

## **CAPITAL MIX AND FIRM VALUE INDUSTRIAL SECTOR COMPARISON: COLOMBO STOCK EXCHANGE**

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### **Abstract**

*This study aimed to examine the impact of a firm's capital mix on its value. There was a methodological gap in the capital mix literature, which focused highly on the single or all industrial sectors as an average. Hence, to fill this gap, this study compared the impact of capital mix on the firm value of five industrial sectors in the Colombo Stock Exchange (CSE). The capital mix, the study's independent variable, was measured through the Debt Ratio (DR) and Debt-to-Equity Ratio (DER). In contrast, the firm value, the study's dependent variable, was measured using the Market-to-Book Value Ratio (MBVR). The data of 101 Public Limited Companies was collected for 11 years from 2012 to 2022. The findings revealed a significant negative impact of DR on MBVR in the capital goods sector and Food, Beverage and Tobacco sector an insignificant negative impact of DR on MBVR in the consumer durables sector, material sector, and real estate management and development sector. Further, it reveals a significant positive impact of DER on MBVR in capital goods sector and real estate management and development sector and an insignificant positive impact of DER on MBVR in consumer durables sector, material sector, and Food, Beverage and Tobacco sector in CSE. When the industry average was considered, a significant positive impact of DR and an insignificant positive impact of DER were found on MBVR. Finally, the conclusion derived from the study was that the impact of capital mix on firm value was not equivalent in different industrial sectors in the Sri Lankan context. It is recommended to have a separate investigation of the impact of capital mix on firm value for different industrial sectors.*

**Keywords:** Capital mix, Colombo Stock Exchange, firm value, industrial sectors

**JEL Classification:** G32, G11

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## **1 Background**

The ultimate financial goal of any business is to maximize the Firm's value on its owner's behalf. Thus, firm value becomes a crucial indicator in financial decision-making, and financial managers are enthusiastic about the factors affecting firm value. Various scholarly efforts have been found in the literature in recognizing the factors affecting to firm value, such as capital mix/structure (Alfian & Ghazali, 2024; Anandita & Septiani, 2023; Bidaya *et al.* 2023; Bui, 2023; Irsad *et al.* 2023; Siregar *et al.*2023; Sonjaya & Muslim, 2023; Talreja *et al.* 2023; Afridi *et al.* 2022; Alisa & Aryani, 2022; Akhmadi *et al.* 2022; Almomani *et al.* 2022; Ferriswara *et al.* 2022; Purnamasari & Fauziah, 2022; Rinaldy & Kalalo, 2022; Amin, 2021; Dang & Do, 2021; Duc, 2021; Hasanuddin, 2021; Putro & Risman, 2021; Nursetya & Hidayati, 2020; Hirdinis, 2019; Tabe *et al.*, n.d.), profitability (Alfian & Ghazali, 2024; Bidaya *et al.* 2023; Irsad *et al.* 2023; Siregar *et al.*2023; Alisa & Aryani, 2022; Akhmadi *et al.* 2022;), dividend policy (Alfian & Ghazali, 2024; Anandita & Septiani, 2023; Siregar *et al.*2023; Purnamasari & Fauziah, 2022; Hasanuddin, 2021;), liquidity (Bidaya *et al.* 2023; Putro & Risman, 2021;), corporate governance (Ferriswara *et al.* 2022;), working capital turnover (Rinaldy & Kalalo, 2022;), firm size (Irsad *et al.* 2023; Afridi *et al.* 2022; Purnamasari & Fauziah, 2022; Rinaldy & Kalalo, 2022; Nursetya & Hidayati, 2020; Hirdinis, 2019; Tabe *et al.*, n.d.), growth of Firm (Irsad *et al.* 2023; Talreja *et al.* 2023; Amin, 2021;), investment decisions (Hasanuddin, 2021; Afridi *et al.* 2022; Tabe *et al.*, n.d.) etc.

Thus, identifying such factors adds more value to the firm's financial decisions, enhancing the firm value. Enhancing firm value is vital for investors, potential investors, and other stakeholders in making their decisions towards firms. The capital mix or capital structure, denoted by a firm's equity capital and debt capital, plays an important role in deciding the firm value, as evidenced in the literature. Though much empirical evidence is available to assess the impact of capital mix on firm value, inconclusive results are found. A similar perspective exists in the theoretical aspects of capital structure as the dilemma in the capital structure theories concerning the impact of capital mix on firm value and its cost of capital. Therefore, it is still important to investigate the effect of capital mix on firm value.

