THE ROLE OF EARNED AND CONTRIBUTED CAPITAL MIX IN DETERMINING DIVIDEND POLICY: A LIFE CYCLE PERSPECTIVE IN THE SRI LANKAN CONTEXT

Indunika, D.P.A.M[1], Wijesinghe, B.A.C.H.[2]

[1,2]Department of Accountancy, Faculty of Business Studies & Finance, Wayamba University of Sri Lanka
[1]dpamindunika@gmail.com, [2]harshani@wyb.ac.lk

ABSTRACT

This study examines the influence of the mix of earned and contributed capital on dividend policy, utilizing empirical evidence from the Colombo Stock Exchange. A sample of 50 non-financial companies was collected for data analysis spanning from 2011 to 2020, resulting in 500 observations. Drawing from existing literature, earned/contributed capital mix was designated as the independent variable, while dividend payout served as the dependent variable. The earned/contributed capital mix was quantified using earned equity to total equity (RE/TE) and earned equity to total asset (RE/TA) ratios. Correlation analysis confirms the absence of multicollinearity among the independent variables. The regression analysis yields a significant negative association between RE/TA and dividend payout. However, the relationship between RE/TE and dividend payout is not statistically significant. These findings suggest that firms with a higher proportion of earned capital relative to total assets tend to distribute lower dividends. Conversely, the non-significant relationship with RE/TE implies that the overall earned capital to equity ratio may not be a strong determinant of dividend policy in this context. The negative association with RE/TA suggests that younger firms in the Sri Lankan market, with a higher proportion of earned capital relative to total assets, exhibit a greater propensity for dividend payouts. Consequently, the study's findings challenge the life cycle hypothesis of dividends, indicating its lack of support within the Sri Lankan setting. The study's scope is delimited to secondary data analysis, thus suggesting an extension of research using a triangulation approach to garner more comprehensive insights in future studies.

Keywords: Dividend Policy, Earned/Contributed Capital Mix, Life Cycle Theory, Colombo Stock Exchange

1.INTRODUCTION

The determination of dividend distribution stands as a pivotal and extensively scrutinized subject within managerial finance discourse in contemporary business realms. Upon realizing a profit, thereby prompting the potential disbursement of dividends to shareholders, a corporation is confronted with the strategic decision of allocating these earnings either towards dividend payments to shareholders or towards internal reinvestment endeavours.

Since cash is considered the company's lifeblood and oxygenated when derived from earnings, managers must now decide whether to distribute it as dividends or retain it for future growth. If the latter option is chosen, the company's health will deteriorate, and the company will contract the solvency disease. In reality, dividend distributions negatively impact the company's value because they eliminate future projects (Rafique and Javaid, 2017). Therefore, the debate arises about why companies pay dividends. Though several studies have tried to find an answer to this debate in different aspects, no definitive solution has been reached. Among those studies, the life cycle theory by Mueller (1972) is a pioneering study that highlights that mature and established companies pay higher dividends because they have more resources and undertake fewer investment projects, whereas new companies with limited resources pay lower dividends to finance their investment opportunities. The cost-benefit trade-off between dividend distribution expenses and benefits is implied or evident in life cycle explanations.

The lifecycle theory will be tested in this study by determining whether a firm's likelihood of paying dividends positively correlates with the mix of earned and contributed capital. Accordingly, the study focuses on whether companies with relatively large retained earnings as a percentage of total equity (RE/TE) and total assets (RE/TA) are more likely to pay dividends. According to DeAngelo et al. (2006), the ratio of earned capital to contributed capital is a plausible proxy for the stage of the lifecycle that a company is currently in because it gauges how dependent a company is on external capital or how self-sufficient it is. DeAngello (2006) explains that companies with low RE/TE (and RE/TA) ratios are typically in the early stages of their life cycles and require capital infusions since a low percentage of the capital is earned relative to the contributed capital. For such firms, retaining earnings dominates the distribution of dividends as raising external capital is fairly expensive, and these companies are less likely to become dividend payers despite their rapid development and enormous growth potential.

