the achievement of the optimal capital structure of the company. The agency affinity between the principal and the agent occurs mainly due to information asymmetry and moral hazard leading to the generation of a transaction cost (Buvanendra et al., 2017). The dynamic ToT takes the resulting transaction cost into account and buttresses the target leverage levels that firms trying to achieve to maximize firm values given that deviations from these targets are expensive (Jensen & Meckling, 1976). Berkovitch and Narayanan (1993) presented “Agency” as one key motive of M&As and it is a means by which an acquirer could reduce the agency costs. Jensen (1986) highlighted that high-levered companies try to reduce agency

costs and encourage managers to invest in value-generating acquisitions given their obligation to make debt service payments to bondholders on time.

Tao et al. (2017) emphasized the presence of leverage targets among acquirers and their adjustments of existing leverage ratios towards optimal levels at a point at which the costs and benefits of debt are equal. According to Vermaelen and Xu (2011), acquirers run in line with their desired leverage in 80% of M&As where many acquirers opt to reduce the deviation between the actual and target levels which leads to an improvement in the firm performance (Yang, 2011). Further, improved performance is visible among the acquirers who are moving towards the target leverage ratios (Harford et al., 2009). Conversely, Bouraoui and Li (2014) attested that changes in leverage levels have a negative impact on firm performance in the aftermath of an acquisition signaling the effect of financial flexibility on the post-M&A performance.

Although voluminous literature is available on M&A in developed economies, studies conducted in frontier and emerging markets are still in the nascent stage (Lebedev et al., 2015). Despite the record-breaking performance history of M&As and the government's high regard for M&A deals in Sri Lanka, scant literature is available on M&As vis-à-vis multiple aspects of the economy such as Human Resource Management, Supply Chain Management, and Accounting etc. (Dissanayaka & Jayaratne, 2017; Geekiyanage & Jahfer, 2017; Wickramasinghe & Karunaratne, 2009). Moreover, albeit the availability of a wealth of literature on dynamic ToT in developed economies, the study of dynamic capital structures is scant in Sri Lanka (Buvanendra, 2013; Samarakoon, 1999). Thus, the extant literature posits the scarcity of studies in the Sri Lankan context to measure the impact of dynamic capital structures on acquirer post-M&A performance. Based on the literature the study developed the below hypotheses.

2.1 Hypothesis Development

Capital structure decisions related prior studies have often incorporated leverage as one of the key variables determining the firm performance (Gugler & Konrad, 2002; Kumar & Chhabra, 2021). According to Gugler and Konrad (2002), the debt-equity ratio shift that occurs as a result of a merger is not one-way, arbitrary, or unplanned. Miller and Bromiley (1990) demonstrated that higher risk levels due to increased debt levels have a negative impact on future financial performance indicating that high-debt acquisitions underperform low-debt

acquisitions. High debt levels may limit managerial choice in allocating resources during the acquisition process, which may have a detrimental influence on performance (Myers & Majluf, 1984). In contrast, Lewellen (1971) and Myers and Majluf (1984) asserted that a higher absolute leverage ratio may suggest a higher debt capacity, which would improve business performance. Therefore, it is pivotal to identify the impact of leverage change on the acquirer's post-M&A financial performance.

H₁: Leverage change has a significant negative impact on the post-M&A acquirers' financial performance.

A Leverage Deficit (LD) is recognized as the change between a firm's realized leverage and its target level (Uysal, 2011). This is the actual minus target debt ratio where LDs that are positive show that the company is overleveraged, and the negative depict that the firm is under-levered. Flannery and Rangan (2006) discovered that acquirers who get closer to the desired leverage ratio have superior financial performance after M&As. Further, according to the DToT model, it was found that in an effort to get toward the target capital structures, over-leveraged companies lower their leverage deficits and issue equity (Hovakimian et al., 2002). Nevertheless, Bouraoui and Li (2014) found that acquirers who get closer to the desired leverage ratio have superior financial performance after M&As.

H₂: Leverage Deficit has a significant positive impact on the post-M&A acquirers' financial performance.

Equity Multiplier (EM) is a key component in the DuPont analysis which is often used by scholars in identifying the effect on the firm's Return on Equity. The prior literature reflects that the EM has a significant impact on a firm's volatility and thereby on the firm's performance as when the use of debt to finance assets increases, the risk also increases which is detrimental to the firm's performance (Abraham et al., 2017; Bao 2017). Further, the study conducted by Bao (2017) asserted that a reduction in EM demonstrates the improvement in the leverage structure of the banks and thereby a boost in the company's financial performance. In fact, the analysis by Geyfman and Walker (2018) on the change in EM, which links ROA and ROE, revealed a slight decline in the acquirers' post-merger EM in the post-merger period. In contrast, Bao (2017) attested that an increase in equity multiplier during the post-M&A period can be attributable to the synergy gains from the M&As, especially in terms of financial synergies ensuring efficient capital utilization leading to improved profits and financial performance of the company.