Even though the empirical findings are available to assess the impact of capital mix on firm value, most of the studies were done based on the companies in the individual industrial sector in stock exchanges or several industrial sectors considering the average ((Alfian & Ghazali, 2024; Anandita & Septiani, 2023; Bidaya *et al.* 2023; Bui, 2023; Irsad *et al.* 2023;

Siregar *et al.* 2023; Sonjaya & Muslim, 2023; Talreja *et al.* 2023; Afridi *et al.* 2022; Alisa & Aryani, 2022; Akhmadi *et al.* 2022; Ferriswara *et al.* 2022; Purnamasari & Fauziah, 2022; Rinaldy & Kalalo, 2022; Amin, 2021; Duc, 2021; Hasanuddin, 2021; Putro & Risman, 2021; Nursetya & Hidayati, 2020; Hirdinis, 2019; Tabe *et al.*, n.d.), The lack of studies were found based on the comparison of findings of several sectors in stock exchanges (Almomani *et al.* 2022; Dang & Do, 2021). Thus, this study tries to fill this methodological gap by comparing five main industrial sectors: capital goods, consumer durables, material, Food, Beverage and Tobacco, and real estate management and development sectors in CSE.

In addition to this methodological gap, another research gap was found based on the mix and inconclusive findings of the previous research studies. Though there were previous research studies as mentioned in the above section, to identify the impact of capital mix on firm value in different research contexts, a literature gap exists, since the findings of these research studies are different and thus, mix and inconclusive results can be seen. Therefore, this study tries to fill this research gap as well.

Therefore, this study aims to investigate the impact of capital mix on firm value in different industrial sectors in Sri Lanka based on a comparison of different industrial sectors. Thus, the study seeks to answer the research question of what is the impact of capital mix on firm value in different industrial sectors in Sri Lanka. Apart from the study's main objective, it focuses on identifying the impact of the Debt Ratio on firm value in different industrial sectors and investigating the impact of the Debt Equity Ratio on firm value in different industrial sectors in the Sri Lankan context. Further, the main research question can be broken into two research questions: what is the impact of Debt Ratio on firm value in different industrial sectors? And what impact the debt-equity ratio has on firm value in different industrial sectors in Sri Lanka?

The findings of this study are important for the investors and potential investors to make their investment decisions, for the Financial Managers to identify the diversity in the impact of capital mix on firm value in different industrial sectors and to make financing decisions accordingly, for the academics and scholars to add more knowledge on the impact of capital mix on firm value; and for other interested parties of the firm.

## **2 Review of Literature and Knowledge Gaps**

### **2.1 Theoretical Background**

Several theories are available concerning the firm's capital mix, like the net income approach, net operating income approach, traditional model, Modigliani and Miller model, Trade-off theory, pecking order theory, Signaling theory, etc. Some of these theories support the Capital mix/structure Relevance, which focuses on the impact of capital mix on firm value. In contrast, some of the theories support the capital mix/structure irrelevancy, which focuses on the fact that capital mix has no impact on firm value. Since this study aims to find the impact of capital mix on firm value, the theoretical underpinnings should support the study's aim. Thus, the theories that support the capital mix/structure relevance, such as the net income approach, traditional model, trade-off theory, pecking order theory, and signaling theory, are considered the underpinning theories of this study. These theories are important for the study since the study's focus is to investigate whether the capital mix affects the firm's value or not. However, the trade-off theory is considered as the major underpinning theory of the study.

These underpinning theories argue that when a firm changes its capital mix, its value will be changed. Changes in capital mix are reflected through the changes in debt capital. Thus, debt capital reflects any firm's capital mix more than equity capital. Therefore, these theories conclude that the firm value will also increase when the amount of debt capital increases and does not exceed its optimum level (optimum capital mix). The reason for this situation is the interest tax shield and the ability of cheaper debt capital to decrease the cost of capital rather than the firm's return.

The optimal capital mix is the capital structure that optimizes the balance between risk and returns to maximize share prices. According to the theory of Modigliani and Miller, an increase in debt can increase the value of the firm if it has not reached its optimal point; this is strengthened by the Trade-off theory, which describes that if the Firm's capital mix is below the optimal level, any additional debt will increase the firm value, and vice versa; if the capital mix is above the optimal level, any increase in debt will reduce the Firm's value (Amin, 2021). Thus, the trade-off theory can be regarded as the main underpinning theory of the current study.

## **2.2 Capital Mix/Capital structure**

As a result of a firm's financing decisions, capital mix/structure may arise. Capital mix is the combination of debt capital and equity capital. Debt capital is aroused from external funds, such as bonds, debentures or long-term loans. In contrast, the equity capital is obtained from the internal sources of funds, such as ordinary shares and retained earnings. Ordinary shares can be identified as an internal fund source, even though they are also issued to the financial markets because the ownership of a firm is created through ordinary shares. According to Mubeen et al. (2020), capital mix/structure is a proportion of fulfilment of the company's spending needs using debt, equity, or issuing shares.

In accordance with Fahmi (2017), capital structure is an illustration of the proportional form of the company's finances, namely between owned capital, which comes from long-term debt (long-term liabilities), and own capital (shareholders' equity), which is a source of financing for a company. Capital structure is part of the financial structure, which can be interpreted as reflecting the balance between long-term debt and equity (Putro & Risman, 2021). Capital structure combines the company's long-term funding sources (Alisa & Aryani, 2022).

