# Islamic and Traditional Corporate Finance: a Comparative Study on WACC 

Nicola Miglietta and Enrico Battisti*

* Nicola Miglietta, Department of Management, University of Turin, Italy, nicola.miglietta@unito.it
Enrico Battisti, Department of Management, University of Turin, Italy, enrico.battisti@unito.it

Abstract- The paper represents a first exploratory study based on the comparison between the Weighted Average Cost of Capital (WACC) of a sample of companies listed on Malaysian Stock Exchange, classified and shared according to the principles of Islamic finance (i.e. riba, risk sharing, haram).

In particular, the main aim of the analysis is to provide some evidences of the potential effect on the risk (measured by beta) on the WACC as result of the principles used to divide the companies between Shari'ah Compliant and not Shari'ah Compliant. Generally our findings are focused on a greater level of WACC related to the LCSC that belong to the majority of selected sectors and, according to the principles of Islamic finance, they have shown a leverage ratio lower than that of companies not Shari'ah Compliant.

Keywords: Weighted Average Cost of Capital (WACC); Islamic Corporate finance; Traditional Corporate Finance; Risk; Listed Companies.

## I. INTRODUCTION

The traditional principles of Corporate Finance postulate that each firm carries out some choices related to where to get the funds (investment decision), how to invest it (financing decision) and when to return the excess cash (dividend decision). The same choices can be referred to an Islamic firm. We can therefore assert that the financial goal of the firm is to maximize the Shareholder Value. This goal is widely accepted in both theory and practice (e.g. Copeland, Weston \& Shastri, 2004; Van Horne and Wachovicz, 2008; Damodaran, 2011; Vernimmen, Quiry, Dallocchio, Le Fur \& Salvi, 2014; Brealey, Myers \& Allen, 2014) and can be applied to Islamic firms (e.g. Aggarwal \& Yousef, 2000; Habib, 2007; Nagano, 2010; Salvi \& Miglietta, 2013).

What is different and what is the impact on value creation? The principles that a Shari'ah Compliant company must follow with reference to its capital structure diverge from a traditional firm. In particular, Profit and Loss Sharing (PLS) and Markup financing, in addition to legal-religious principles, could play a significant role on the system of capital structure puzzle and, consequently, on the Weighted Average Cost of Capital (WACC). As known in the corporate finance, WACC represents the minimum acceptable hurdle rate of return within the investment decision. Finally, the hurdle rate should be higher for riskier projects and reflect the financing mix used (debt or equity) (Damodaran, 2011).
The aim of the paper is to present some evidences of the potential effect on the risk (measured by Beta) on the WACC as a result of the Islamic finance principles used to divide the companies between Shari'ah Compliant (LCSC) and not Shari'ah Compliant (LCnotSC).
The paper is organised as follows. First, we introduce a theoretical background of the Islamic Finance principles and their effects on the capital structure. After the main differences between the cost of capital in the Traditional and Islamic Corporate Finance, we develop a comparative study on WACC.

## II. ISLAMIC FINANCE: A THEORETICAL BACKGROUND

Islamic finance is a financial institution and product designed to comply with the central principles of Shari'ha (a legal framework of Islam). It is one of the most growing segments of the global finance industry (Gait \& Worthington, 2007). In particular, Islamic financial markets have gained impulse over the past few decades, as demonstrated by the global proliferation of Islamic financial institutions. This proliferation has been accompanied by parallel increases in Islamic financial products.
The principles of Islamic finance have been analyzed by Muslim and not-Muslim researchers alike (e.g. Dar \& Presley, 1999; Warde, 2000; Iqbal
\& Molyneux 2005; Metwally, 2006) but the number of literatures focusing on Islamic finance from the point of view of corporate finance is scant (e.g. Aggarwal \& Yousef, 2000; Habib, 2007; Nagano, 2010).

