Effect of Financial Leverage on Firm Performance: Reference to Investment Trust Companies Listed in Sri Lanka

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ABSTRACT

The research investigates the effect of financial leverage on firm performance: reference to investment trust companies listed in the All Share Price Index (ASPI) on the Colombo Stock Exchange (CSE). Data for the study were collected for the period through annual reports and analyzed data using multiple linear regressions. The Profitability, Liquidity, and Asset Management efficiency performance of firms are measured respectively by Return on Asset, Current Ratio, and Total Asset Turnover Ratio. Financial Leverage is measured by Debt Ratio, Debt Equity Ratio, and Interest Coverage Ratio.

Based on the analysis performed, it is noted that there's no significant relationship between financial leverage and profitability, liquidity, and asset management while having a positive significant relationship with debt ratio and asset management performance of investment trusts listed in the All Share Price Index.

Keywords: Leverage, Liquidity, Asset Management, Performance, Investment Trust.

1. BACKGROUND

The investment trust sector of an economy plays a key important roles in any country in the world. Investment Trust sector in Sri Lanka also plays an important role of economy, it provide various kind of investing instruments to the investors to gain return while managing the risk of investing in Sri Lanka. The finance sector of every economy plays a key role in fostering growth and subsequently development (Duca & McLaughlin, 1990). And investment trust companies are the form of collection of diversified investment asset pools to investors. As per the trends in economy arise the interest rates also fluctuating accordingly. Not only because of Sri Lankan economically impacts but also globally impacts on Sri Lankan economy Investment Trust institutions in Sri Lanka and their consumers have aim on the performance institutional vise. Therefore these institutions set up several economic evaluating measures to analyses the unfavorable impacts to face on those in advance. There should be a proper mix between debt and equity to take advantage of a proper financial planning because debt capital is cheaper than equity capital with the attendant effect of lowering the average cost of capital of the firm. (Banerjee, 2009). However, ROA (return on Asset) and ROE (return on equity) are always taken as an important indicator of measuring finance sector performance. Pimentel et al, (2005), defines profitability as the final measure of economic success achieved by a company in relation to the capital invested in it.

Liquidity is to check the ability to meet firms liabilities in short run. Greuning, and Bratanovic, (2004) noted that maintaining an adequate degree of liquidity is extremely important.

Leverage is the ability to settle the liabilities long run basis and for that capital structure of the firm should be a level that always satisfying the needs of its investors and customers. Gatsi, Gadzo & Akoto (2013) states that the ability of the company's management to increase their profit by using debt indicates the quality of the management's corporate governance. Good corporate governance shows the companies' performance on their use of debt to increase their profits. The use of debt capital increases the earnings on equity capital as long as the rate of return on the firm's investment exceeds the explicit cost of financing the investment (Abdul & Adelabu, 2015). The inability to settle the short term liabilities will affect the company's operations as well as will affect firm reputation.

The findings on this research will contribute to the theory of investment companies. The research will help distinguish empirically, whether firms' leverage has a significant impact on their profitability, liquidity, asset management efficiency. The findings of the research can guide finance managers in investment sector to make investment decisions that will satisfy the

stakeholders' interest with regard to liquidity, leverage, asset management and profitability needs of the investors. This study will support how the investment trust company perform and the relationship with their important ratios.

2. LITERATURE REVIEW

Richard and Laughlin, (1980), suggested that the importance of liquidity status for investors and managers for evaluating company future, estimating investing risk and return and stock price in one hand and the necessity of removing weaknesses and defects of traditional liquidity indices (current and liquid ratio) on the other hand persuade the financial researchers. Atrill and McLaney (2008) define working capital as a measure of both a company's efficiency and its short-term financial health. It represents that portion of current assets financed by long term funding not requiring immediate payment. The working capital ratio is calculated as: Working Capital =Current Assets-Current liabilities. Chandra (2001) defines current ratio as a liquidity ratio that measures a company's ability to pay short-term obligations. It's calculated as ratio of current assets to current liabilities. The ratio is mainly used to give an idea of the company's ability to pay back its short-term liabilities (debt and payables) with its short-term assets (cash, inventory, receivables). Rule of the thumb is that a ratio between 1.2 and 2.0 is sufficient. On Profitability in Canada" observed that liquidity was an instrumental factor during the 2008-2009 financial crises.