Capital mix is imperative due to its direct impact on a firm's Statement of Financial Position and its impact on firm value. A firm's value should be maximized through the capital structure by making the right decisions about the firm's stock (Rinaldy & Kalalo, 2022).

## **2.3 Firm Value**

The primary financial goal of an enterprise is the maximization of the enterprise's value (Martín-Reyna et al., 2012). Firm value is reflected through the market value of equity capital and the market value of debt capital. Since there is no difference between the market value and book value of debt capital, for companies listed in capital markets, firm value is reflected in the market price of its shares.

Firm value is how investors view a company, and high stock prices increase firm value (Berger & Ofek, 1995). High firm value can increase shareholder wealth; therefore, shareholders invest their capital in the company (Hutchinson & Gul, 2004).

The company's value is the condition the manager achieves in managing the company's resources and the investors' perception of the company related to its share price. If the share value is high, the Firm's value is higher (Bidaya *et al.*, 2023).

Firm value is the investor's insight into a company, often related to stock prices. High stock prices make the firm value high, and it is commonly indicated by price to book value. A high

price-to-book value will make the market believe in the company's prospects (Prakoso *et al.* 2021).

#### **2.4 Empirical Findings on the Impact of Capital Mix on Firm Value**

A study was done by Rinaldy & Kalalo (2022) to examine the impact of capital structure, working capital turnover, and firm size on firm value in the property and real estate sector listed on the Indonesia Stock Exchange for the 2018 – 2021 periods. The findings revealed that capital structure had a positive insignificant effect on firm value. Dang & Do (2021) investigated the impact of capital structure and several factors on firm value in Vietnam. Four hundred thirty-five non-financial listed companies have been used from 2012 to 2019 on the Vietnamese Stock Exchange for the study. This study investigated the differences in the outcomes among industries in the Vietnamese Stock Exchange. The findings showed that the impact of capital structure on firm value is significant. It was observed the differences across industries, such as capital structure, have a significant positive impact on firm value in the food and beverage industry but have a significant negative effect on the value of the Firm in wholesale trade and construction, as well as real estate industry.

Another study was conducted by Talreja *et al.* (2023) to examine the mediating effects of the growth of firms on the relationship between capital structure and firm value. This study used 36 manufacturing firms in the Pakistan Stock Exchange covering the period from 2015 to 2019. The findings discovered a significant positive relationship between capital structure and firm value. According to a study by Nursetya and Hidayati (2020), capital structure does not affect firm value. The study examined whether firm size and capital structure impact firm value in 30 manufacturing companies listed on the Indonesia Stock Exchange.

Amin (2021) has conducted a study to examine the capital structure, firm growth, and profitability of the firm value of manufacturing companies in Indonesia's consumer goods industry sector. It was found that the capital structure has a negative and insignificant effect on the firm value in selected companies in Indonesia. Another study was done by Sonjaya & Muslim (2023) to determine the effect of capital structure on firm value in banking companies on the Indonesia Stock Exchange. The findings explored capital mix's negative and insignificant effect on firm value in selected Banking Companies in the Indonesia Stock Exchange.

No impact was found in capital structure on the firm value of the companies in food and beverage sub-sector companies listed on the Indonesia Stock Exchange by Anandita &

Septiani in 2023. Another study in the same context found that capital structure has no significant positive effect on firm value (Akhmadi *et al.* 2022).

According to Almomani *et al.* (2022), capital structure has an insignificant impact on firm value. This study was found through the study using utility-energy companies and the food beverage listed on the Amman Stock Exchange. A significant positive effect of capital structure on firm value was found by Hirdinis (2019) using data from companies in the mining sector listed on the Indonesia Stock Exchange.

Capital structure does not affect the firm value of the companies listed in Jakarta Islamic Index from 2015 to 2021 (Ferriswara *et al.* 2022). According to Irsad *et al.* (2023), capital mix has no impact on firm value in transportation sector firms in the Indonesia Stock Exchange during the period from 2019 to 2021 and the same results were found by Hasanuddin (2021) based on the study conducted using the firms listed on the Indonesian Sharia Stock Index on the Indonesia Stock Exchange during the 2017-2019 period. Further, the same findings were obtained by Putro & Risman (2021) by conducting a study based on the infrastructure companies in Indonesia. Moreover, Purnamasari & Fauziah (2022) found evidence to support the same findings that capital mix has no impact on firm value by undertaking a study based on the hotel, restaurant, and tourism companies listed on the Indonesia Stock Exchange during the period from 2019 to 2020. Afridi *et al.* (2022) also supported the finding that capital mix has no impact on firm value based on the study done using the companies in the banking sector listed on the Pakistani Stock Exchange for the ten years 2010–2019.

Siregar *et al.* (2023) found that even though the firm value is collectively affected by dividend policy, capital structure, and profitability, capital structure individually has no impact on firm value in the Consumer Goods sector in Indonesia. According to the study conducted by Alisa & Aryani (2022), capital mix affects the firm value of non-go public banks.