In contrast, companies with a high RE/TE (and RE/TA) become more likely to mature since they have considerable cumulative earnings and are largely self-reliant. It makes them suitable candidates for dividend payments since they have a restricted pool of investment opportunities and a declining cost of borrowing outside capital. This is consistent with Jensen (1986), who foregrounds that a significant portion of free cash flow that managers control might exacerbate the agency problem since managers give managers incentives to grow the organization larger than it should be. One way to lessen the agency issue is by paying dividends. As a result, dividend payments are more likely for companies with high RE/TE (and RE/TA). Researchers worldwide have delved into the lifecycle theory since Mueller's (1972) study and have come to a variety of results. According to some researchers (DeAngelo and Stulz, 2006; Denis and Osobov, 2008; Brockman and Unlu, 2009; Yusra et al., 2018), the life cycle of a company has an impact on the dividend decision. However, some researchers have contradicting evidence against the life cycle hypothesis (Ishikawa, 2011). On the other hand, others discovered inconsistent outcomes for various circumstances (Trotz, 2013). While researchers in Sri Lanka have mainly concentrated on various

dividend policy theories (Dewasiri et al., 2019; Baker et al., 2019), they have not given the lifecycle theory their entire attention. In light of the lifecycle theory of dividends, this research investigates the effect of the mix of earned and contributed capital on the dividend policy of firms listed on the Colombo Stock Exchange (CSE). Our study contributes to the existing literature, providing further empirical results for the life cycle theory from Sri Lanka, an emerging context.

The remainder of this paper is organized as follows: section two discusses the literature, section three describes the methodology, and section four presents the results and analysis. Finally, section five offers the conclusion of the study.

2.LITERATURE REVIEW

Theoretical Literature

Berle and Means (1932) introduced agency theory to elucidate the impact of the ownership-control gap on modern businesses. Within the context of agency problems between managers and owners, dividend payments serve as a mechanism to mitigate agency conflicts and reduce associated costs. Easterbrook (1984) further emphasizes that cash dividends diminish monitoring costs and mitigate managerial risk aversion. Investment banks and market observers also scrutinize firms issuing additional shares or debt securities to fund business opportunities, ensuring alignment with shareholder interests. Transaction cost theory, as proposed by Manos (2001), posits that firms and investors incur transaction costs when external capital must be raised due to dividend payments. This theory underscores that financing business activities with internal funds is less costly than issuing new securities. Consequently, firms facing high transaction costs may retain earnings to finance investment opportunities, while those paying higher dividends incur elevated external financing transaction costs (Higgins, 1972; Rozeff, 1982).

According to residual theory, firms distribute dividends only after fully funding all feasible investment options (Weston & Brigham, 1979). This perspective suggests that dividends should be considered residual since investment decisions aim to maximize owners' wealth in the context of varying taxes and transaction costs. Thus, firms with a high number of positive net present value projects exhibit a propensity for dividend distribution (Ghosh & Woolridge, 1989).

Mueller's (1972) lifecycle theory posits that mature firms pay higher dividends due to ample resources and fewer investment projects, while new firms with limited resources offer lower dividends to fund investment opportunities. This theory highlights the cost-benefit trade-off between dividend distribution expenses and benefits, suggesting that more established firms with higher profits and fewer investment opportunities exhibit higher dividend payouts.

Empirical Literature

Empirical evidence surrounding the relationship between the earned and contributed capital mix and dividend policy, based on lifecycle theory, has been extensively investigated globally.

DeAngelo and Stulz (2006) examined US firms from 1973 to 2002, utilizing the earned/contributed capital ratio (RE/TE or RE/TA) as a proxy for firm maturity. Their findings revealed a positive association between the ratio and dividend payments. This aligns with the life cycle theory, suggesting that mature firms with a higher proportion of retained earnings are more inclined to pay dividends.

Similar findings emerged from Denis and Osobov's (2008) study encompassing six developed nations (1989-2002). Firms with a higher RE/TE ratio exhibited a greater propensity for dividend payouts, further supporting the life cycle theory. Expanding the analysis to a broader global context, Brockman and Unlu (2009) analyzed data from 52 countries. They observed a positive correlation between the retained earnings to book value of assets ratio and both the likelihood of dividend payments and the dividend payout ratio. These findings provide additional evidence for the life cycle theory's validity.