Notably, Islamic finance is based on the legalreligious principles of Shari'ah, geared mainly to illustrate what not to do rather than on what is lawful to do (Biancone, 2012). Islamic financial system requires transactions to be linked to the real sector, leading to fruitful activities that produce income and wealth (KFH Research, 2014). In particular, the aim of Shari'ah is to promote actions that do not affect people and society adversely through the violation of religious bans.
The main principles of Islamic finance are (Gait \& Worthington, 2007):
the prohibition of Riba and the exclusion of debt-based financing from the economy;
the prohibition of Gharar encompassing the full disclosure of information and elimination of any asymmetrical information in a contract;
the prohibition of Maysir encompassing the exclusion of financing and dealing in sinful and socially irresponsible activities and commodities such as gambling, drugs and pork or the production of alcohol and other games of chance (i.e. casino-type games, lotteries);
materiality that is a direct or indirect link to a real economic transaction. Islamic finance supports people to invest their cash effectively without any wrongdoing for those who are either borrowers or lenders;
justice, a financial transaction should not lead to the utilization of any part to the transaction.
Islamic finance rejects that it can be realized a gain without taking a risk. The funding to the business entity is permitted, but the return must be tied exclusively to the results linked to the use of capital (Gomel, 2010). This is the base of the Profit and Loss Sharing (PLS), that is a form of partnership, where partners share profits and losses based on their capital share and work. In particular, the concept of PLS is the method utilized in Islamic banking to comply with the prohibition of interest and it is a contractual agreement between two or more transacting parts, which allows to bring together their resources to invest in a project to share in profit and loss (Dar \& Presley, 2000).

## III. THE EFFECTS ON THE CAPITAL STRUCTURE

The literature on capital structure started with the contributions of Franco Modigliani and Merton Miller (Modigliani \& Miller, 1958), whose propositions are, even today, the theoretical and explanatory keys for proper framing of the issues related to funding choices. For Modigliani and Miller (1958), there is not a relation between capital structure and the value of the firm. These studies also allow to understand the evolution of the theories developed in the following years (Harris \& Raviv, 1991): starting from the a) Trade-off Theory (theory that capital structure is based on a trade-off between tax savings and cost of bankruptcy), through the b) Pecking Order Theory (theory stating that firms prefer to issue debt rather than equity if internal finance is not sufficient) until the c) Agency Theory.
As observed in the introduction, the studies on Islamic finance from the point of view of capital structure are not frequent. According to the traditional corporate finance, the Weighted Average Cost of Capital (WACC) and the theories on the capital structure and its relationship with the creation of shareholder value have featured countless research and determined the principles that underpin the system of the financial decisions for the Traditional firm (e.g. Fama \& French, 1999; Damodaran, 2011; Dallocchio \& Salvi, 2011; Tardivo, Schiesari \& Miglietta 2012; Brealey, Myers \& Allen, 2014) and, also, for the Islamic firm (e.g. Habib, 2007; Mohamad \& Saad, 2012; Shafizal \& Mansur, 2013). The financial manager (anyone responsible for an investment or financing decision) of a Traditional firm must choose a composition of sources (debt and equity) that maximizes the value of investments and which is in line with the strategic profile and risk; from these decisions derives its capital structure.
For an Islamic Firm, the financial decisions system is not substantially different from that of a Traditional firm (Salvi \& Miglietta, 2013). As known, the principles of Islamic finance have direct impact on the choice of capital structure. The financial contracts that can be compared with the equity are:

Musharakah: it is an agreement under which the Islamic bank provides funds, which are mingled with the funds of the business companies and others (www.islamic-banking.com).
Mudarabah: it is similar to the concept of silent partnership which financial capital is provided by a partner and the other partner (Ahmed, 2007) executes the work.
For the Islamic finance, the financial contracts that can be compared with the debt are:

- Murabahah: it is a sale contract at a markup; the seller adds a profit component to the cost of the item being sold (Ahmed, 2007).
- Salam and Istisna: it is one of the basic conditions for the validity of a sale in Shari'ah that the commodity must be in the physical or constructive possession of the seller; Salam is used to finance agricultural like goods and Istisna is utilized to finance manufactured like goods (www.blomdevelopment.com).
- Ijarah: it is an agreement that permits one party (the lessee) to use an asset or property owned by another party (the lessor) for an agreed-upon price over a fixed period of time (www.financialislam.com).


