

## CHAPTER V :DISCUSSIONS, RECOMMENDATIONS AND CONCLUSION

### 5.1 Introduction

This chapter discusses on the findings, which are reviewed against historical events as a means of validating the results. Conclusion and recommendations follow suit.

### 5.2 Summary and Discussion of Findings

The results of the descriptive summary outlines that conventional stocks have the lowest single recorded skewness at -1.81 (Luster Industries). Furthermore, conventional stocks also reported higher average value for kurtosis at (54.55) while Shariah-compliant stocks average at (43.15). Overall, the two portfolios showed similar values for all the observed variables but a more stringent observation places conventional stocks at slightly higher boundaries when compared with Sharia-compliant stocks.

Additionally, the two portfolio were used as a model to mirror the market downside beta. This was done entirely by using the GARCH (1,1) model as a tool to analyze which portfolio minimizes the downside beta while closely mapping the FTSE Bursa Malaysia downside return patterns. From the findings, a visual trend on the graphs (figures 4.2 and 4.3) indicate there is slightly lower downside beta in conventional stocks relative to the Sharia-compliant stocks. Furthermore, there is more persistence of beta shocks in the ARCH and GARCH parameters for conventional stocks (1) when compared with Shariah-compliant stocks (0.78). The persistence was computed by adding the ARCH and GARCH parameters.

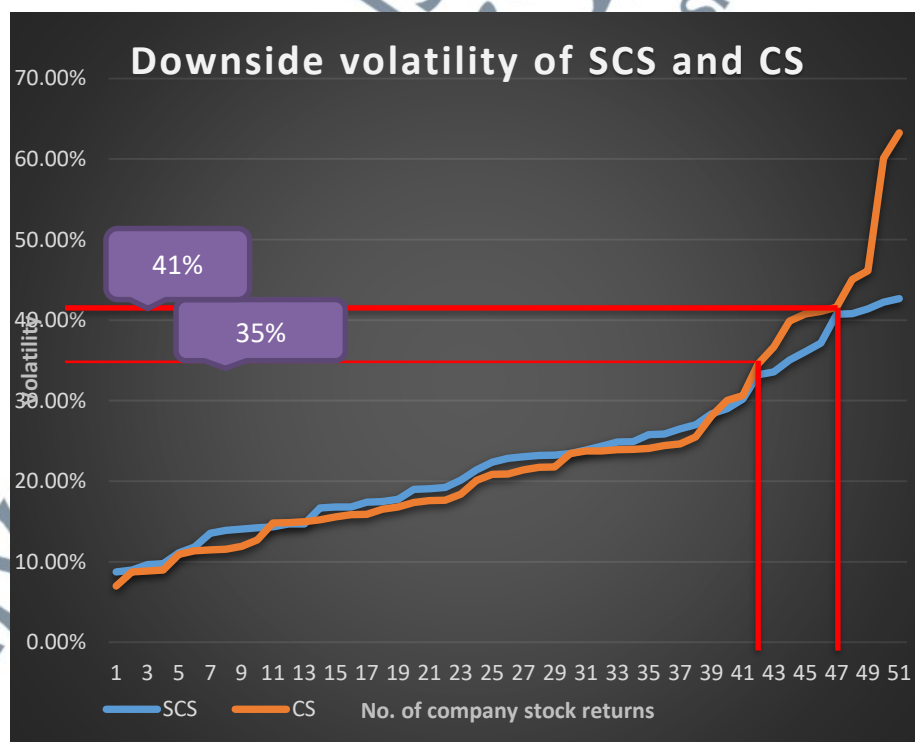
### **5.2.1 Research Objective 1**

The HV, EWMA and GARCH (1,1) all show similar patterns for the downside beta. Furthermore, the GARCH (1,1) model has milder upper and lower boundaries. The years 2015 to 2017 is a bearish market (declining beta) while 2017 to 2019 is a bullish period (increasing beta) as evidenced by Yahoo Finance (2021). This is plausible because high downside beta clusters discourage investors and therefore triggers bearish market periods while low beta periods incentivize investors. The period with the highest density of beta spikes was in 2019. Shukry and Vishnoi (2019) found that the price fall for that period was remarkably low. This is consistent with the findings obtained. Furthermore, the highest annual average of downside beta (10.90%) was in 2015. This can be attributed to the political instability that was in the country, covered by BBC (2015). The unfavorable political environment was connected to the allegations of a sitting prime minister been allocated \$700 million dollars into his bank account by unnamed donors. This tense situation became categorized as the 1Malaysia Development Berhad (1MDB) scandal. This is a highly plausible premise because the Asian emerging market, as researched by Aggarwal, Inclan & Leal (1999), is vastly influenced by country specific political, social and economic events. These forces have a huge role to play in dictating the nature of beta. The downside beta for 2017 and 2018 compressed as was also evident in the Standard and Poor's 500 (S&P 500) index volatility trends (Ed, 2021). Finally, there is increase in downside beta as the model becomes more rigid with parameters.