H₃: EM change has a significant negative impact on the post-M&A acquirers' financial performance.

3 Methodology

A quantitative research design was employed and the study used secondary data sources where the Standard & Poors (S&P) Global Capital IQ database was used to collect acquirer data. The population consists of acquiring companies during the 12-year period from 2007/2008 to 2018/2019 that meets the required standard criteria i.e.,

- Listed companies on the Colombo Stock Exchange (except firms under the Banking, Finance, and Insurance sectors) operated in the scale of an acquirer.
- The acquirer should have acquired 50per cent or more of the ownership of the target firm to account for significant influence on firm performance in line with IFRS11/IAS 28 (IFRS Foundation, 2024).
- Acquirers with a minimum stated capital of Rs.100 Mn or more during the year of acquisition in line with eligibility criteria given for listing under “Dirisavi Board”, the board developed for Small and Medium-sized firms listing on the Colombo Stock Exchange (CSE) based on CSE Listing rules Section 7.

Based on that, data from 90 acquirers have been collected for a 7-year period³ from the date of completion of the M&A to analyse the post-M&A acquirer's financial performance based on the availability of data. Moreover, acquisitions of target firms from related and unrelated industries were considered for analysis where the majority of the target firms were unlisted. Accordingly, the study identifies 630 firm-year observations. However, data have not been gathered past the year 2019 to exclude the impact of the triple crises (Easter Sunday attack, COVID-19 pandemic, and the subsequent economic crisis) in Sri Lanka.

³ The sample period of the study is a 12-year period from 2007-2018 based on which 90 acquirers were identified who met the required conditions set under the study. Data with respect to each acquirer has been collected by observing a period of 7 years following the acquisition due to the limitations in data availability. If the acquisition was completed in the year 2008, data has been collected from the year 2008 to 2014 (7-year period) to analyze the acquirer's post-acquisition performance. Further, acquirers who had more than one acquisition during the period when performance was observed, were excluded from the sample.

Table 1: Measurement of Variables

Variable	Measurement/Indicators	Authors
Independent variables		
Leverage Ratio Change	(Total short-term and long-term interest-bearing debt/ Total Equity ratio) _t - (Total short-term and long-term interest-bearing debt/ Total Equity ratio) _{t-1} $Lev_t - Lev_{t-1}$	Gugler and Konrad (2002) Ghosh and Jain (2000),
Equity Multiplier	Total Assets / Total Equity Ratio	Bao (2017) Harford et al. (2006)
Leverage Deficit Ratio	Actual Leverage – Target Leverage Target Leverage estimation (Profitability + Firm size + Tangibility+ Firm growth+ Liquidity)	Bouraoui and Li (2014) Uysal (2011)
Dependent variables		
Return on Assets	Net Income / Total Assets	Abeyrathna and Priyadarshana (2019)
Return on Equity	Net Income / Common Equity	Le and Phan (2017)
Control variables		
Firm growth	Total market capitalization/ Book value of Equity	Frank and Goyal (2009)
Firm size	Logarithm of total sales	Rajan and Zingales (1995)
Method of Payment	1 for cash-only deals and 0 otherwise	Huang et al. (2016)

3.1 Estimation procedure

The study follows the prior studies to utilize a two-step estimation procedure (Fama & French, 2002). Firstly, the leverage deviation calculation requires the determination of the target/optimal leverage ratio as it is not readily available and unobservable in firms. Secondly, the study measures the impact of DToT on the acquirers' post-M&A performance using the dynamic panel Generalized Method of Moments (GMM) technique.

Amongst several techniques such as mean leverage levels (Shyam-Sundars & Myers, 1999), industry mean (Hovakimian, 2002), our study derives its target leverage by calculating a regression-based proxy using a static panel multiple regression model (Buvanendra et al., 2017; Flannery & Rangan, 2006). Book leverage of the firms was used as the dependent variable (Myers, 1977). Several firm-specific variables, such as Profitability (Harford et al., 2009), Growth (Uysal, 2011), Firm size (Lin & Lee, 2016), Tangibility (Nunkoo & Boateng, 2010), and Liquidity (Ahsan et al., 2016) were used as the independent variables when developing the regression-based proxy.