Moreover, an inverse relationship between capital mix and firm value was found by Duc (2021) by conducting a study based on the chemical companies listed in the Vietnam stock market from 2012 to 2019.

Thus, mixed and inconclusive results were found in the literature on capital mix–firm value.

### 3 Methods

This study investigates the impact of capital mix on the firm value of publicly listed Companies (PLCs) in five industrial sectors in CSE: capital goods, consumer durables, material, food, beverage and tobacco, and real estate management and development. It aims to compare the impact of capital mix on firm value across these five sectors in Sri Lanka. Thus, this study's population and sample companies are illustrated in Table 01. 75 per cent of PLCs from each sector were selected as the study sample based on Krejcie and Morgan, (1970), hence, 101 were chosen as the study sample out of 132 in five sectors.

**Table 01: Population and Sample of the Study**

Sector	Total PLCs	Sample PLCs
Capital goods sector	29	22
Consumer durables sector	14	11
Material sector	23	18
Food, beverage and tobacco sector	48	36
Real estate management and development sector	18	14
<b>Total</b>	<b>132</b>	<b>101</b>

Source: Developed by authors

The capital mix was quantified through Debt Ratio (DR) (Almomani *et al.*, 2022) and Debt-to-Equity Ratio (DER) (Alfian & Ghozali, 2024; Sonjaya & Muslim, 2023; Talreja *et al.*, 2023; Akhmadi *et al.* 2022; Rinaldy & Kalalo, 2022; Amin, 2021; Nursetya & Hidayati, 2020; Hirdinis, 2019), while the firm value was measured using Market-to-Book Value Ratio (MBVR) (Alfian & Ghozali, 2024; Irsad *et al.* 2023; Akhmadi *et al.* 2022; Hirdinis, 2019). The capital mix was measured using DR and DER since these two measurements were mostly used in the previous literature (Alfian & Ghozali, 2024; Sonjaya & Muslim, 2023; Talreja *et al.* 2023; Almomani *et al.*; 2022; Akhmadi *et al.* 2022; Rinaldy & Kalalo, 2022; Amin, 2021; Nursetya & Hidayati, 2020; Hirdinis, 2019). Moreover, these two indicators were identified as the most suitable indicators to reflect the firm's capital mix in theory as well as in previously identified empirical literature. The data was collected for 11 years, from 2012 to 2022.

The data was analyzed using panel regression analysis, while the behaviour of the data was explained through descriptive statistics. The data analysis was done through the E-views software.

Figure 01 describes the conceptual framework of the study.



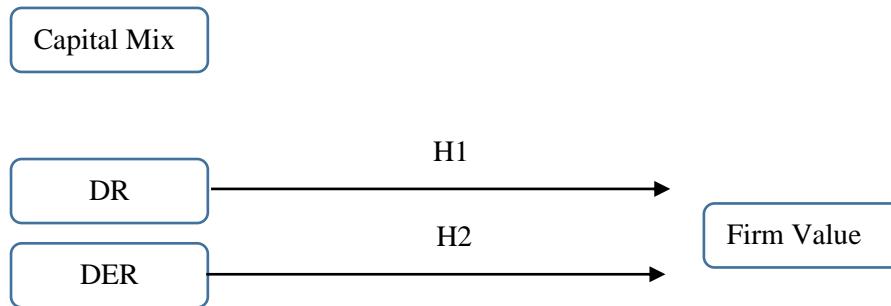


Figure 01: Conceptual Framework

Source: Developed by authors

Based on the literature discussed above and the conceptual framework developed, the following hypotheses were formulated for this study to achieve its objectives and to address the research questions.

H<sub>1</sub>: There is a significant impact of Debt Ratio on firm value

H<sub>2</sub>: There is a significant impact of Debt – Equity Ratio on firm value

The following illustrates the regression model of the study;

$$MBVR = \beta_0 + \beta_1 DR + \beta_2 DER + \varepsilon \dots\dots\dots 1$$

Where;

MBVR = Market-to-Book Value Ratio

DR = Debt Ratio

DER = Debt-Equity ratio

## **4 Results and Discussions**

### **4.1 Descriptive Statistics**

Descriptive statistics, which include mean, mode, median, standard deviation, etc., show the data's behavior. Table 02 presents the descriptive statistics of all the study variables based on sector-wise and as a whole.

When all the sectors are considered as a whole, the mean debt ratio was 2.21 per cent, and it shows that the five sectors' capital mix comprises a very low level of debt capital. The debt capital value is nearly two per cent.

Variation among the values can be seen compared with the average debt ratio. The average debt ratio of capital goods, consumer durables, and food, beverage and tobacco sectors show a very insignificant debt component (less than 0.5 per cent) in the capital mix of the PLCs. However, the average debt ratio in the material and real estate management and development sectors represents a considerably high debt component (nearly 10 per cent and 6 per cent, respectively) in their capital mix.