## IV. THE COST OF CAPITAL FOR ISLAMIC AND TRADITIONAL CORPORATE FINANCE

According to the traditional corporate finance, the company's cost of capital is usually estimated as a Weighted Average Cost of Capital that is the average rate of return that a firm expects to compensate all its different investors; the weights are the fraction of each financing source (debt and equity). This is the company's cost of financing and the minimum return its investments must generate in the medium term (Vernimmen, Quiry, Dallocchio, Le Fur \& Salvi, 2014). The formula is:
a) $\mathrm{WACC}=\mathrm{Ke}(\mathrm{E} / \mathrm{E}+\mathrm{D})+\mathrm{Kd}(\mathrm{D} / \mathrm{E}+\mathrm{D})$
where:

- $\quad \mathrm{E}=$ Market value of the company's equity
- $\quad \mathrm{D}=$ Market value of the company's debt
- $\mathrm{E}+\mathrm{D}=$ Total Market Value of the company
- $\quad \mathrm{Ke}=$ Cost of equity
$\mathrm{Kd}=$ Cost of debt
To calculate the WACC it is necessary an estimate of the cost of equity and debt. In particular, the hardest part of estimating the WACC is to understand the cost of equity that is the expected rate of return to investors in the company's common stock; many Traditional firms look to the Capital Asset Pricing Model for an answer (Brealey, Myers \& Allen, 2014). The Capital Asset Pricing Model (CAPM) asserts that the expected rate of return is equal to the risk free interest rate plus a risk premium, that depends on beta (measure of market risk) and the market risk premium.
4.1 Cost of capital for Traditional Corporate finance The cost of debt is defined as the remuneration requested by third parts that finance the company according to the risk endured. The formula is:
b) $\mathrm{Kd}=\mathrm{i} \times(1-\mathrm{t})$
where

> - $\quad i=$ interest rate (risk free interest rate plus default spread)
> $-\quad t=$ tax rate

The cost of equity is the return required to invest capital in a risky activity and it represents the opportunity cost of capital incurred for failing to invest the capital in another activity of the same degree of risk. The formula is:
c) $\mathrm{Ke}=\mathrm{rf}+$ Betalevered $\times \mathrm{MP}$
where

- $\quad \mathrm{rf}=$ risk free interest rate
- MP = market premium
- Betalevered $=$ measure of market risk


### 4.2 Cost of capital for Islamic Corporate finance

As above-mentioned, the cost of capital for Islamic Corporate finance based on mark-up tends to assume a structure similar to the Traditional Corporate finance.
The process of estimating of the cost of debt in Islamic finance provides a mechanism based on a benchmark derived from the traditional finance and equivalent to the "base cost" of the same source on which, through the application of the Mark-up, it forms a "cost complement". Although in the process of estimating the cost of equity in Islamic finance can be associated a "hurdle yield of return" that the lender is expected from the investment. By connecting the return with a situation of "minimum risk", the cost of equity can be determined using a mechanism similar to that of the CAPM. In this sense, the application of CAPM in Islamic finance implies some different considerations about the principles that govern the basics: not interest (Riba) and Profit and Loss Sharing.

## V. A COMPARATIVE STUDY ON WACC

## A. Research methodology

Referring to the Shari'ah Advisory Council (SAC) of the Securities Commission Malaysia, we consider not Shari'ah Compliant all the firms involved in the following core activities: a) financial services based on riba (interest); b) gaming and gambling; c) manufacture or sale of non-halal products or related products; d) conventional insurance; e) entertainment activities that are non-permissible according to Shari'ah; f) manufacture or sale of tobacco-based products or related products; g) stock broking or share trading on Shari'ah non-compliant securities; h) other activities deemed nonpermissible according to Shari'ah. For companies with activities comprising both permissible and nonpermissible activities, the SAC measures level of mixed contributions from permissible and nonpermissible activities towards turnover and profit before tax of a company (Securities Commission of Malaysia, 2014). The SAC uses benchmarks based on Ijtihad. In particular, the Shari'ah Advisory Council applies a two-tier quantitative approach in
determining the Shari'ah Compliant status of the listed securities:

1. business activity benchmarks;
2. financial ratio benchmarks.