Baltagi (2005) posits that the panel regression models are superior to pooled Ordinary Least Square (OLS) models as panel data tend to account for heterogeneity across individual units, are less prone to multicollinearity and serial correlation issues, compared to Pooled data. Therefore, our study deployed a panel regression model when determining the target leverage. The below model was developed to derive the fitted value for the target leverage ratio.

$$LEV^*_{it} = \sum_{j=1}^E \alpha_j x_{jit} \text{ --- (Formula 01)}$$

LEV^*_{it} stands for the target leverage ratio for the firm i in the t^{th} period. LEV^*_{it} is a function of five explanatory variables denoted through E, where $J = 1, 2, 3, \dots, E$ in accordance with the past literature available in our study context (Flannery & Ranjan, 2006). Based on the above-identified firm-specific variables, the below formula could be used to regress the leverage ratio on the firm-specific capital structure determinants.

$$\hat{y}_{jit} = \beta x_{jit} + \mu_i \text{ --- (Formula 02)}$$

The dependent and the independent variables identified above were used to derive the following multiple regression model to measure target leverage.

$$LEV^*_{it} = \beta_0 + \beta_1 * PROF_{it} + \beta_2 * FZ_{it} + \beta_3 * GRWT_{it} + \beta_4 * TANGI_{it} + \beta_5 * LIQ_{it} + \mu_{it} \text{ --- (Formula 03)}$$

Where:

LEV^* - Target leverage ratio

$PROF$ - Profitability measured by return on assets ratio

FZ - Firm size computed by taking the natural logarithm of sales

$GRWT$ - Firm growth measured using market-to-book ratio

$TANGI$ - Tangibility measured by the ratio of tangible fixed assets to total assets

LIQ - Liquidity measured using the ratio of current assets to current liabilities.

β_{it} - Coefficients

μ_{it} - Error term

The firm and study period are represented using the indices i and t respectively. Based on the Hausman test results (Table 5), the Random effect model was employed as the model's validity is demonstrated by significant (at 5 per cent) F statistics. Accordingly, the below formula could be derived to measure the leverage deviation.

$$LD_{it} = LEV_{it} - LEV^*_{it} \text{ --- (Formula 04)}$$

Based on the above formula a residual series is computed to measure the LD for firm i in the t^{th} period. The residuals were calculated by comparing the Target leverage with the tracked actual leverage over the years (Lemmon et al., 2008). The i^{th} residual is the variation between the actual leverage ratio denoted through y_i (LEV_{it}), and the value projected by the above-estimated regression formula, $\hat{y}_i$ (LEV^*_{it}) i.e., target leverage ratio. These residuals are viewed as estimates of the leverage deficit from the model. Nevertheless, the literature suggests that in the absence of market frictions, the firm i 's actual leverage ratio at time t , indicated as Lev_{it} , would be equal to the target leverage ratios i.e., $Lev_{it} = Lev^*_{it}$ (Buvanendra et al., 2017).

3.2 Dynamic Panel Regression Model: GMM

The study employs the dynamic panel two-step system GMM estimate technique introduced by Arellano and Bond (1991) and Arellano and Bover (1995). This is an econometric technique used to estimate models which include lagged dependent variables and potential endogeneity concerns i.e., current outcomes are influenced by past outcomes, especially in panel data. This technique deals with the dynamic nature of the capital structure variables and overcome endogeneity issues, simultaneity issues, and unobservable heterogeneity. The System GMM technique makes use of estimators that are consistent and translate the function to the first difference, using the lagged values of the endogenous variables as instruments. Further, it is crucial to use a dynamic panel GMM strategy since the OLS estimate method produces biased and inconsistent findings when a dependent variable acts as an explanatory variable in the model (Kwenda et al., 2017). Thus, given firm performance has reflected large persistence suggesting endogeneity issues, the GMM model was used to capture the lagged firm performance term ($t-1$). We arrive at Formula 5 and Formula 6 to identify the impact on financial performance.

$$ROA_{it} = \beta_0 + \beta_1 ROA_{(it-1)} + \beta_2 LC_{it} + \beta_3 EM_{it} + \beta_4 LD_{it} + \beta_5 FZ_{it} + \beta_6 GRWT_{it} + \beta_7 MoP_{it} + \varepsilon_{it} \text{ (Formula 05)}$$

$$ROE_{it} = \beta_0 + \beta_1 ROE_{(it-1)} + \beta_2 LC_{it} + \beta_3 EM_{it} + \beta_4 LD_{it} + \beta_5 FZ_{it} + \beta_6 GRWT_{it} + \beta_7 MoP_{it} + \varepsilon_{it} \text{ (Formula 06)}$$

Where:

ROA – Return on Asset

ROE – Return on Equity

LC - Leverage Ratio Change

EM - Equity Multiplier

LD - Leverage Deficit

FZ - Firm size

GRWT – Firm growth

MoP – Method of Payment

β_{it} - Coefficients

ε_i - Error term

The firm and study period are represented using the indices i and t respectively. The final analysis incorporated 540 firm-year observations compared to the 640 observations used in target leverage estimation under the first step, given the leverage ratio change variable takes the difference between two years into account ($LR_t - LR_{t-1}$).