When it comes to the average debt-to-equity ratio, it is 5.67 per cent in all sectors. This average ratio seems low in the capital goods and food, beverage and tobacco sectors. However, this ratio is high in the other three sectors. The average market-to-book value ratio of all sectors was 62 per cent. All the sector-wise average market-to-book value ratios showed a high percentage except for the food, beverage and tobacco sectors.

**Table 02: Descriptive Statistics of Variables**

Description	Capital Goods Sector			Consumer Durables Sector			Material Sector			Food, Beverage and Tobacco Sector			Real Estate Management and Development Sector			All Sectors		
	DR	DER	MBVR	DR	DER	MBVR	DR	DER	MBVR	DR	DER	MBVR	DR	DER	MBVR	DR	DER	MBVR
Mean	0.22	0.34	50.17	0.21	24.75	122.47	9.67	13.25	78.57	0.24	0.43	5.53	6.21	3.26	136.89	2.21	5.67	62.03
Median	0.21	0.26	0.92	0.16	4.84	0.73	5.20	5.49	4.67	0.16	0.16	1.11	0.15	0.18	0.63	0.20	0.27	1.02
Maximum	0.59	1.43	1336.75	1.50	304.41	2733.46	58.09	138.59	1051.45	1.63	8.19	64.43	44.60	31.33	2275.41	58.09	304.41	2733.46
Minimum	0	0	0	0	-10.96	-12.78	0	0	-1.44	-0.11	-18.65	-1.18	0	0	0	-0.11	-18.65	-12.78
Std. Dev.	0.15	0.29	193.29	0.25	46.95	363.03	13.17	22.42	215.95	0.26	1.48	11.16	10.44	6.79	411.90	6.89	21.11	250.46
Skewness	0.28	1.04	4.67	1.97	3.27	4.16	1.88	3.05	3.11	1.31	-5.16	2.86	1.91	2.39	3.48	4.50	7.53	5.63
Kurtosis	2.09	3.71	25.34	7.89	15.34	24.43	6.22	14.04	12.02	5.13	90.70	10.62	5.99	8.11	15.06	25.81	76.58	40.89

Source: Developed by authors

### 4.3 Correlation Analysis

**Table 03 – Correlation Analysis**

	MARKET_TO_BOOK_VALUE	DEBT_TO_EQUITY	DEBT_RATIO
MARKET_TO_BOOK_VALUE	1.00	0.09	0.14
DEBT_TO_EQUITY	0.09	1.00	0.27
DEBT_RATIO	0.14	0.27	1.00

Source: Developed by authors

The correlation analysis reveals a weak association between market-to-book value and leverage indicators, implying limited interdependence. The correlation between market-to-book value and debt-to-equity is 0.09, whereas the correlation between market-to-book value and debt ratio is 0.14, implying that increases in leverage have little effect on market-to-book value. Additionally, the correlation between debt-to-equity and debt ratio is 0.27, indicating a low to moderately favorable association. This demonstrates a minor tendency for enterprises with greater debt-to-equity ratios to also have higher debt ratios, which is consistent with the nature of these measurements as indicators of leverage. Overall, the findings show that the variables are not tightly connected, implying that other factors may have a greater impact on market-to-book value.

**Table 04 – Multi – collinearity test**

Variance Inflation Factors			
	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
C	75.11286	1.139117	NA
DEBT_TO_EQUITY	0.16	1.16	1.08
DEBT_RATIO	1.50	1.19	1.08

Source: Developed by authors

The table displays low centered VIF values (<5) for all variables, indicating little multicollinearity. Debt to Equity and Debt Ratio have VIF values of 1.08, indicating that they are not strongly linked with one another or other factors. The intercept (C) does not have a centered VIF because it is not applicable.

Overall, the model has no multicollinearity concerns and does not require any changes.

### **4.3 Regression Analysis**

The regression analysis demonstrates the impact of capital mix on firm value. The regression analysis results are presented in the study based on sector-wise and all sector averages. Table 05 presents the results of regression analysis considering the impact of Debt Ratio on Market-To-Book Value Ratio and impact of Debt Ratio and Debt to Equity Ratio on Market-To-Book Value Ratio both in sector-wise and in all sector averages.

When considering the capital mix based on the debt ratio, the impact of the capital mix on firm value is significant and negative in the capital goods sector (-2149.90) and the food, beverage, and tobacco sector (-6.22). The impact was negative but insignificant in the consumer durables sector (-92.66), material sector (-4.50), and in the real estate management and development sector (-0.21). Further, the overall impact of the capital mix, based on debt ratio, on firm value was highly significant and positive (4.50).

The significant negative impact of the capital mix, measured by the debt ratio, on firm value in the capital goods sector and the food, beverage, and tobacco sector, may indicate that the capital mix of PLCs in these two sectors exceeds their optimum levels. Hence, it shows a negative impact. The insignificant impact of the capital mix on firm value in the consumer durables sector, material sector, and real estate management and development sector indicates that the capital mix of PLCs in these three sectors cannot change the firm value and is thus irrelevant. The significant positive overall impact of capital mix on firm value indicates that when considering all PLCs, the capital mix does not exceed the optimum level and increase in debt capital affects to increase the firm value. This overall implication is conflicted with the findings in all individual sectors considered separately in the study. Thus, this finding opens up avenues for future research studies for further investigation on this.