The activities are classified as Shari'ah Compliant if they are within the business activity benchmarks and the financial ratio benchmarks. In other words, if the contribution of non-permissible activities exceeds the benchmark, the securities shall be classified as not Shari'ah Compliant.

1. Business activity benchmarks

The contribution of not Shari'ah Compliant activities to the Group revenue and Group profit before taxation of the company will be computed and compared against the relevant business activity benchmarks as follows:
a. 5\% benchmarks (activities: conventional banking and insurance; gambling; pork and pork-related activities; Shari'ah noncompliant entertainment; liquor and liquorrelated activities; tobacco and tobaccorelated activities; interest income from conventional accounts and instruments).
b. $20 \%$ benchmarks (activities: stockbroking business; hotel and resort operations; share trading; rental received form Shari'ah noncompliant activities).
For these activities, the contribution of not Shari'ah Compliant businesses to the Group revenue or Group profit before taxation of the company must be less than 5\% (a) and 20\% (b).
2. Financial ratio benchmarks
a. cash over total assets;
b. debt over total assets.

Each ratio, which is proposed to evaluate riba and riba-based elements within a company's statements of financial position, must be less than $33 \%$ (www.bursamalaysia.com).
In order to provide some preliminary evidences of the potential effect on the risk as result of the principles used to divide the companies between Shari'ah Compliant and not Shari'ah Compliant, we followed three research phases.
First, we have identified Stock Markets that contained Shari'ha Compliant and not Shari'ah Compliant firms. In this sense, Bursa Malaysia offers a dynamic platform for issuers by supporting and assisting companies in fulfilling their capital raising needs and operates a fully-integrated exchange that offers a comprehensive range of products which includes equities, derivatives, offshore and Islamic products as well as exchange related services such as trading, clearing, settlement and depository services.
Second, the companies on Bursa Malaysia listed under the Main Market are 814 (march 2015). In this second phase, we have recognized 598 listed companies Shari'ah Compliant (LCSC) and 216 listed companies not Shari'ah Compliant (LCnotSC).

Third, we have defined some items (filters) relevant to the purpose of our comparative analysis on WACC. We have considered the three following selection criteria of the listed companies:

- Company profile: Macro sector.
- Key Statistics: Beta levered.
- Financial Health: Debt/equity ratio.

In this phase, we have evaluated as "not relevant", and consequently excluded from the final dataset, the listed companies that do not have at least two of the three parameters mentioned above or some listed companies in which it was not possible to identify a single sector of belonging.
Consequently, 779 listed companies were our eligible target: 569 LCSC and 210 LCnotSC.
This first result of the research is summarized in the following figure.


Figure 1: The percentage of Listed Company analysed

## B. Data analysis

From the sample of firms analysed, which corresponds to $96 \%$ of the universe of listed companies operating in the Malaysian Stock Market, we have divided the undertakings for macro sectors: eight for the listed companies Shari'ah Compliant and nine for the listed companies not Shari'ah Compliant.
For the LCSC sectors are Real Estate, Basic materials, Industrial, Consumer, Healthcare, Energy, Communication service, Technology.
For the LCnotSC these sectors are Real Estate, Industrial, Consumer, Healthcare, Energy, Utilities, Technology, Financial service, Basic materials.
This second result of the research is summarized in the following two figures.


Figure 2: Sectors for listed companies Shari'ah Compliant


Figure 3: Sectors for listed companies not Shari'ah Compliant

Both for Shari'ah Compliant listed companies and for those not Shari'ah Compliant, the macro sector that has a higher number of listed companies is that of "Consumer", this last divided in "Consumer Cycling" and "Consumer Defensive".
In order to provide some preliminary evidences of the potential effect on the risk (measured by Beta) as a result of the principles used to divide the companies between LCSC and LCnotSC, we have decided to analyse for each listed companies the following elements needed to calculate the average WACC of the sector:

- Beta levered;
- Debt/equity ratio.