4 Data Analysis, Findings, and Discussion

4.1 Descriptive Statistics: Target Leverage Estimation Variables

Table 2 illustrates the descriptive statistics of the study variables. The leverage ratio depicts a mean of 24.5 per cent indicating a lower proportion of debt in their capital structures. This is in line with the leverage ratio reported by Samarakoon (1999) which is 24.2 per cent. However, it is noted that Sri Lankan firms' leverage ratio is below the average leverage levels in developed countries such as 59 per cent in Swiss firms (Drobetz & Wanzenried, 2006), 45 per cent in China (Feng et al., 2020), 40 per cent range in Eastern European countries (Hanousek & Shamshur, 2011) etc., indicating Sri Lankan acquirer firms rely less on external debt financing due to underdeveloped capital and debt markets and lack of collaterals to be utilized in borrowing external financing (Buvanendra et al., 2017).

The firm size has the highest mean of 21.99 ($SD=2.24$) which is in line with the study conducted by Buvanendra et al. (2017). However, the firm size of the Sri Lankan acquirer companies is greater compared to some developing countries such as Ghana (Abor, 2005) and Indonesia (Chua et al., 2022) which can be an influencer on the M&A failures owing to challenges in integrating large company operations. The growth rate has a mean of 1.27 ($SD=1.56$) which is relatively lower compared to other emerging markets (8.37) (Haron et al., 2021), Indonesia (3.92) (Chua et al., 2022) which can be attributable to uncertain economic conditions and the lower business confidence aggregated by the lower economic growth rate in Sri Lanka (Kumar & Ghaffoor, 2023). Profitability has a mean of 0.44 indicating profitable acquirer firms in Sri Lanka. Table 1 represents a mean tangibility value of 0.46 ($SD=0.32$) which is relatively greater than the tangibility in international firms (Feng et al., 2020; Alipour et al., 2015). Finally, the liquidity variable has a mean of 1.66 ($SD=1.97$) which is relatively greater compared to developing countries (Al-Najjar & Taylor, 2008).

4.2 Descriptive Statistics: Main Analysis

Table 2 depicts a mean ROA value of 0.04 ($SD=0.10$) which aligns with the prior studies conducted in the Sri Lankan context (Pathirawasam & Wickremasinghe, 2012; Suganya & Kengatharan, 2018). However, the literature suggests that the acquirer firms tend to have a lower ROA ratio compared to non-acquirer firms, especially in developed economies (Dickerson et al., 1997; Kwenda et al., 2017) implying over-investments made by acquirers in targets and the failure of their assets to produce the anticipated revenue growth. The ROE has a mean of 0.09 ($SD=0.28$) which is in line with the studies conducted in developed countries (Hassen et al., 2018; Ebaid, 2009), and developing countries (Ayaz et al., 2021). However, it was observed that the ROE of the non-acquirer companies in Sri Lanka is relatively greater than that of the acquirer companies (Sivalingam & Kengatharan, 2018).

Table 2 represents the LC variable with a mean of 0.01 ($SD = 0.10$). This is consistent with the mean LC reported by US acquirers in the post-M&A period (Levine & Wu, 2020; Ghosh & Jain, 2000). The positive mean LC may suggest that acquirers can increase their leverage during the post-M&A period without increasing the financial risk given the increase in debt capacity (Kim & McConnell, 1977). The EM variable has a mean of 2.97 ($SD=2.96$) which is a measure of the extent to which an acquirer utilizes its equity (Mishra et al., 2012). The prior studies reflect relatively higher EM values (Sridharan & John, 1998; Abraham, 2013)

whereas the lower EM value in Sri Lankan acquirer firms may suggest that there is room for improvement.

Table 2 denotes a mean LD value of 0.005 ($SD=0.15$) in line with US acquirer firms (Bouraoui & Li, 2014; Liu et al., 2018). The positive mean leverage value asserts that the acquirers are above their target leverage levels. Besides, the majority of businesses fall between -0.5 and 0.5, which suggests that a sizeable number of businesses are either overleveraged or underleveraged reflecting how firms change their leverage ratios after acquisitions. The mean 0.900 of the MoP variable denotes that the majority of the acquisitions are cash-financed transactions.

