Impact of Financial Leverage on Firm’s Investment in Listed Hotels and Travels Companies in Sri Lanka

M. Tharshiga¹, T. Velnamby²

Abstract

Leverage is a technique magnifies gain and loss. High leverage may be beneficial in boom periods; it may cause serious cash flow problems in recessionary periods. So this research study examines the impact of financial leverage on firm’s investment using information on ten Hostels and travel companies listed on Colombo stock Exchange over the period of 2009-2013. Random sampling is used for data collection. Analyzed results revealed that gross investment had significant impact on debt to equity at 0.01 significant levels. But fixed investment had not significant impact on debt to equity. Further it implies There is positive significant relationship between gross investment and debt to equity .r value indicates the .552 level of Strength at the 0.01 significant level and there is negative relationship between fixed investment and debt to equity But there is no significant relationship exist (p>0.05).

Keywords: Financial leverage, Gross Investment and Fixed investment

1. Introduction

Taking on debt, as an individual or a company, will always bring about a heightened level of risk due to the fact that income must be used to pay back the debt even if earnings or cash flows go down. From a company's perspective, the use of financial leverage can positively or sometimes negatively affect its return as a consequence of the increased level of risk. The most obvious risk of leverage is that it multiplies losses. Due to financial leverage's effect on solvency, a company that borrows too much money might face bankruptcy during a business downturn, while a less-levered company may avoid bankruptcy due to higher liquidity.

There is also a misconception that companies enter a higher level of financial leverage out of desperation, referred to as involuntary leverage. While involuntary leverage is certainly not a good thing, it is typically caused by eroding equity value as opposed to the addition of more debt. Therefore, it is typically a symptom of the problem, not the cause.

When evaluating the riskiness of leverage it is also important to factor in the value of the company itself and its activities. If a company borrows money to modernize, add to its product line, or expand internationally, the additional diversification will likely offset the additional risk from leverage. The upshot is, if value is expected to be added from the use of financial leverage, the added risk should not have a negative effect on a company or its investments. Financing capacity will decrease with leverage ratio increasing. Without enough capital, the companies will select to invest projects with stable cash flow each year even if these choices are not the best ones. That is, insufficient fund will lead to under-investment (Raza et al., 2011).

By doing research on agency cost and other externalities generated by debt financing, Myers (1977) derived that there is a significant positive correlation between debt ratio and under-investment. He pointed out that the interest conflicts between shareholders and creditors force enterprises to adopt a sub-optimal

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investment strategy, and then reduced the current market value of these enterprises. To an enterprise with debt financing, managers and shareholders tend to refuse the positive NPV projects whose major returns belong to the creditors. Green (1984) got the same conclusion as above: financing decisions are not separated from investment arrangements, and leverage may lead to wrong investment incentives. Clearly, the debt financing reduces the motivation on managers and shareholders, and weakens their initiative to invest valuable projects. Hence, firms with low leverage ratio have higher possibility to exploit opportunities as they emerge.

One of the main issues in Corporate Finance is whether financial leverage has any effects on investment. The corporate world is characterized by various market imperfections, due to transaction costs, institutional restrictions and asymmetric information. The interactions between management, shareholders and debt holders will generate frictions due to agency problems and that may result in under-investment or over-investment incentives. Whenever we refer to investment, it is essential to distinguish between over-investment and under-investment.

Thus, leverage is one mechanism for overcoming the overinvestment problem suggesting a negative relationship between debt and investment for firms with weak growth opportunities. Too much debt also is not considered to be good as it may lead to financial distress and agency problems.

Cantor (1990) explained that highly leveraged firms show a heightened sensitivity to fluctuations in cash flow and earnings since they face substantial debt service obligations, have limited ability to borrow additional funds and may feel extra pressure to maintain a positive cash flow cushion. Hence, the net effect would be reduced levels of investment for the firm in question.