Starting from these two elements, considered a Malaysian tax rate of $14,50 \%$ (Damodaran, 2015), we have calculated for each sector the levered and unlevered beta.
The formula of beta levered is:
d) Beta levered $=$ Beta unlevered*[ $1+(1-t) * D / E]$ where
$\mathrm{t}=$ tax rate
$D / E=$ Debt/equity ratio.
According with the previous formula, the beta unlevered is:
e) Beta unlevered $=$ Beta levered/[1 + $(1-t) * D / E]$

The third result of the research is summarized in the following two tables.

|  | Real Estate | Basic Materials | Industrial | Consumer | Healthcare | Energy | Technology | Communication service |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Beta levered | 1,3980 | 1,3044 | 1,0827 | 0,8533 | 0,894 | 1,3052 | 1,0338 | 1,0516 |
| Beta unlevered | 1,1128 | 1,0271 | 0,9315 | 0,7097 | 0,8015 | 1,0907 | 0,9399 | 0,8446 |
| Tax rate (Damodaran, 2015) | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% |
| D/E | 0,2997 | 0,3158 | 0,1898 | 0,2366 | 0,1350 | 0,2300 | 0,1168 | 0,2867 |
| D/(E+D) | 0,2306 | 0,2400 | 0,1595 | 0,1913 | 0,1189 | 0,1870 | 0,1046 | 0,2228 |

Table 1: Beta levered and unlevered of LCSC

|  | Real Estate | Basic materials | Industrial | Consumer | Healthcare | Energy | Technology | Utilities | Financial service |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Beta levered | 0,9273 | 1,2404 | 0,8933 | 0,994 | 1,42 | 1,2229 | 0,9289 | 0,9267 | 1,0372 |
| Beta unlevered | 0,6426 | 0,9963 | 0,7066 | 0,6970 | 1,2126 | 0,7818 | 0,5777 | 0,3971 | 0,7871 |
| Tax rate (Damodaran, 2015) | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% |
| D/E | 0,5183 | 0,2865 | 0,3090 | 0,4983 | 0,2000 | 0,6600 | 0,7111 | 1,5600 | 0,3716 |
| D/(E+D) | 0,3414 | 0,2227 | 0,2361 | 0,3326 | 0,1667 | 0,3976 | 0,4156 | 0,6094 | 0,2709 |

Table 2: Beta levered and unlevered of LCnotSC

|  | Beta levered |  | Beta unlevered |  | Higher beta <br> levered | Higher beta <br> unlevered |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | LCSC | LCnotSC | LCSC | LCnotSC |  |  |
| Real Estate | 1,3980 | 0,9273 | 1,1128 | 0,6426 | LCSC | LCSC |
| Basic Materials | 1,3044 | 1,2404 | 1,0271 | 0,9963 | LCSC | LCSC |
| Industrial | 1,0827 | 0,8933 | 0,9315 | 0,7066 | LCSC | LCSC |
| Consumer | 0,8533 | 0,9940 | 0,7097 | 0,6970 | LCnotSC | LCSC |
| Healthcare | 0,8940 | 1,4200 | 0,8015 | 1,2126 | LCnotSC | LCnotSC |
| Energy | 1,3052 | 1,2229 | 1,0907 | 0,7818 | LCSC | LCSC |
| Technology | 1,0338 | 0,9289 | 0,9399 | 0,5777 | LCSC | LCSC |

Table 3: A comparative analysis on risk
shows that listed companies Shari' ah compliant are generally more risky than those not Shari'ah Compliant. The diversity in the results in the sector of "Healthcare" is justifiable, in part, for the small number of not Shari'ah Compliant firms that operate in the sector.
Finally, starting from these results, we have calculated for each sector the WACC. The results are the following.