Table 2 Descriptive Statistics

Panel I - Target leverage calculation					
Variable	Mean	SD	Median	Min	Max
Leverage	0.2446	0.1679	0.2248	0.0000	0.8614
Firm Size	21.9977	2.2446	22.4606	14.2941	26.5463
Growth	1.2707	1.5579	0.8362	0.0000	14.8399
Profitability	0.0440	0.0942	0.0341	-0.6108	0.9430
Tangibility	0.4651	0.3257	0.5067	0.0000	1.9311
Liquidity	1.6619	1.9728	1.1675	0.0116	14.8692
Panel II - Main analysis					
Variable	Mean	SD	Median	Min	Max
ROA	0.0431	0.0975	0.0336	-0.6108	0.9430
ROE	0.0886	0.2774	0.0993	-1.5154	3.5712
LC	0.0119	0.0958	0.0022	-0.6293	0.6342
EM	2.9710	2.9584	1.9725	-0.1471	16.2784
LD	0.0049	0.1544	-0.0301	-0.2705	0.6470
MoP	0.9009	0.3240	0.5010	0.0000	1.0000

4.3 Correlation Analysis

Table 3 depicts the correlation coefficients between the explanatory variables. The tables show that the correlation coefficients of all variables are less than 0.90 and suggest the absence of multicollinearity issues in the sample (Tabachnick & Fidell, 1996). Further, reinforcing the above findings, a Variance Inflation Factor (VIF) test was conducted. The test results depict that all VIF values were less than 10 and tolerance values were above 0.1, thus, the study sample concluded that no multicollinearity exists in the models.

Table 3 Correlation Matrix – Main Analysis

Variable	LC	LD	EM	MoP	FZ	GRWT
LC	1					
LD	0.3144**	1				
EM	0.0217	0.0943**	1			
MoP	0.0031*	-0.0758**	-0.0125*	1		
FZ	-0.0733*	-0.1466**	0.1413**	0.0096*	1	
GRWT	-0.0058	0.1430**	0.0814*	0.0824*	-0.1408**	1

*, **, *** denote statistical significance at the 10per cent, 5 per cent and 1per cent level, respectively

Moreover, the study employed the Levin, Lin, and Chu (LLC) unit root test depicting that all variables are stationary at level by including the individual intercept.

4.4 Target Leverage Estimation

The F-test statistics ($p < 0.05$) (Table 5) imply that the fixed effects are non-zero, thereby, making the Fixed Effect (FE) preferred over the Pooled OLS model. Secondly, the Lagrange Multiplier test was used to determine the preferred approach between OLS and Random Effect (RE). The test results ($p < 0.05$) i.e., $\sigma_{\mu}^2 = 0$ demarcates the presence of random individual effects in the model (Baltagi, 2005). Therefore, the panel regression is preferred over the pooled OLS model. Thirdly, the Hausman test was conducted to determine between RE and FE models (Hausman & Taylor, 1981). Table 5 represents the Hausman test statistics ($p > 0.05$) implying that RE model would be consistent and efficient in analysing the data and the model's validity is demonstrated by significant (at 5 per cent) F statistics. Moreover, Fama and French's 48 industry classification was used to absorb industry year fixed effects.

Table 4: Fixed Effect Model

Independent variable	Dependent variable: Leverage ratio (LEV)			
	Fixed effect model			
	Coefficient	SE	t-stat	p-value
C	-0.3319	0.1096	-3.0300	0.0030
FZ	0.0258	0.0050	5.1700	0.0000**
GRWT	-0.0037	0.0039	-0.9300	0.3510
PROF	-0.3153	0.0580	-5.4400	0.0000**
TANGI	0.0954	0.0368	2.5900	0.0100**
LIQ	-0.0100	0.0030	-3.3200	0.0010**
R-square	0.1533			
F-statistic (p-value)	0.0000			

*, **, *** denote statistical significance at the 10per cent, 5 per cent and 1per cent level, respectively

The table represents the Fixed effect model coefficients. This table reports coefficients, standard errors, and t-values. LEV is the Leverage ratio which is a ratio between Debt to Total assets, FZ (Ln) (Firm Size) natural algorithm for total revenue, Growth opportunity (GRWT) is the market-to-book value ratio, PROF is the profitability which is Net income as a proportion of Total assets, TANGI (Tangibility) is the tangible assets a proportion of Total assets, LIQ (Liquidity) is the current asset ratio.