**Statement of Problem**

Investment of a company is the financing by primarily, owners’ funding and funding from lenders. The choice of the combination of this funding is made by the managers of the businesses and they decide whether to borrow, plough back the profits the business has made, or to ask the owners to raise more funds to expand the business, or to increase the shareholders’ payout of returns on their investment. The combination of the sources of business funding is referred to, as the capital structure of that business.

An investor who would like to be rational and scientific in his investment activity has to evaluate a lot of information about past performance and the expected future performance of the companies, industries and the economy as a whole before taking the investment decision and hence, the this study will attempt to analyze the impact of financial leverage on return on investment of selected listed companies in Sri Lanka.

**Significant of this Study**

Significant of the study should answer three questions. They are will this study generate new knowledge? Will the study benefit stakeholders, advance understanding or influencing policy? And will the study fill the gap in existing knowledge? This present study gives positive answer for three questions.

The significant of the study is to enable us to evaluate how impact of the financial leverage on firm’s investment. Especially we have the critical look on changes in fixed investment and gross investment due to financial leverage Changed. This study will therefore enhance an understanding on how financial leverage can be said to thrive well in an economy that is forming in that as dept employed more founds to increase, for investment and as such profit fends to increase.

Managers of the companies can understand how financial leverage impact on capital employed. Because normally financial leverage magnifying the shareholders wealth. So changes in the financial leverage lead to change the shareholders wealth. Stakeholders can understand how much money committed in the business as investment.

**Objective of the Study**

The research question serves as the basis of the study. Following are the objective of the study:
To evaluate what extent financial leverage influence on investment of Sri Lankan listed companies
To examine the relationship between financial leverage and investment in selected companies

2. Literature Review

Many authors have studied leverage and its determinants and conducted their study in different
countries using different techniques. This has led to different outcomes and results.

Myers (2001) stated there are many theories that explain the concept of leverage. There exists no
universalistic theory about leverage because the explanatory power of theories that might explain leverage is
based on various conditions and circumstances.

Anandasayanan, S & Subramaniam, V.A (2013) examined Effect of Capital Structure on profitability of
Listed Manufacturing Companies in Sri Lanka. Their sample consists of 12 Manufacturing companies listed
in Colombo stock Exchange and their results revealed that significantly negative relation between debt and
profitability.

The successful selection and use of capital is one of the key elements of the firms’ financial strategy
(Kajananthan, 2012). Velnampy & Aloy Niresh J made an attempt to find out the Relationship between
Capital Structure and profitability of ten listed Sri Lankan banks over the past 8 year period from 2002 to
2009. They found that there was a negative relationship between capital structure and profitability. Further
the results suggest that 89% of total assets in the banking sector of Sri Lanka are represented by debt,
confirming the fact that banks are highly geared institutions.

Anandasayanan (2013) analyzed “The determinant of leverage of the listed companies in Sri Lanka: An
empirical Study. The purpose of present study was to investigate the determinants of leverage decision of Sri
Lankan firms based on a panel data set over a period of five years from 2007-2011 comprising of 60
companies. This study examined the impact of five firm specific factors – firm size, firm growth rate,
profitability, and asset tangibility, on the leverage decision of listed companies in Sri Lanka. The results
showed that financial leverage of Sri Lankan firms is influenced by firm size, firm growth rate and
profitability. This study contributed to the literature on the factors that influence financial leverage of the
firm.

Xin & Lin (2006) noticed that investment is sensitive with debt level for those non-state-owned listed
companies. With an increase in proportion of state-owned shares, the sensitivity will fall down. Bertrand,
Schoar and Thesmar (2007) noticed that banks are reluctant to offer a loan to those firms which have low
growth opportunities. At the same time, other firms which can get external capital from banks are more
willing to invest. Jothi, K. (2010) in his study had analyzed the significant level of financial risk on capital
structure of fifty-nine companies – ten each from cement, Food, Pharmaceutical, Steel, Textile and nine
from Information Technology from 1997-98 to 2006-07. He found that proportion of debt fund provided by
long-term as well as by short term debt is significantly related to level of financial risk of firms under these
industries.