While substantial research supports the life cycle theory, some studies present contrasting findings. Ishikawa (2011) examined Japanese data, revealing that growing firms prioritize dividend increases, potentially contradicting the theory's prediction of higher dividends from mature firms. Similarly, Aigbovo (2022) found no significant impact of earned/contributed capital mix on dividend payouts, while firm age exhibited a negative effect. These findings deviate from the life cycle theory's core proposition.

Despite these discrepancies, recent research continues to support the life cycle theory. Rafique et al. (2017) suggest that mature firms with limited investment opportunities but high profitability pay dividends while dividend-reducing firms retain earnings for future growth. These observations align with the life cycle theory. Furthermore, Yusra et al. (2018) analyzed Indonesian firms (2012-2016) and found the RE/TE ratio to be the most significant factor influencing dividend payments, further supporting the theory. Similarly, AL Sawalqa (2022) obtained results consistent with the life cycle theory when investigating Jordanian firms (2015-2019).

In conclusion, the life cycle theory remains a valuable framework for understanding the relationship between firm maturity and dividend policy. The earned/contributed capital mix serves as a useful proxy for firm maturity, with a positive association observed between a higher ratio and a greater propensity for dividend payouts. While some studies offer contrasting viewpoints, a significant body of research supports the core tenets of the life cycle theory.

3.METHODOLOGY

The study population consisted of 297 listed companies on the Colombo Stock Exchange (CSE) as of February 18, 2022. However, for the purpose of this study, only non-financial companies listed on the CSE were considered due to structural reporting differences between financial and non-financial entities. Consequently, a stratified random sampling approach was adopted to select a sample of 50 companies

representing various non-financial sectors. Secondary data spanning from 2011 to 2020 were collected from the annual reports of the selected companies, resulting in a total of 500 observations. Panel data regression was employed as the analytical method for the study.

The study's variables, both dependent and independent, as well as control variables, were chosen in accordance with the framework proposed by DeAngelo et al. (2006). The independent variable, the Earned/Contributed Capital Mix, was proxied using two measures: Earned Equity to Total Equity (RE/TE) and Earned Equity to Total Assets (RE/TA). The dependent variable, Dividend Payout, was represented by the dividend payout ratio. Additionally, profitability, sales growth, asset growth, level of capital ownership, and firm size were selected as control variables.

The research model is delineated as follows.

$$DP = \beta_0 + \beta_1 RE/TE + \beta_2 RE/TA + \beta_4 PR + \beta_5 SG + \beta_6 AG + B_7 LCO + \beta_8 FS + \acute{\varepsilon}_i$$

Where; DP is the dividend payout, RE/TE indicates earned equity to total equity, RE/TA indicates earned equity to total asset, PR is the profitability (return on asset), SG represents the sales growth (sales growth rate), AG is the asset growth (asset growth rate), LCO indicates the level of capital ownership (ratio of total common equity to total assets), FS is firm size (logarithm of total assets) and the $\acute{\varepsilon}_i$ is the error term.

The hypotheses of the study are derived from previous literature as follows.

H_1 = Earned equity to total equity has a significant impact on the dividend policy

H_2 = Earned equity to the total asset has a significant effect on the dividend policy

4.FINDINGS AND DISCUSSION

Table 01 presents descriptive statistics, including the mean, standard deviation, maximum, and minimum values of the study variables.

Table 1: Descriptive Statistics

	DP	RE_TE	RE_TA	PR	SG	AG	LCO	FS
Mean	0.124	0.443	0.235	0.074	0.168	0.156	0.556	20.76
Median	0.204	0.446	0.172	0.049	0.081	0.101	0.533	21.67
Maximum	17.35	1.23	1.282	1	20.17	7.46	7.807	28.95
Minimum	-58.27	-1.322	-0.182	-1	-0.992	-0.9	0.07	13.10
Std. Dev.	3.439	0.292	0.216	0.139	1.021	0.434	0.446	3.542
Skewness	-13.99	0.442	1.346	1.835	15.74	10.97	9.159	-0.50
Kurtosis	226.1	4.701	4.991	19.85	299.3	170.8	144.6	2.075

The descriptive statistics reveal that the minimum and maximum dividend payout values are -58.278 and 17.357, respectively. On average, companies have maintained a dividend payout ratio of 0.124. The standard deviation of 3.439 indicates a moderate degree of dispersion in dividend distribution. The mean values of RE/TE and RE/TA suggest that companies have retained approximately 44.3% of earnings as a proportion of total equity and 23.5% as a percentage of total assets. Moreover, the standard deviations of RE/TE (0.292) and RE/TA (0.216) suggest that the values are only marginally deviated from the mean.