Table 5: Random Effect Model

Independent variable	Dependent variable: Leverage ratio (LEV)	
	Coefficient	SE
C	-0.2083	0.0884
FZ	0.0199**	0.0039
GRWT	-0.0011	0.0037
PROF	-0.3259**	0.0559
TANGI	0.1075**	0.0278
LIQ	-0.0113**	0.0029
Industry FE	control	
R-square	0.1884	
F-statistic (p-value)	0.0000	
F test	19.64**	
LM test	619.63**	
Hausman test	9.78	
No. of observations	630	

*, **, *** denote statistical significance at the 10per cent, 5 per cent and 1per cent level, respectively

The table represents the Random effect model coefficients. This table reports coefficients, standard errors, and t-values. LEV is the Leverage ratio which is a ratio between Debt to Total assets, FZ (Ln) (Firm Size) natural algorithm for total revenue, Growth opportunity (GRWT) is the market-to-book value ratio, PROF is the profitability which is Net income as a proportion of Total assets, TANGI (Tangibility) is the tangible assets a proportion of Total assets, LIQ (Liquidity) is the current asset ratio.

Table 5 represents the Random effect model coefficients derived in target leverage calculation. The Firm size has a significant positive impact on the leverage of the acquirer which suggests that large, diversified organisations have greater access to capital and debt markets thereby enhancing the debt capacity (Singh et al., 2003). Moreover, Profitability reflects a significant negative relationship with the leverage level at 5 per cent in line with the prior studies (Titman & Wessels, 1998; Rajan & Zingales, 1995). The positively significant

relationship between tangibility and leverage ($p < 0.05$) suggests the assets' potential to serve as collateral and higher liquidation value, possibly indicating better debt capacity. Liquidity reflects a negatively significant relationship with the leverage levels at a 5 per cent significance level. However, the negative and non-significant relationship between Growth and leverage ($p < 0.05$) can be owing to the lower growth opportunities in the Sri Lankan context. The fitted value of this regression is defined as the target leverage ratio where the LD is then calculated by taking the difference between the actual leverage ratio and the target leverage ratio ($D_{t-1} - D_t$) (Lin & Lee, 2016). LDs that are positive show that the company is overleveraged and the negative depict that the firm is under-levered. The LD was then used as an independent variable in the final analysis.

4.5 Tests For Data and Models

Prior to employing the GMM technique, the study used multiple benchmark specification tests (Table 6). Firstly, the Sargen test results depict the validity of the instruments which was further reinforced using the Hansen test statistics. Secondly, the Arellano Bond First-order and Second-order autocorrelations tests indicate the absence of second-order autocorrelation. Thirdly, the Wald test results depict the significance of capital structure proxies. In addition, the endogeneity of the variables was revealed through the Wu-Hausman test, evidencing the suitability of the dynamic panel system GMM model. Further, robustness checks were carried out using alternative time periods to ensure the stability and reliability of the results (Appendix 1).

Table 6 Coefficient Estimates under the Two-Step System GMM Estimation Model

	Model 1		Model 2	
	Coefficients	SE	Coefficients	SE
ROA _(t-1)	0.458**	0.034		
ROE _(t-1)			0.068**	0.002
LC	-0.104**	0.049	-0.210**	0.072
LD	0.175**	0.057	0.265**	0.124
EM	-0.013**	0.004	-0.090**	0.002
MoP	0.9715	0.072	0.3869	0.130
FZ(ln)	0.006***	0.004	0.059**	0.027
GRWT	0.008**	0.001	0.061**	0.015
Wald χ^2	225.430(0.000)		9531.960(0.000)	
Sargan test	14.998(0.308)		16.159(0.241)	
Hansen test	5.3372(0.0693)		3.7676(0.1520)	
Arellano-Bond AR (1)	-2.347(0.019)		-0.834(0.404)	

Arellano-Bond AR (2)	-0.696(0.486)	-1.189(0.235)
Durbin chi-square value	17.3067 (0.0000)	10.4838 (0.0012)
Wu- Hausman test	17.7142 (0.0000)	10.4838 (0.0012)
No. of instruments	20	20
No. of groups	90	90
No. of observations	540	540

Note: **, ***Significant at 0.05, and 0.1 levels respectively

The table displays regression results under the Two-step system Generalized Method of Moments (GMM). Acquirer financial performance was measured using the ROA (Model 1) and the ROE (Model 2). The coefficient of each variable is indicated by the corresponding standard error value. ROA (Return on Asset) is the Net income as a proportion of Total assets, ROE (ROE) is the ratio of Net income to shareholder's Equity, LC (LC), LD (LD), EM (EM), FS (Ln) (Firm Size) natural algorithm for total revenue, Growth opportunity (GRWT) is the market to book value ratio. The Wald test (χ^2) measures the combined significance of estimated coefficients that are asymptotically distributed as chi-square under the null hypothesis of no connection.