### **5.2.2 Research Objective 2**

The average conventional stocks uniformly record slightly higher downside beta compared to its Shariah-compliant counterpart across all three methods. Based on the

GARCH results, the average downside beta for Shariah-compliant stocks is at 23% while the conventional portfolio stands at 24%. However, based on random sampling of 100 company stock returns, the study reveals that the difference in downside beta between Sharia-compliant stocks and their conventional counterpart is statistically insignificant. This conclusion was reached through the t-test. However, different opinions have been shed on this controversial issue. The superiority of Sharia-compliant stocks over conventional stocks with respect to beta is supported by Ramlall (2010) for firms in Malaysia. Pranata & Nurzanah (2016) also allude to this finding. On the contrary, Mansor & Bhatti (2016) argued the superiority of conventional portfolio being less volatile than Sharia compliant portfolio. However, this research found that Shariah-compliant portfolio is indifferent from conventional portfolio and support the findings of Kholifatul & Fauzan (2016) and Bayram & Abdullah Othman (2019). Figure 5.1 highlights the results for the GARCH (1,1) downside beta scores for both portfolios.

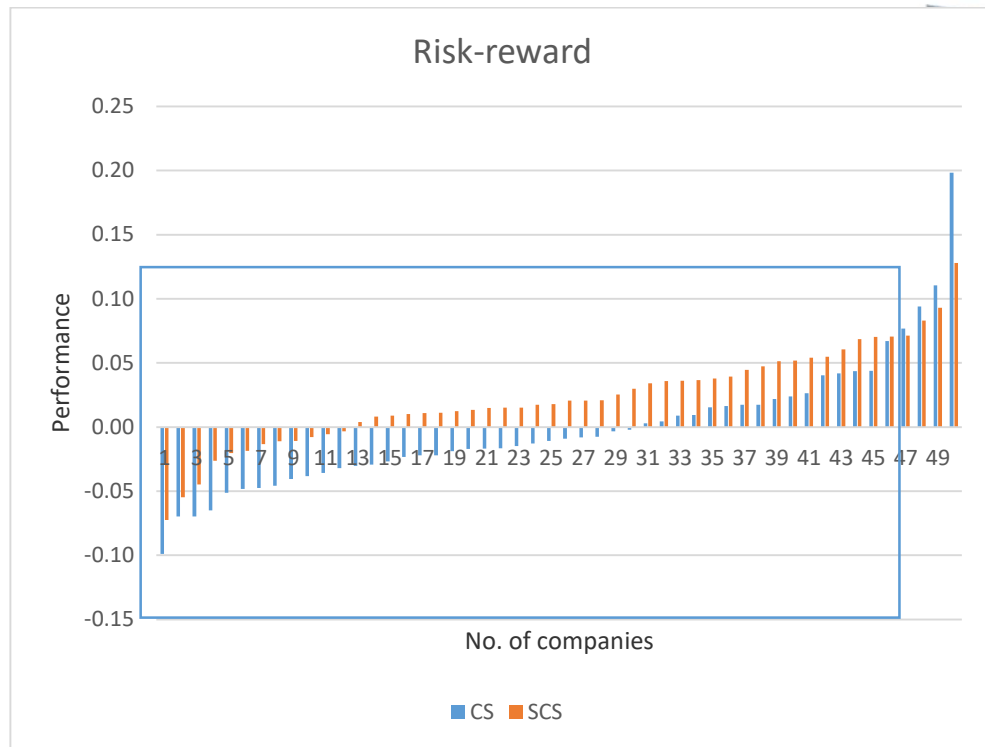


**Figure 5.1:** Downside Beta For both portfolio

While the random selection of 50 Shariah-compliant stocks and 50 conventional stocks indicates a neutral preference in downside beta amongst the two portfolios, this research discovered a growing divergent result in downside beta for all stocks that recorded an annualized beta greater than 41%. Bahloul, Mroua & Naifar (2017) used the Markov switching regression model to explore the impact of conventional stock market return and beta and various macroeconomic variables on Islamic stock markets returns. While the study reveals Islamic stock indices are influenced by conventional stock indices returns for both low and high beta regimes, it provides that several other macroeconomic variables failed to explain the dynamics of Shariah-compliant stock indices especially in high beta regimes. These variables include economic growth and unemployment rate. The essence of highlighting the findings of the prior research is to emphasize plausible discrepancies that can occur for high beta regimes in Shariah-compliant stocks. Ergo, with similar beta trends to their conventional counterparts, further investigation on extreme beta boundaries could provide unanticipated results.

### **5.2.3 Research Objective 3**

The average Sortino ratio for Shariah-compliant stocks is more rewarding as compared to its conventional counterpart. This is consistent with Kholifatul & Fauzan (2016) and Alam & Ansari (2020). Also, the insignificance in downside beta for Shariah-compliant stocks against their conventional counterparts does not play a major role in influencing the Sortino ratio as evidenced by the findings. In contradiction to this research, other opinions suggest indifference in performance between the two portfolios (Hosen, Tunku, Rahman, Ashraful, Chowdhury & Masih 2018; Tükenmez et al., 2019; Trabelsi et al., 2020). Also, Rana & Akhter (2015) argues conventional portfolios are more rewarding than Sharia compliant portfolios.