Lang (1996) was one of the first authors to empirically examine the relationship between leverage and
investment controlling for growth opportunities at the firm level. Using a basic investment regression model
and a US sample, the author found that leverage reduces investment and concluded that the negative
relationship was due to agency problems. The negative relationship between leverage and investment is
stronger for firms with low growth opportunities. Growth opportunities were measured using Tobin’s Q
which measured the difference between market value and book value of assets. The found results hold for
different industries. The author concluded that the negative relationship between investment and leverage
applied to firms with high growth opportunities, but only to those firms with growth opportunities that were
not recognized by the external market. The author however did not mention that the found negative
relationship between leverage and investment does not necessarily mean that overinvestment or
underinvestment is present. Furthermore, it is not clear which agency problem is more persistent.
Aivazian et al. (2005) indicated that tangible assets increase the use of the leverage by reducing the bankruptcy cost, and find that the correlation between tangible assets and investment opportunities is not high. At the first stage, the firm’s leverage decision function consists of the ratio of tangible assets to total assets, as instrumental variables, and those in the investment function as control variables. They conducted an F-test to test the hypothesis that the instruments cannot explain firm leverage, and we reject this hypothesis at the 1% level.

3. Conceptualization

Following are the research conceptualization:

![Figure 1: Developed by Researchers](image)

### Table 2: Operationalization

<table>
<thead>
<tr>
<th>Concept</th>
<th>Variables</th>
<th>Indicators</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leverage</td>
<td>Financial leverage</td>
<td>relationship Between Debt and equity</td>
<td>Debt/equity</td>
</tr>
<tr>
<td>Investment</td>
<td>Gross Investment</td>
<td>PAT+ depreciation – Dividend + Δ equity + Δ debt+ Advertisement expenses + R&amp;D expenses</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fixed investment</td>
<td>Cash outflows for acquired fixed assets/Total fixed assets</td>
<td></td>
</tr>
</tbody>
</table>

Key Variable Definition

- **Financial Leverage**
  
  It indicates what proportion of equity and debt the company is using to finance its assets
  
  Debt to Equity = Total liabilities
  
  Share holders Fund

- **Gross Investment**
  
  Gross investment represents the total investment of the firm and be mathematically represented as follows:
  
  Gross investment = profit after tax + depreciation – Dividend + changes in equity + changes in debt + advertisement expenses + research and development expenses

- **Fixed Investment**
  
  Fixed investment represents fixed assets acquired by company out of total assets
  
  Fixed investment =
  
  Cash outflows for acquired fixed assets
  
  Total fixed assets
Research Hypotheses

Following Hypothesis are developed for this study

H1: There is a significantly impact of Financial leverage on Investment
H1a: There is a significantly impact of Financial leverage on gross Investment
H1b: There is a significantly impact of Financial leverage on fixed Investment
H2: Financial Leverage significantly correlated with investment
H2a: Financial leverage significantly correlated with gross investment
H2b: Financial leverage significantly correlated with fixed investment

Sampling

The study will adopt an analytical and descriptive research design. The data of the sample companies will be collected from the annual reports and the balance sheet published by the companies and the websites of the companies. Ten listed companies are selected from hotels and travel companies for this study on basis of sacrificed random sampling method.

Data collection

Data are collected from selected Companies financial statement through Colombo stock exchange web site over the period of 2009-2013.