Table 6 denotes that LC is negative and has a statistically significant effect on ROA at a 5 per cent significance level ($\beta = -0.104$ $p < 0.05$). The outcomes imply that an increase in the leverage ratio leads to a rise in the cost of debt in terms of bankruptcy and agency costs which may outweigh the advantages of debt, and result in poorer acquirer performance and vice versa. However, the findings are not in line with ToT which assumes a favourable correlation between financial leverage and financial performance (Ayaz et al., 2021). Additionally, the increasing interest payments brought on by higher debt capacity during the post-M&A period tend to drain the company's cash flow and may limit its capacity in terms of investing in profitable and acquisition-related value-creating operations in the future (Habeck et al., 2000).

Further, a negatively significant relationship was found between LC and post-M&A ROE of the acquirers at 5 per cent ($\beta = -0.210$ $p < 0.05$). Findings are consistent with studies conducted in developed countries (Rajan & Zingales, 1995; Titman & Wessels, 1988) as well as in developing economies (Kyereboah-Coleman, 2007). The study findings suggest that firms with larger leverage ratios may raise agency costs by threatening bankruptcy. The resulting agency problem may have an unfavourable impact on the equity owners of the acquirers and deteriorate their ROE (Sangeetha & Sivathaasan, 2013). In the aftermath of acquisitions, the company's financial structure markedly alters, forcing debt service to take precedence, which reduces management's financial flexibility affecting the shareholder value creation process (Korteweg, 2010). Furthermore, excessive debt usage may hinder management's capacity to pursue potentially lucrative investments, a phenomenon known as risk balancing, which directly influences reducing shareholder ROE (Hitt et al., 1991).

Table 6 depicts a positive and significant association between LD and ROA at 5 per cent ($\beta=0.175$ $p<0.05$). A plausible justification is that through greater deviations from the target leverage levels, an acquirer may exploit financial synergies to benefit from improvement in financial abilities, tax benefits from increased debt capacities, reasonable tax avoidance via M&As, and decreased bankruptcy risk through diversification of the merged entity. These benefits tend to generate a lower WACC and in turn maximize shareholder wealth (Hamza et al., 2016; Kumar, 2009). However, in contrast, the literature suggests that greater divergence from a company's desired capital structure can be costly for an acquirer due to the increase in agency cost, bankruptcy cost, and financial distress cost (Chen et al., 2019). Nevertheless, the positive relationship can be attributable to the unsustainable aggressive leveraged expansions and acquisitions executed by the acquirers' keen for tax benefits.

Table 6 elucidates that the LD is positively significant with the acquirer's ROE ($\beta=0.265$ $p<0.05$). This reflects that the higher debt beyond optimal leverage levels increases the danger of financial instability, forcing management to prioritize projects with a positive net present value (NPV) which may result in maximizing shareholder wealth, resulting in an improved ROE. Moreover, large acquirers tend to excessively utilize external borrowing as a means of coping with the high corporate tax rates prevailing in Sri Lanka (Pratheepan & Yatiwella, 2016). These tax benefits tend to improve the returns of the equity holders of the acquirers. Moreover, it was found that 54 per cent of the Sri Lankan firms had a flexible target, 29 per cent a tight target, 7 per cent a strict target, and 11 per cent had no target (Pratheepan & Yatiwella, 2016). Thus, it is noteworthy that more than 50 per cent of the firms maintain flexible targets, allowing firms to deviate freely from debt-to-equity targets while maximizing shareholder performance.

Table 6 depicts a negatively significant relationship between the EM and ROA at 5 per cent ($\beta=-0.013$ $p<0.05$). A high EM implies that a corporation is heavily reliant on debt to fund its assets and tends to expand debt beyond the target and thus, bears higher debt servicing costs and financial distress costs reducing the firm performance (Mishra et al., 2012). The study outcomes are in line with Abraham (2013) who asserted that an increase in the EM ratio has not resulted in superior financial performance conducted by considering the Saudi Banks. Also, Bao (2017) asserted that a reduction in EM demonstrates the improvement in the leverage structure of the banks and thereby a boost in the company financial performance. Similarly, a negatively significant relationship was found between EM and ROE at 5 per cent

($\beta=-0.089$ $p<0.05$). The study findings are in line with the study conducted by Gatsi et al. (2016). Geyfman and Walker (2018) also noted that the EM marginally dropped with a slight increase in the acquirers' ROE during the post-M&A period.

The study results depict a positively significant relationship between the control variables Firm Size and ROE at 5 per cent and Firm Size and ROA at a 10 per cent significant level. The positive relationship suggests large firms enhance the firm performance primarily driven by the larger scope and the economies of scale enjoyed by the acquirer (Bertrand & Betschinger, 2012; Kwenda et al., 2017). Further, growth opportunity has a significant positive relationship with ROA ($\beta=0.008$ $p>0.05$) and ROE ($\beta=0.058$ $p>0.05$). This suggests that growth opportunities create new positive NPV-generating projects thereby improving the firm's performance. Nevertheless, the findings depict a non-significant relationship between the MoP and post-merger M&A performance.