**Figure 5.2:** Beta To Reward Performance Of Portfolios

It is evident from the graph above that Shariah-compliant stocks slightly edge over their conventional counterparts for the vast majority of company returns analyzed using the Sortino ratio. Again, contradicting results begin to show on the outskirts of high performance boundary. However, it is certain that Shariah compliant and conventional stocks does not record significant differences in downside beta scores when compared. But Shariah compliant index do records a higher performance when compared to its conventional counterparts. The implications of this finding therefore prompts investors to show preference in investing on Shariah-compliant stocks over their conventional counterparts.

### 5.3 Limitations & Contribution of Study

The scope of this study is limited to a total of 100 Malaysian firms' stock returns, with 50 being Shariah-compliant securities and the other 50 as conventional stocks. Shariah-compliant portfolio constitutes 50 stocks that are recognized by FTSE Bursa Malaysia as Shariah-compliant whilst conventional portfolio consists of 50 stocks that are all classified as conventional stocks under the same FTSE Bursa Malaysia. This allows for unified separation of the two portfolios harmoniously. The principal data used in assessing the downside betas was the daily returns of the firms. However, the data set used to compute the downside beta of the returns ranged from January 2015 to January 2020. This period was chosen primarily because no major economic events occurred and therefore downside beta is computed under no abnormal economic situations. This allows for easier replication of study *ceteris paribus* in other countries and providing a better comparative setup for the two asset classes.

There are different methods to estimate downside beta. Nevertheless, the researcher finds the listed 3 methods sufficient enough in respect to method and accuracy to arrive at the expected results. The methods are the Historical Volatility Model (HV), the Exponentially Weighted Moving Average Model (EWMA) and the GARCH (1, 1) method.

These methods are employed principally due to the high level of effectiveness and commonalities present in them. Three objectives are set to be achieved by the implementation of these models. The first objective aims to explore the general behavior of downside beta for FBM KLCI. The second objective addresses two major components of the FBM KLCI with respect to risk. These are Shariah-compliant stocks and conventional stocks. The third objective explores the performance of Shariah-compliant stocks against their conventional counterparts.

Highlighting the contributions of the study, it is factual that Malaysia is predominantly a Muslim society. Therefore, the study provided a model that potentially addresses a majority concern in relations to adopting an investment scheme that is familiar with the mass and in most ways aligned with their norms and values as a religiously governed state. It addresses the question of how much safer is Shariah-compliant stocks over conventional stocks, or vice versa.

Finally, a meticulous study of downside beta and performance of Shariah-compliant stocks and conventional stocks cushions out well for other financial models to set as benchmark upon which their progress, or lack thereof, is gauged against. A particular example is the momentous wave of fintech amidst social distancing during the COVID-19 pandemic (Dubey, Sonar & Mohanty, 2020). These new financial frameworks would require a yardstick in order to uncover their meaningfulness in a society where punishment is levied on investors for adopting undesirable financial models. Additionally, investors have clearer information on both downside beta and performance of Shariah-compliant stocks and their conventional counterparts and such information allows them to make better informed decisions on investment strategies.

#### **5.4 Recommendations**

There is great desire for investors to be able to gauge and optimally leverage resources during times of inevitable crises. Therefore, greater interest has been shifted to inclusive adoption of different other asset classes to compliment the traditional conventional and Shariah-compliant asset classes (Nasr, Ben, Lux, Ajmi & Gupta, 2016; Ku-Mahamud, Omar, Abu-Bakar & Muraina, 2019). A good example is the fast growing fintech industry which is quiet desirable for investors especially during the COVID-19 pandemic (Kalmykova & Ryabova, 2016). Therefore, beta can be explored

for newly emerging financial assets to continually soften any unforeseen future shocks for investors, economies and individuals. Furthermore, given the findings of this research, which hints of a growing disparity in downside beta as well as performance scores for highly volatile stocks, future researchers are encouraged to model both beta and performance for Shariah-compliant stocks and conventional stocks that are exposed to high beta. Finally, other approaches to downside beta such as multivariate GARCH can be explored.

## 5.5 Conclusion

The implication of investing in a Sharia compliant portfolio over its conventional counterpart is a contentious debate with gains and downsides on either side. However, the findings of this research supports the argument that Shariah-complaint stocks and their conventional counterparts, using Malaysian firms as a case study, share equal downside beta merits. However, there is clear superiority in performance for Shariah-compliant returns over their conventional counterparts. The study further reveals that assigning tighter parameters improves measures of downside beta estimates. Furthermore, the research indicates the average performance of a combined Shariah-compliant and conventional firm returns outperform the market. This is supported by Mansor & Bhatti (2016), who issued similar conclusions on performance. The growth of Islamic finance is a plausible justification that Shariah-compliant businesses have an element of superiority over several other competing asset classes as its market size continues to grow, highlighted by Quilter-Pinner & Yan (2013). Therefore, a reasonable implication of this research is that there is a wider acceptance and practice of Shariah-compliant trading.