Rasiah et al (2010) in his research found asset portfolio mix, loans and interest income, investments, non-interest income earning assets, total expenses, operating expenses, personnel expenses, liability composition, deposit composition, liquidity ratios, capital structure as internal factors influencing profitability. Any combination of common stock, preferred stock and debt used in financing the assets of a firm creates some level of financial risk. In other words, financial risk is directly related to the firm's capital and financial structure/leverage (Pandey 2010).

Pimentel et al, (2005), defines profitability as the final measure of economic success achieved by a company in relation to the capital invested in it. The assessment of profitability is usually done through the ROA (Return on Assets = Net Income / Total Assets) and ROE (Return on Equity = Net Income / Equity), which is the ultimate measure of economic success. Whitehead (2001) defines ROA as the ratio that measures the firm's ability to use its assets to create profits. It's computed as the ratio of net income to the average assets of the company during the year. ROA is useful number for comparing competing companies in the same industry. Return on assets gives an indication of the capital intensity of the company, which will depend on the industry; companies that require large initial investments will generally have lower return on assets.

Ezeamama (2010) states that debt ratio (DR) measures the amount of the total funds provided by creditors in relation to the total assets of the firm. Debt ratio = Total debt/Total Assets.
Enekwe (2014) posits that debt to equity ratio is a financial ratio indicating the relative proportion of equity and debt used to finance a company's assets which is an indicator of the financial leverage. Pandey (2010) states that it indicates the ratio of net operating income (or EBIT) to interest charges. Investors usually have an idea of financial risk of a firm by comparing the coverage ratios of similar firms with an accepted industry standard, the investors. Soub (2012) argue that there are various measures of financial performance. For instance return on sales reveals how much a company earns in relation to its sales, return on assets explain a firm's ability to make use of its assets.

Eljelly (2004),suggested that practically, profitability and liquidity are effective indicators of the corporate health and performance of not only the commercial banks but all profit-oriented ventures. It is usually a difficult task for managers to ensure that business organizations operate on the optimal mix of equity and debt. They are in constant struggle of ensuring the adequate sources of long-term financing that will maximize the wealth of shareholders (Njeri & Kagiri, 2013).

Bourke (1989) carried out a study to establish the relationship between liquid assets and bank profitability for 90 banks in Europe, North America and Australia from 1972 to 1981, the study used econometric framework presented in an equation. The dependent variable, profitability, was regressed against a non-linear expression of relative liquid asset holdings, as well as a set of control variables.
Wald (1999) in his research study argued that debt to assets ratio has significant negative relation with the firm profitability. He did his study on the firm's capital structure which operates in United State, United Kingdom, Japan, France, and Germany. He used firm size, growth and firm's riskiness as explanatory variables.

Sheel (1994) in his study also supported the negative relation between debt to assets ratio and firms past profitability. He used cross sectional regression analysis to study the leverage behavior of 32 firms in two industry groups, Hotel industry and manufacturing sector was examined. His findings confirmed that all leverage determinants except firm size are significant in explaining leverage variations in debt behavior.

The financing or leverage decision is a significant managerial decision because it influences the shareholder's return and risk and the market value of the firm (Omondi & Muturi, 2013). Leverage is viewed as a result of events that determines companies' source of financing to run the business (Alkhatib, 2012).

Larry & Stulz(1995) conducted a study on the effect of debt on firms in Ghana which resulted positive significant association between total debt and total assets and return on equity. A study carried out by Murphy (1968), on financing behavior of listed Chinese firms resulted in a conclusion that a negative relationship between profitability and firms leverage exists.

Njeri & Kagiri (2013) stated that leverage increases the level of the debt in the capital structure and the turnover of the business and hence its profit, resulting in an increase in returns to the business owners. They also claim that an increase in interest rate is expected to result in reduced borrowing, increased interest expenses and thus reduced returns to business owners.

Pandey (2010) states that financial leverage occurs when there are no fixed financial charges (interest and preference dividend). Firms are either levered or unlevered. An unlevered firm is an all-equity firm, whereas a levered firm is made up of ownership equity and debt (Andy, Chuck & Alison, 2002). As debt increases, financial leverage increases.