Correlation Analysis

Table 02 presents the results of the correlation analysis. The findings indicate the absence of multicollinearity issues. Additionally, the analysis reveals a positive relationship between profitability, asset growth, and firm size with dividend payout. Conversely, a negative relationship is observed between sales growth and the level of capital ownership with dividend payout.

Table 2: Correlation Analysis

	DP	RE_TE	RE_TA	PR	SG	AG	LCO	FS
DP	1							
RE_TE	-0.016**	1						
RE_TA	-0.047**	0.368	1					
PR	0.053**	0.111	0.229	1				
SG	-0.005	-0.044	0.010	0.106	1			
AG	0.023	-0.081	-0.073	0.036	0.022	1		
LCO	-0.026	-0.120	0.330	0.056	0.035	-0.065	1	
FS	0.021*	0.074	-0.104	-0.006	-0.019	0.090	-0.212	1

Regression Analysis

The results of the panel data regression analysis are depicted in Table 3.

Table 3. Results of the Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.130	1.028	-0.126	0.900
RE_TE	0.419	0.831	0.504	0.615
RE_TA	-1.342**	1.198	-1.120	0.026
PR	1.465**	1.178	1.243	0.021
SG	-0.047	0.154	-0.307	0.759
AG	0.088	0.365	0.241	0.809
LCO	0.011	0.426	0.025	0.980
FS	0.013	0.045	0.280	0.780

The research model can be estimated based on the regression outcomes.

DP = -0.130 + 0.419 RE/TE - 1.342 RE/TA + 1.465 PR - 0.047 SG + 0.088 AG + 0.011 LCO+ 0.013 FS

The Hausman test (P value: 0.7629) was employed to choose between the fixed effect model and the random effect model, determining the fixed effect model as the most suitable for analyzing the data. The regression analysis findings indicate support only for H1b, while H1a is not supported. This outcome suggests that, in contrast to Earned Equity to Total Equity, Earned Equity to Total Assets exerts a significant negative influence on dividend policy. Specifically, a higher Earned Equity to Total Equity ratio correlates with a notably lower dividend payout. This finding aligns with Ishikawa's (2011) research, which indicates that newer companies in Sri Lanka tend to increase dividends more than established ones. In a surprising turn of events, this study's results upend the prevailing notion of the dividend life cycle, as presented in DeAngelo (2006), by directly contradicting the primary literature in this field.

5.CONCLUSION

This study investigated the influence of the earned and contributed capital mix on the dividend policy of companies listed on the Colombo Stock Exchange (CSE), with a particular focus on the applicability of the life cycle theory of dividends in this context. The analysis employed a 10-year panel dataset encompassing 50 companies and 500 observations from 2011 to 2020.

The results provide compelling evidence for a significant negative association between the ratio of earned equity to total assets and dividend payout policy. This implies that, in line with the life cycle theory's prediction of higher dividend payouts in mature firms, companies with a greater proportion of retained earnings (earned equity) exhibited a lower propensity for dividend distribution. However, this relationship was statistically negative, suggesting a potential deviation from the life cycle theory within the Sri Lankan market. This challenge throws open the door for a reevaluation of longstanding assumptions about dividend policy, potentially paving the way for a new era of financial theory while highlighting the need for further exploration of alternative dividend policy determinants that may be more relevant to the specific economic and regulatory environment of Sri Lanka.

These insights hold potential value for various stakeholders. Investors and potential investors, for instance, can leverage this knowledge to incorporate the earned and contributed capital mix into their decision-making processes when evaluating dividend-paying prospects of listed companies on the CSE.

It is essential to acknowledge the limitations of this study. The reliance on secondary data analysis from a sample of 50 companies over a 10-year timeframe necessitates further research. Future studies could benefit from employing a triangulation approach, potentially combining quantitative data with qualitative interviews with industry experts or company management, to gain a more comprehensive understanding of dividend policy decision-making within the Sri Lankan context.