5 Conclusion

The study aims to identify the impact of DToT on the acquirer's financial performance during the post-M&A period. The study findings depict that LC has a negative and significant relationship with firm performance. Despite greater tax savings and lower agency costs, it is argued that shareholders can only assume advantages over debt holders to the point when the merged firm's value is maximized, and when acquirers are overleveraged, it destroys the value. This could be attributable to the irrational managerial decisions making in line with the Hubris hypothesis. The study results show a significantly positive relationship between LD and the acquirer's financial performance during the post-M&A period. The cyclical economic conditions and internal and external shocks in the Sri Lankan context may explain the large leverage deviation from the target levels. Managers tend to maximize shareholder wealth by exploiting these deviations. Finally, the findings reveal a negatively significant relationship between the EM and the acquirer's financial performance in the aftermath of an acquisition. When analysing the Sri Lankan acquirers, a high multiplier risk could be seen, meaning that the firms are heavily dependent on debt financing. This increases the firm risk and bankruptcy costs leading to lower firm performance. Nevertheless, the study findings are in line with the DToT which buttresses that acquirers have optimal capital structures and return to those targets when benefits exceed the costs of doing so. However, this is one of the first kinds of studies to empirically connect M&As and DToT to understanding the realization of potential M&A synergies from a frontier market's perspective.

5.1 Implications

The findings are imperative for frontier markets to understand the post-M&A behavior and enable the related parties to make informed decisions. Further, the regulators could revamp the existing takeover and merger code by initiating policies to introduce leverage ratio caps post M&A, mandate pre and post deal disclosure requirements, improve disclosures on financing methods, require third-party fairness opinions, enhance minority shareholder protection and incentivize prudent debt management. The study findings are vital for the managers to provide actionable guidance such as guidelines on balancing tax benefits of leverage against financial risk, scenario based capital planning in M&A deals, prioritizing capital structure adjustments in line with financial goals, and strategies on gradually adjusting towards the optimal leverage after acquisitions and avoiding value destroying acquisitions.

5.2 Limitations and Future Research

The study being one of the preliminary M&A-related studies in Sri Lanka, the study sample was confined to 90 listed acquirer companies given the availability of data publicly which can be expanded to private acquirer firms as well as to other South Asian nations to improve the outcomes. Further, the study has considered only three proxies of dynamic capital structures where new measures along with additional control variables can be introduced to strengthen the study outcomes. Despite the use of the system GMM technique in the analysis to address the endogeneity issues, the model can be sensitive to instrument selection and specification as the weak instruments lead to biased or inconsistent estimates. Further, exclusion of data beyond 2019 limits the ability of the study to account for the effects of external shocks that are particularly relevant for frontier market contexts whereas the future studies could address this gap by conducting comparative studies across pandemic and post pandemic periods and crisis and non-crisis periods to generalize findings across different economic conditions.

This will be the starting point for extended future research on the DToT in the M&A sector in Sri Lanka and could expand to integrate other strategic decisions such as divestitures, and joint ventures. Further, the incorporation of new mathematical modeling tools into future studies could modify the study outcomes. The study is completely based on quantitative data and thus does not capture the qualitative effects of dynamic capital structures on M&As such as government regulations, economic conditions, and macroeconomic factors which are considered to significantly impact on consolidations that happen in an economy.

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Appendix 1

To ensure the robustness of the investigation, the same analysis was carried out for an additional two years post-acquisition. The overall findings support the argument that dynamic capital structures play an important role in the post M&A performance of acquirer firms.

Table 7 Robustness test results using an alternative time period

	Model 1	Model 2
	Coefficients	Coefficients
ROA _(t-1)	0.208*(0.012)	
ROE _(t-1)		0.079**(0.103)
LC	-0.094**(0.105)	-0.541**(0.045)
LD	0.105**(0.062)	0.568(0.231)
EM	-0.020**(0.015)	-0.069*** (0.002)
MoP	0.875(0.192)	0.745(0.320)
FZ(ln)	0.012*** (0.012)	0.048**(0.078)
GRWT	0.008**(0.015)	0.072*** (0.042)
Wald χ^2	331.630(0.000)	7835.460(0.000)
No. of instruments	20	20
No. of groups	90	90
No. of observations	720	720

Note: *, **, ***Significant at 0.01, 0.05, and 0.10 levels respectively.