When the debt to equity ratio is considered, the impact of the capital mix on firm value was significant and positive in the capital goods sector (976.99) and in the real estate management and development sector (46.94). The impact was insignificant in the consumer durables sector (0.17), the material sector (0.84), and the food, beverage, and tobacco sector (0.19). When considering the overall impact of the capital mix on firm value in Sri Lankan PLCs, it was found that there was an insignificant positive impact (0.74).

The significant positive impact of the capital mix, measured through the debt to equity ratio, on firm value is found in two sectors (capital goods sector and real estate management and development sector) implying the capital mix in these two sectors does not exceed its optimum level and hence, the increment in debt capital affects to increase the firm value of PLCs in these two sectors. Findings of the impact of debt to equity ratio on firm value is insignificant in consumer durables sector, material sector, food, beverage, and tobacco sector, and overall sectors implying that the capital mix is irrelevant in the PLCs of these sectors and all sectors as a whole in Sri Lanka. Thus, it was observed that the findings on the impact of debt to equity ratio on firm value were totally different from the impact of debt ratio on firm value, which is exposed to further discussion.

In the capital goods sector, 20 per cent of the variance of firm value can be explained by the capital mix ( $R^2 = 0.20$ ). In contrast, the explanatory power of the capital mix on firm value

was nearly 2 per cent ( $R^2 = 0.02$ ) in the food, beverage, and tobacco sectors. In the real estate management and development sector, this explanatory power was 60 per cent ( $R^2 = 0.60$ ). However, it was observed that the power of the capital mix on firm value was very low, at nearly 2 per cent ( $R^2 = 0.02$ ) when all sectors are concerned. Therefore, it was indicated that the debt ratio is not a considerable variable that can explain the firm value in Sri Lankan PLCs. However, debt ratio is a significant indicator of firm value in the real estate management and development sector and is a moderate indicator in capital goods sector in Sri Lanka.

The findings provide insights to financial managers to limit the usage of debt capital if the capital mix exceeds its optimum level and use more debt capital when it is not met. This maximizes the shareholders' benefits by effectively utilizing the potential favorable benefits of debt capital, which is reflected through high firm value. Moreover, investors, especially shareholders, may understand which sectors can enhance the shareholders' return through the capital mix based on the study's findings.

**Table 05: Results of Regression Analysis – Debt Ratio, Debt to Equity ratio and Market-to-Book Value Ratio**

Description	Capital Goods Sector		Consumer Durables Sector		Material Sector		Food, Beverage and Tobacco Sector		Real Estate Management and Development Sector		All Sectors	
	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.	Coefficient	Prob.
DEBT_RATIO	-0.214990	0.0000	-92.66	0.52	-4.50	0.30	-6.22	0.01	-0.21	0.93	4.50	0.00
DEBT_TO_EQUITY	976.99	0	0.17	0.83	0.84	0.74	0.19	0.66	46.94	0	0.74	0.06
C	187.98	0	138.07	0.00	110.94	0.00	6.91	0	-14.93	0.56	47.91	0.00
R-squared	0.20		0.00		0.04		0.02		0.60		0.02	
Adjusted R-squared	0.20		0.01		0.02		0.01		0.59		0.02	

Source: Developed by authors

### 4.3 Hypotheses Testing

This study will test two main hypotheses to achieve its research objectives. According to the results of the analysis, these two hypotheses were tested for each sector. The following table shows the results of hypotheses testing for each sector.

**Table 06: Results of Hypotheses Testing**

Hypothesis	Sector					
	Capital Goods Sector	Consumer Durables Sector	Material Sector	Food, Beverage and Tobacco Sector	Real Estate Management and Development Sector	All Sectors
H2: There is a significant impact of debt ratio on firm value (MBVR)	Supported	Not-Supported	Not-Supported	Supported	Not-Supported	Supported
H3: There is a significant impact of debt-equity Ratio on firm value (MBVR)	Supported	Not-Supported	Not-Supported	Not-Supported	Supported	Not-Supported

Source: Developed by authors

### 5 Theoretical and Practical Implications

This study investigates the impact of capital mix on the firm value of PLCs listed in CSE. The theoretical and empirical relationship between capital mix and firm value is inconclusive. In contrast, some theories support capital structure relevancy, and some support capital structure irrelevancy, while the empirical findings also comprise mixed results.

The findings of this study also have mixed results in different industrial sectors. The findings in the capital goods sector and real estate management and development sector are consistent with capital structure relevance theories providing the theoretical insights for Financial Managers to accept that capital mix can change the firm value and, hence, to adjust their companies' capital structure to enhance the firm value. Moreover, all sectors' findings are consistent with capital structure relevancy theories, providing the same theoretical insights.