For the sectors of Real Estate, Basic Materials, Industrial, Energy and Technology, the beta levered and unlevered of LCSC are higher than beta of LCnotSC. For Healthcare, the beta levered and unlevered are lower than beta of LCnotSC. For Consumer, the beta levered of LCSC is lower than the beta of LCnotSC, while the beta unlevered of LCSC is higher than the beta of LCnotSC. This

|  | Real Estate | Basic Materials | Industrial | Consumer | Healthcare | Energy | Technology | Communication service |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of listed companies Shari'ah Compliant | 66 | 87 | 119 | 213 | 10 | 21 | 47 | 6 |
| Country Risk Premium (Damodaran, 2015) | 1,80\% | 1,80\% | 1,80\% | 1,80\% | 1,80\% | 1,80\% | 1,80\% | 1,80\% |
| Risk Free Rate (Damodaran, 2015) | 3,85\% | 3,85\% | 3,85\% | 3,85\% | 3,85\% | 3,85\% | 3,85\% | 3,85\% |
| Market Premium (Damodaran, 2015) | 7,55\% | 7,55\% | 7,55\% | 7,55\% | 7,55\% | 7,55\% | 7,55\% | 7,55\% |
| Cost of equity | 14,40\% | 13,70\% | 12,02\% | 10,29\% | 10,60\% | 13,70\% | 11,66\% | 11,79\% |
| Cost of debt | 4,83\% | 4,83\% | 4,83\% | 4,83\% | 4,83\% | 4,83\% | 4,83\% | 4,83\% |
| Beta levered | 1,3980 | 1,3044 | 1,0827 | 0,8533 | 0,894 | 1,3052 | 1,0338 | 1,0516 |
| Beta unlevered | 1,1128 | 1,0271 | 0,9315 | 0,7097 | 0,8015 | 1,0907 | 0,9399 | 0,8446 |
| Tax rate (Damodaran, 2015) | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% |
| $\mathrm{E} / \mathrm{E}+\mathrm{D})$ | 76,94\% | 76,00\% | 84,05\% | 80,87\% | 88,11\% | 81,30\% | 89,54\% | 77,72\% |
| D/(E+D) | 23,06\% | 24,00\% | 15,95\% | 19,13\% | 11,89\% | 18,70\% | 10,46\% | 22,28\% |
| D/E | 0,2997 | 0,3158 | 0,1898 | 0,2366 | 0,1350 | 0,2300 | 0,1168 | 0,2867 |
| D | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| E | 3,337 | 3,167 | 5,269 | 4,227 | 7,407 | 4,348 | 8,562 | 3,488 |
| WACC | 12,20\% | 11,57\% | 10,88\% | 9,25\% | 9,91\% | 12,04\% | 10,94\% | 10,24\% |

Table 4: WACC of LCSC on Bursa Malaysia.

|  | Real Estate | Basic materials | Industrial | Consumer | Healthcare | Energy | Technology | Utilities | Financial service |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of listed company not Shari'ah Compliant | 30 | 24 | 30 | 60 | 2 | 7 | 18 | 3 | 36 |
| Country Risk Premium (Damodaran, 2015) | 1,80\% | 1,80\% | 1,80\% | 1,80\% | 1,80\% | 1,80\% | 1,80\% | 1,80\% | 1,80\% |
| Risk Free (Damodaran, 2015) | 3,85\% | 3,85\% | 3,85\% | 3,85\% | 3,85\% | 3,85\% | 3,85\% | 3,85\% | 3,85\% |
| Market Premium (Damodaran, 2015) | 7,55\% | 7,55\% | 7,55\% | 7,55\% | 7,55\% | 7,55\% | 7,55\% | 7,55\% | 7,55\% |
| Cost of equity | 10,85\% | 13,22\% | 10,59\% | 11,35\% | 14,57\% | 13,08\% | 10,86\% | 10,85\% | 11,68\% |
| Cost of debt | 4,83\% | 4,83\% | 4,83\% | 4,83\% | 4,83\% | 4,83\% | 4,83\% | 4,83\% | 4,83\% |
| Beta levered | 0,9273 | 1,2404 | 0,8933 | 0,994 | 1,42 | 1,2229 | 0,9289 | 0,9267 | 1,0372 |
| Beta unlevered | 0,6426 | 0,9963 | 0,7066 | 0,6970 | 1,2126 | 0,7818 | 0,5777 | 0,3971 | 0,7871 |
| Tax rate (Damodaran, 2015) | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% | 14,50\% |
| $\mathrm{E} / \mathrm{E}+\mathrm{D})$ | 65,86\% | 77,73\% | 76,39\% | 66,74\% | 83,33\% | 60,24\% | 58,44\% | 39,06\% | 72,91\% |
| $\mathrm{D} / \mathrm{E}+\mathrm{D})$ | 34,14\% | 22,27\% | 23,61\% | 33,26\% | 16,67\% | 39,76\% | 41,56\% | 60,94\% | 27,09\% |
| D/E | 0,5183 | 0,2865 | 0,3090 | 0,4983 | 0,2000 | 0,6600 | 0,7111 | 1,5600 | 0,3716 |
| D | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| E | 1,929 | 3,490 | 3,236 | 2,007 | 5,000 | 1,515 | 1,406 | 0,641 | 2,691 |
| WACC | 8,80\% | 11,35\% | 9,23\% | 9,18\% | 12,95\% | 9,80\% | 8,36\% | 7,18\% | 9,82\% |