4. Data Analysis and Discussion

Correlation Analysis

<table>
<thead>
<tr>
<th></th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>gross investment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>fixed investment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debt to equity</td>
<td>.552**</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>-.217</td>
<td>.130</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Above table 2 explores that relationship between financial leverage and investment. from the analyzed results revealed that there is positive significant relationship between gross investment and debt to equity (p<0.01). r value indicates the .552 level of Strength at the 0.01 significant level. Further this table explains that there is negative relationship between fixed investment and debt to equity. But there is no significant relationship exist.(p>0.05)

ANOVA Table 3

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.850E16</td>
<td>1</td>
<td>3.850E16</td>
<td>20.992</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>8.803E16</td>
<td>48</td>
<td>1.834E15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1.265E17</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Debt to equity
b. Dependent Variable: Gross investment
Based on the analyzed results we can accept hypothesis (H2b) because there is significant relationship between gross investment and debt to equity ($r=0.552$) and ($p<0.01$). but there is no significant relationship between fixed investment and debt to equity ($p>0.05$). Therefore hypothesis (H2b) is rejected. In the table 3 focused on F statistic. The information to pay attention to here is the probability shown as “Sig.” in the table. From this analysis results revealed that the F-statistic is large enough to accept the hypothesis.

### Table 4. Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>-6.083E6</td>
<td>1.311E7</td>
<td>-.464</td>
<td>.645</td>
</tr>
<tr>
<td>debttoequity</td>
<td>5.379E6</td>
<td>1.174E6</td>
<td>.552</td>
<td>4.582</td>
</tr>
<tr>
<td>R Square</td>
<td></td>
<td></td>
<td></td>
<td>.304</td>
</tr>
</tbody>
</table>

a. Dependent Variable: gross investment

Table 4 explains that impact of debt to equity on gross investment. This result explained 30.2% of variance explained by debt to equity. The first important thing to note is that the sign of the coefficient of debt to equity (%) is positive. Further implies that the slope is not statistically significant. But debt to equity is statistically significant at 0.01 levels. Regression model is gross investment = -6.083E6+5.379E6 debt to equity +ε Therefore hypothesis (H1a) is accepted.

### Table 5 Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>.361</td>
<td>.079</td>
<td>.464</td>
<td>.645</td>
</tr>
<tr>
<td>De</td>
<td>-.011</td>
<td>.007</td>
<td>-.217</td>
<td>-1.540</td>
</tr>
<tr>
<td>R Square</td>
<td></td>
<td></td>
<td></td>
<td>.047</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Fixed investment

Above table 5 exhibits that influence of fixed investment on Financial leverage. From the analyzed results the slop ($\alpha$) is statically significant ($p<0.01$) but debt to equity is not significant impact on fixed investment ($p>0.05$) further it has least impact on dependent variable( $r=4.7$). regression model is as follows

fixed investment = 0.361 - 0.011 debt to equity +ε

### Table 6. ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Regression</td>
<td>.158</td>
<td>1</td>
<td>.158</td>
<td>2.371</td>
<td>.130</td>
</tr>
<tr>
<td>Residual</td>
<td>3.201</td>
<td>48</td>
<td>.067</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3.359</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Debt to equity

b. Dependent Variable: Fixed investment
Table 5 shown above ANOVA results. F is laid down in the acceptance region. F-statistic is not enough to accept the hypothesis Therefore hypothesis (H1B) is rejected

5. Conclusion

This research is an attempt to analysis the impact of financial leverage on investment. For this study purpose data can be drawn from ten hotel and travel companies listed in Colombo Stock Exchange in 2009-2013. Pearson correlation and regression are used to analysis the data. From the regression analyzed results expressed that gross investment had significant impact on debt to equity at 0.01 significant levels. But fixed investment had not significant impact on debt to equity. From the correlation analyzed results revealed that there is positive significant relationship between gross investment and debt to equity (p<0.01). r value indicates the .552 level of Strength at the 0.01 significant level . Further this study explains that there is negative relationship between fixed investment and debt to equity. But there is no significant relationship exist (p>0.05).

Reference


Anandasayanan & Subramaniam(2011)” Effect of Capital Structure on profitability of Listed Manufacturing Companies in Sri Lanka”; Eighth international conference on business management