The study's findings are enriched with theoretical implications, which are diverse in different sectors that support the confirmation of the theoretical conclusions. The findings of the capital goods sector and the food, beverage, and tobacco sector confirm the theoretical implication of the negative impact of capital mix on firm value when the capital mix exceeds its optimum level under the findings based on the impact of debt ratio on firm value. On the other hand, the real estate management and development sector findings confirm the theoretical implication of having a positive impact of capital mix on firm value when the optimum level of capital mix does not exceed. Furthermore, the theoretical conclusion that

capital mix is irrelevant in maximizing firm's value is confirmed by the findings of consumer durables sector and material sector.

These theoretical implications provide the direction for Financial Managers in different industrial sectors. The financial managers in the capital goods and food, beverage, and tobacco sectors may understand that increasing the debt capital component in the capital mix negatively affects the firm's value and, hence, shareholders' return. On the other hand, the Financial Managers in the real estate management and development sector may confirm the favourable benefit of debt capital over the firm value and shareholders' return.

Moreover, the study's findings align with the existing theoretical framework; hence, the study's findings can be used to confirm the theoretical conclusions about the impact of capital mix on firm value.

Furthermore, the findings in the capital goods sector and food, beverage and tobacco sector are parallel with the empirical findings of the scholars who supported a negative impact of capital mix on firm value. Moreover, the findings of the real estate management and development sector and all sectors are similar to those of scholars who supported the positive impact of capital mix on firm value. These findings provide financial managers of companies in different industrial sectors with more practical implications for deciding the firms' capital mix. It was evidenced that all the PLCs in all the sectors could not adopt the same strategy when deciding upon their capital mix.

## **6 Conclusion**

The findings of this study concluded that capital mix affects firm value in the Sri Lankan context, and different industrial sectors have different types of impact of capital mix on firm value. The capital goods, food, beverage and tobacco, and real estate management and development sectors impact capital mix on firm value. In contrast, the impact was significant in the real estate management and development sector. However, no impact of capital mix on firm value was found in consumer durables and material sectors in Sri Lanka. Further, capital mix positively impacts firm value in all sectors' related findings.

The findings in the capital goods and food, beverage and tobacco sectors are consistent with the findings of Duc (2021). The findings of the real estate management and development sector and all sectors as a whole are consistent with the findings of Dang & Do (2021), Hirdinis (2019) and Talreja *et al.* (2023). Further, the findings of the consumer durables sector and material sector are consistent with the findings of Afridi *et al.* (2022), Akhmadi *et al.* (2022), Almomani *et al.* (2022), Amin (2021), Anandita & Septiani, (2023), Ferriswara *et al.* (2022), Hasanuddin, (2021), Irsad *et al.* (2023), Putro & Risman (2021), Siregar *et al.* (2023), and Sonjaya & Muslim (2023). Thus, the study can achieve its objectives and find answers to its research questions.

However, the findings of the capital mix on firm value in capital goods sector provides a very severe dilemma, since it has too different, but significant impact under the two indicators of capital mix. It shows a significant positive impact under the debt-to-equity ratio and a significant negative impact under the debt ratio creating a puzzle to the Financial Managers of PLCs in the capital goods sector in Sri Lanka.



Thus, it confirms strongly the essential further investigation is required to find out the impact of capital mix on firm value in sector wise in Sri Lankan context. Hence, this study adds more value to the existing literature confirming the capital mix puzzle and opening up new avenues for future research.

Finally, it was concluded that the impact of capital mix on firm value is not equivalent in all the sectors selected for this study. Therefore, it was concluded that the PLCs of Sri Lanka should diversely consider the capital mix decisions in different industrial sectors.

## References

- Afridi, F. e A., Khan, Y., Zafar, S., & Ayaz, B. (2022). The effect of firm size, investment opportunity set, and capital structure on firm value. *International Journal of Social Sciences and Entrepreneurship*, 2(2).
- Akhmadi, Mulyani, A. S., & Noviansyah, N. (2022). Capital structure, profitability, and firm value. *Jurnal Riset Akuntansi Terpadu*, 15(2).
- Alfian, C. B., & Ghozali, I. (2024). Influence of capital structure, dividend policy, profitability, and tax avoidance on intrinsic firm value. *International Journal of Economics Development Research*, 5(1), 429–441.
- Alisa, D. N., & Aryani, D. N. (2022). Profitability, growth opportunity, and capital structure on firm value at non-go public banks. *East Asian Journal of Multidisciplinary Research (EAJMR)*, 1(7), 1395–1404.
- Almomani, T. M., Obeidat, M. I. S., Almomani, M. A., & Darkal, A. N. M. M. Y. (2022). Capital structure and firm value relationship: The moderating role of profitability and firm size evidence from Amman Stock Exchange. *WSEAS Transactions on Environment and Development*, 18. <https://doi.org/10.37394/232015.2022.18.102>
- Amin, M. (2021). The regression effect of capital structure and firm growth on firm value. *Golden Ratio of Finance Management*, 1(1). <https://doi.org/10.52970/grfm.v1i1.202>
- Anandita, D., & Septiani, D. (2023). The effect of capital structure, dividend policy, and cash holding on firm value. *Business Management Analysis Journal (BMAJ)*, 6(1).
- Berger, P. G., & Ofek, E. (1995). Diversification's effect on firm value. *Journal of Financial Economics*, 37(1), 39–65.
- Bidaya, K., Purba, M. I., Laia, R., Giawa, A. H., & Aliah, N. (2023). The influence of profitability, liquidity, and capital structure on firm value. *Journal of Economics and Business Letters*, 3(3), 14–20.
- Bui, T. N., Nguyen, X. H., & Pham, K. T. (2023). The effect of capital structure on firm value: A study of companies listed on the Vietnamese stock market. *International Journal of Financial Studies*, 11, 100.