Berger (1995) analyzed the statistical relationships between bank earnings and capital for 50 U.S. banks over the period of 1983-1989 using multiple regression analysis and found that, contrary to what one might expect in situations of perfect capital markets with symmetric information there is a positive relationship between capital and return on equity. Anson and Hudson (2003) find that leverage is an important determinant of private equity real estate fund performance and that it should be used, albeit in moderation and accountably, in order to contribute to performance.

Bordeleau, Crawford and Graham (2009) reviewed the impact of liquidity on bank profitability for 55 US banks and 10 Canadian banks between the period of 1997 and 2009. The study employed quantitative measures to assess the impact of liquidity on bank profitability. Results from the study suggested that a nonlinear relationship exists, whereby profitability is improved for banks that hold some liquid assets, however, there is a point beyond which holding further liquid assets diminishes a banks' profitability, all else equal.

Njihia (2005), in a study to identify determinants of commercial banks profitability in Kenya identified liquidity as one of the factors affecting profitability. The study involved 35 commercial banks operating in Kenya over a period of 5 years. The study employed 24 descriptive statistics and multiple regression analysis to estimate the determinants of commercial banks profitability. The study concluded that in one of the years under study liquid assets significantly determined the profit of the commercial banks especially in the period after political instability after the elections. The ratio of deposits held, loans and advances held by the commercial banks influenced the profitability.

Baker (1973) analyzed that effect of financial leverage or relatively greater use of debt capital, on industry profitability. This study developed and tested a model consisting of two equations, one explaining industry profitability in terms of the usual market structure variables plus leverage and the other one was a new equation incorporating risk variables to explain leverage.

Mangalam & Govindasamy (2010) analyzed and understand the impact of leverage on the profitability of the firm by investigating the relationship between the leverage and the earning per share. He analyzed leverage in three ways which were financial leverage, operating leverage and combine leverage.

2.1 Research Hypotheses

The hypotheses for this study are stated in null forms as follows:

Ho: Financial leverage does not significantly affect profitability measured by Return on Asset.

Ho: There is no significant relationship between financial leverage and liquidity of investment trusts measured by current ratio.

Ho: Financial leverage does not significantly affect asset management efficiency measured by total asset turnover ratio.
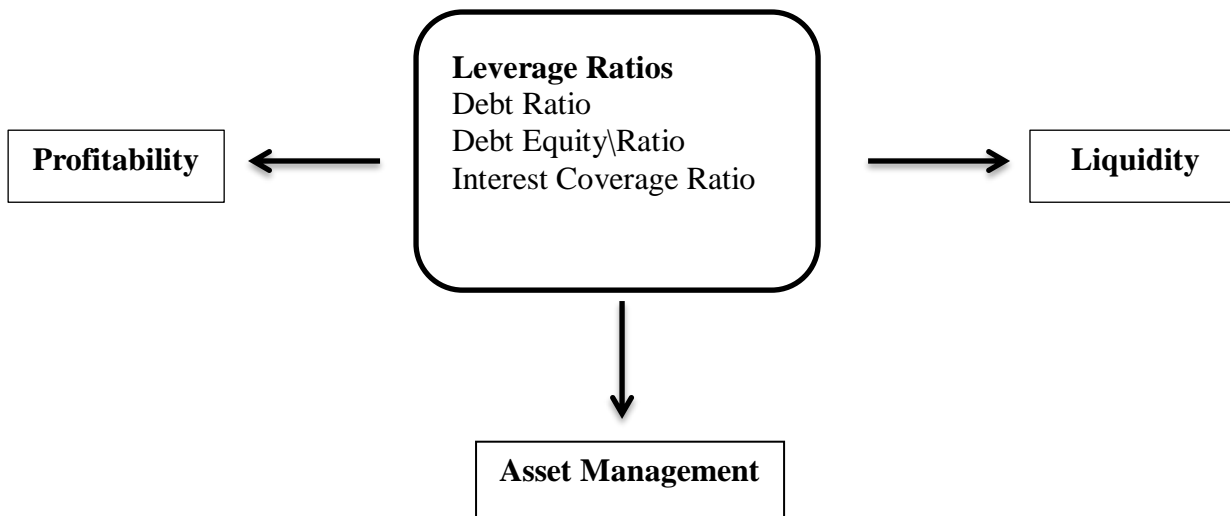
Figure 1: Conceptual Framework