REFERENCES

Aigbovo, O., & Evbayiro-osagie, I. E. (2021). Testing the dividend life cycle theory: evidence from selected sub-saharan african countries. *Journal of Academic Research in Economics*, *13*(2).

Al Sawalqa, F. A. (2021). Lifecycle Theory of Corporate Dividend Policy in Jordan: The Role of Equities, Assets, and Age during the Period 2015-2019. *The Journal of Asian Finance, Economics and Business*, *8*(6), 1-11.

Baker, H. K., Dewasiri, N. J., Koralalage, W. B. Y., & Azeez, A. A. (2019). Dividend policy determinants of Sri Lankan firms: a triangulation approach. *Managerial Finance*, *45*(1), 2-20

Brockman, P., & Unlu, E. (2009). Dividend policy, creditor rights, and the agency costs of debt. *Journal of Financial Economics*, *92*(2), 276-299.

Brockman, P., & Unlu, E. (2009). Dividend policy, creditor rights, and the agency costs of debt. *Journal of Financial Economics*, *92*(2), 276-299.

DeAngelo, H., DeAngelo, L., Stulz, R.M. (2006), Dividend policy and the earned/contributed capital mix: a test of the lifecycle theory, *Journal of Financial Economics, 81*(2), 227–254.

Denis, D. J., & Osobov, I. (2008). Why do firms pay dividends? International evidence on the determinants of dividend policy. *Journal of Financial Economics, 89*(1), 62-82.

Dewasiri, N. J., Koralalage, W. B. Y., Azeez, A. A., Jayarathne, P. G. S. A., Kuruppuarachchi, D., & Weerasinghe, V. A. (2019). Determinants of dividend policy: evidence from an emerging and developing market. *Managerial Finance.*,*45*(3), 413-429.

Ishikawa, H. (2011). Empirical analysis on the dividend lifecycle theory: Evidence from Japan. *The Japanese Accounting Review, 1(*2011), 39-60.

Mueller, D.C. (1972) A Life Cycle Theory of the Firm. *Journal of Industrial Economics*, *20*(3), 199-219.

Yusra, I., Hadya, R., & Fatmasari, R. (2019). The Effect of Retained Earnings on Dividend Policy from the Perspective of Life Cycle. *In 1st International Conference on Life, Innovation, Change and Knowledge (ICLICK 2018)*, 216-220. Atlantis Press.

DeAngelo, H., DeAngelo, L., Stulz, R.M. (2006), Dividend policy and the earned/contributed capital mix: a test of the lifecycle theory, *Journal of Financial Economics, 81*(2), 227–254.

Mueller, D.C. (1972) A Life Cycle Theory of the Firm. *Journal of Industrial Economics, 20*(3), 199-219.

Denis, D. J., & Osobov, I. (2008). Why do firms pay dividends? International evidence on the determinants of dividend policy. Journal of Financial economics, 89(1), 62-82.

Brockman, P., & Unlu, E. (2009). Dividend policy, creditor rights, and the agency costs of debt. *Journal of Financial Economics, 92*(2), 276-299.

Yusra, I., Hadya, R., & Fatmasari, R. (2019). The Effect of Retained Earnings on Dividend Policy from the Perspective of Life Cycle. *In 1st International Conference on Life, Innovation, Change and Knowledge (ICLICK 2018)* (pp. 216-220). Atlantis Press.

Ishikawa, H. (2011). Empirical analysis on the dividend lifecycle theory: Evidence from Japan. *The Japanese Accounting Review, 1(*2011), 39-60.

Dewasiri, N. J., Koralalage, W. B. Y., Azeez, A. A., Jayarathne, P. G. S. A., Kuruppuarachchi, D., & Weerasinghe, V. A. (2019). Determinants of dividend policy: evidence from an emerging and developing market. *Managerial Finance.,45*(3), 413-429.

Baker, H. K., Dewasiri, N. J., Koralalage, W. B. Y., & Azeez, A. A. (2019). Dividend policy determinants of Sri Lankan firms: a triangulation approach. *Managerial Finance, 45*(1), 2-20