- Dang, T. D., & Do, T. V. T. (2021). Does capital structure affect firm value in Vietnam? *Investment Management and Financial Innovations*, 18(1), 33–41. [https://doi.org/10.21511/imfi.18\(1\).2021.03](https://doi.org/10.21511/imfi.18(1).2021.03)
- Duc, H. L. U. U. (2021). The impact of capital structure on firm value: A case study in Vietnam. *Journal of Asian Finance, Economics and Business*, 8(5), 287–292.
- Fahmi, I. (2017). *Financial statement analysis*. Bandung: Alfabeta.
- Ferriswara, D., Sayidah, N., & Buniarto, E. A. (2022). Does corporate governance and capital structure predict financial performance and firm value? (Empirical study of Jakarta Islamic Index). *Cogent Business & Management*, 9(1), 2147123. <https://doi.org/10.1080/23311975.2022.2147123>
- Hasanuddin, R. (2021). The influence of investment decisions, dividend policy, and capital structure on firm value. *Journal Economic Resources*, 4(1).
- Hirdinis, M. (2019). Capital structure and firm size on firm value moderated by profitability. *International Journal of Economics and Business Administration*, 7(1).
- Irsad, M., Sudarsi, S., & Kartika, A. (2023). The impact of capital structure, firm size, growth, and profitability on firm value (Case study of transportation sector companies listed on IDX). *Journal of Economics and Banking*, 5(2).
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607–610.
- Martín-Reyna, S., Manuel, J., & Durán-Encalada, J. A. (2012). Ownership structure, firm value, and investment opportunities set: Evidence from Mexican firms. *Journal of Entrepreneurship, Management and Innovation (JEMI)*, 8(3), 35–57.
- Mubeen, R., Han, D., Abbas, J., & Hussain, I. (2020). The effects of market competition, capital structure, and CEO duality on firm performance: A mediation analysis by incorporating the GMM model technique. *Sustainability*, 12(8), 3480. <https://doi.org/10.3390/su12083480>
- Nursetya, R. P., & Hidayati, L. N. (2020). How do firm size and capital structure affect firm value? *Journal of Management and Entrepreneurship Research*, 1(2), 67–76. <https://doi.org/10.34001/jmer.2020.12.01.2-7>
- Prakoso, L. Y., Suhirwan, Prihantoro, K., Legionosuko, T., Rianto, Salim, G., & Yusriadi, Y. (2021). Analysis of public policy on defense strategy. *Journal of Legal, Ethical and Regulatory Issues*, 24(Special Issue), 1–9.
- Purnamasari, D. I., & Fauziah, M. R. (2022). The impact of firm size, capital structure, and dividend policy on firm value during the COVID-19 pandemic. *Journal of Accounting Science*, 6(2).
- Putro, D. C., & Risman, A. (2021). Profitability mediates the effect of capital structure and liquidity on firm value. *Journal on Global Socio-Economic Dynamics*, 2(27).

- Rinaldy, S., & Kalalo, M. Y. B. (2022). Capital structure, working capital turnover, firm size, and firm value (Study in listed companies on IDX property and real estate sector for the period 2018–2021). *AFEBI Accounting Review (AAR)*, 7(2).
- Siregar, S. D., Toni, N., & Ariesa, Y. (2023). Impact of dividend policy, capital structure, and profitability on consumer goods firm value: Role of firm size (2013–2022). *Journal of Economics and Business Letters*, 3(4), 38–48.
- Sonjaya, Y., & Muslim, M. (2023). The effect of capital structure on firm value in banking companies listed on the Indonesia Stock Exchange. *Golden Ratio of Finance Management*, 3(1). <https://doi.org/10.52970/grfm.v3i1.312>
- Talreja, K., Memon, M. F., Jatoi, W. A., & Bhutto, S. A. (2023). The effects of capital structure and growth of firm on firm's value: A mediation analysis. *Multicultural Education*, 9(1).
- Tabe, R., Lapian, S. L. V. J., Murni, S., & Maramis, J. B. (n.d.). The effect of firm size, investment opportunity set, and capital structure on firm value. *The Seybold Report*, 17(5). <https://doi.org/10.5281/zenodo.6592088>