2.2 Model of the Study

The Model for this study utilized Multiple Regression Analysis and composite variables as proxies for firm characteristics. The empirical model is specified as follows:

$ROA = f(DR, DER, IC)$
$CR = f(DR, DER, IC)$
$TATR = f(DR, DER, IC)$

The full specification of the regression equations using unranked OLS are:

$ROA = \beta_0 + \beta_1 DR_j + \beta_2 DER_j + \beta_3 ICR_j + \varepsilon_j$

$CR = \beta_0 + \beta_1 DR_j + \beta_2 DER_j + \beta_3 ICR_j + \varepsilon_j$

$TATR = \beta_0 + \beta_1 DR_j + \beta_2 DER_j + \beta_3 ICR_j + \varepsilon_j$

Where: DR= Debt Ratio
DER= Debt Equity Ratio
ICR= Interest Coverage Ratio
ROA= Return on Assets
CR = Current Ratio
TATR = Total Asset Turnover Ratio
β_0= constant
β_1= coefficient of debt ratio
β_2= coefficient of debt-equity ratio
β_3= coefficient of interest coverage ratio
ε = stochastic error term

3. RESEARCH METHODS
3.1 Sample and Data

The population of this study comprises all 299 companies listed in the Colombo Stock Exchange (CSE) during the five year period 2012-2016. To select the sample, the following restrictions were imposed: sampled company must be listed in ASPI (All Share Price Index); the financial year end of the sample companies must be March, 31; the firm has published its complete financial statements; to ensure some homogeneity of information, firms in Investment Trust sectors is considered and the shares of sampled companies must be actively traded in the period under consideration. The companies in Investment trust sector is considered as because the use and determinants of leverage of these companies are likely to be different to the ones in companies in non-financial sectors. On the above criteria, depending on availability of companies under the sector firms with any missing observations for any variable in the model during the above range also dropped and 35 firm-years were obtained. This represents 77.8% of the mean number of companies listed in the CSE- Investment Trust sector during the sample period. The accounting data were collected mainly from the financial statements of the sampled firms and the CSE website. Data so obtained were analyzed by employing Ordinary Least Squares (OLS) multiple regression approach because it enables the investigation of the collective influence of several independent variables on a single dependent variable.

4. DATA PRESENTATION AND ANALYSIS

The collected data were analyzed using Ordinary Least Square Regression technique.

Hypothesis 1

Ho: Financial leverage does not significantly affect profitability measured by Return on Asset.

Table 1 - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.139[a]	.019	-.076	14.45090

a. Predictors: (Constant), ICR, DR, DER

Table 2 - ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	127.108	3	42.369	.203	.894[a]
	Residual	6473.688	31	208.829		
	Total	6600.796	34			

a. Predictors: (Constant), ICR, DR, DER

b. Dependent Variable: ROA

Table 3 - Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.995	2.866		-.696	.491
	DR	.300	1.068	.062	.281	.781
	DER	.677	1.618	.116	.418	.679
	ICR	.000	.000	-.065	-.260	.796

a. Dependent Variable: ROA

Source: SPSS 16.0

The empirical results showed regression coefficients of Debt ratio, debt equity ratio and interest coverage ratio at 0.300, 0.677 and- 0.000 respectively at t values of 0.281, 0.418 and -0.260. This implies that Debt ratio, Debt-equity Ratio and Interest coverage Ratios very insignificant of having effect on return on asset. Therefor based on debt ratio, debt-equity ratio and Interest coverage ratio does not particularly affect profitability. Evaluating the model, the value of the R2 is 0.019 which in other words means that 1.9 percent variation in the net profitability of firms is explained by financial leverage. The remaining 98.1% unexplained variable is largely due to variation in other variables outside the regression model which are otherwise included in the stochastic error term.

Therefore, we accept the null hypothesis and reject the alternate hypothesis. This implies that financial leverage does not have effects on profitability measured by Return on Asset.

Hypothesis 2
Ho: There is no significant relationship between financial leverage and liquidity of investment trusts measured by current ratio.