Table 5: WACC of LCnotSC on Bursa Malaysia.
The results of comparative analysis on WACC are the following:

|  | WACC |  | Higher |
| :--- | :---: | :---: | :---: |
|  | LCSC | LCnotSC |  |
| Real Estate | $12,20 \%$ | $8,80 \%$ | LCSC |
| Basic Materials | $11,57 \%$ | $11,35 \%$ | LCSC |
| Industrial | $10,88 \%$ | $9,23 \%$ | LCSC |
| Consumer | $9,25 \%$ | $9,18 \%$ | LCSC |
| Healthcare | $9,91 \%$ | $12,95 \%$ | LCnotSC |
| Energy | $12,04 \%$ | $9,80 \%$ | LCSC |
| Technology | $10,94 \%$ | $8,36 \%$ | LCSC |

Table 6: A comparative analysis on WACC

## VI. FINDINGS AND CONCLUSIONS

We carried out a comparative study on WACC of listed companies on the Malaysian Stock Exchange, rare example of financial market that includes companies classified in Shari'ah (LCSC) and not Shari'ah Compliant (LCnotSC).
In order to estimate the WACC of the selected companies, we have calculated for each one the cost of debt, the cost of equity and the market capitalization. According to the study of Damodaran (2015), we have considered a $1,80 \%$ as Country Risk Premium of Malaysia, a $3,85 \%$ as Risk Free Rate and a $7,55 \%$ as Market Premium.
Excluding the sectors not comparable due to lack of companies LCSC and/or LCnotSC (Utilities, Communication service, Financial service), the findings of our analysis (as shown in Table 6) are generally based on a systematic value of LCSC's WACC greater than LCnotSC, for each group of companies that belong to Real Estate, Basic Materials, Industrial, Consumer, Energy and Technology sectors.
In conclusion, we can assert that, for the sample analyses, listed companies Shari'ha Compliant collected using the application of the principles of Islamic finance, shows a higher level or risk, measured by Beta levered, and higher value of the WACC. As a final point, what is the impact on value creation? The LCSC of our sample analyzed starts their business management from a greater minimum acceptable hurdle rate.
More research is necessary to examine the potential effect on the risk.
In particular, it may be interesting to understand why the listed companies Shari'ah Compliant, while presenting a debt over total assets below $33 \%$, appear to be riskier of not-Shari'ah. In this sense, the principles of traditional corporate finance postulate that a higher level of leverage suggests a high level of risk, but in our exploratory study, we have observed that in Malaysian Stock Exchange the LCSC haven't a lower level of risk. Other future researches should be based on the extension of this analysis to other Financial Markets, implementing the use of statistical tools in order to verify the significance of what introduced in this preliminary and comparative study.

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