Table 4 - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.158[a]	.025	-.069	43.41448

a. Predictors: (Constant), ICR, DR, DER

Table 5 - ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1498.825	3	499.608	.265	.850[a]
	Residual	58429.319	31	1884.817		
	Total	59928.144	34			

a. Predictors: (Constant), ICR, DR, DER

b. Dependent Variable: CR

Table 6 - Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	38.981	8.609		4.528	.000
	DR	-2.279	3.208	-.157	-.710	.483
	DER	.210	4.860	.012	.043	.966
	ICR	.000	.001	-.064	-.256	.799

a. Dependent Variable: CR

Source: SPSS 16.0

The intercept of the equation that represents the other variables that affect the change relationship is 38.981 at 0.000 significance level which is significant strongly. The financial leverage measures also do not depict significance as the significance values for each of them are greater than 0.05. The values of R- squared & the adjusted R- squared in the model summary table (0.025 and - 0.069) explains that the model has very low predictor power. The f statistic reads 0.265 at 0.05 level of significance as shown in the model summary. The alternate hypothesis is rejected and the null hypothesis accepted because calculated f value is less than critical f value. Thus, the liquidity of investment trusts firms not affected by financial leverage.

Therefore, we reject the alternate hypothesis and accept the null hypothesis that there is no relationship between financial leverage and liquidity of investment trusts.

Hypothesis 03

Ho: Financial leverage does not significantly affect asset management efficiency measured by total asset turnover ratio.

Table 7 - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.368[a]	.135	.052	4.60278

a. Predictors: (Constant), ICR, DR, DER

Table 8 - ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	102.854	3	34.285	1.618	.205[a]
	Residual	656.753	31	21.186		
	Total	759.606	34			

a. Predictors: (Constant), ICR, DR, DER

b. Dependent Variable: TATR

Table 9 - Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.267	.913		-.293	.771
	DR	.748	.340	.458	2.199	.035
	DER	-.701	.515	-.355	-1.360	.184
	ICR	.000	.000	.223	.948	.350

a. Dependent Variable: TATR

The empirical results showed regression coefficients of Debt ratio, debt equity ratio and interest coverage ratio at 0.748, -0.701 and- 0.000 respectively at t values of 2.199, -1.360 and 0.948. This implies that Debt ratio has positive significant effect on asset turnover ratio which determines asset management efficiency since sig value = 0.035 which is less than 5%. Debt-equity ratio has insignificant negative effect on TATR as sig value = 0.184. Interest coverage ratio has a zero coefficient but did not show significance within the level of significance adopted for this study as sig=0.350>0.05.Thus the higher the debt ratio, the more asset management efficiency a firm would be. Evaluating the model, the value of the R2 is 0.135 which in other words means that 13.5 percent variation in the asset management of firms is explained by financial leverage. The remaining 86.5% unexplained variable is largely due to variation in other variables outside the regression model which are otherwise included in the stochastic error term. The f-value of the model is lower that the critical f value and suggested that accept null hypothesis while rejecting alternate hypothesis.

Therefore, we accept the null hypothesis and reject the alternate hypothesis. This implies that financial leverage does not affect asset management measured by Total Asset Turnover Ratio.

5. CONCLUSION

Outcomes disclosed that financial leverage insignificant on profitability or performance on investment trust indexed in ASPI. Long term loans have lower cost than equity and have interest accrued to them. The more leverage a non-financial firm employs, the more profitable it becomes. But this is not consistent with the findings of non-financial firms and the use and determinants of leverage of investment trust companies are likely to be different to the ones in companies in non-financial sectors in Sri Lanka.

As to the analysis the profitability performance cannot be measured by the financial leverage of investment trust sector companies which is listed in ASPI in Colombo stock exchange. And also found that Liquidity and its performance of investment trust sector firms listed in ASPI are not affected by financial leverage measured by Debt Ratio, Debt Equity Ratio and Interest Coverage Ratio. The availability of working capital and the working capital management practices of the investment trusts are virtually independent of whether debt is included in the capital structure or not.

The study also shown that asset management efficiency measured by Total Asset Turnover Ratio also not affected by the financial leverage performance of the investment trust sector as financial firms. But individually there was a significant impact on asset management measured by debt ratio as financial leverage performance determinant which can be able to understand asset management efficiency to some extent in investment trusts sector listed in Colombo stock exchange.

Further studies can be focused on considering the impact of economic variables on the performance of businesses, incorporate macro-economic factors to the model. And also this study can be expanding by using different sectors and time dimension to have greater number of observation.

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