CAPITAL STRUCTURES IN ISLAMIC CAPITAL MARKETS:
EVIDENCES FROM BURSA MALAYSIA

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AUTHOR DECLARATION

بسم الله الرحمن الرحيم

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged.

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Omer Ahmed Salmeed Bin Thabet (4100090) was born in Yemen on the 21th February 1978. He currently resides at South City, Serdang, Selangor, Malaysia. He obtained his first degree at Alahgaff University-Yemen. He furthers his study in Malaysia in 2005 and obtained two Masters degrees from University Utara Malaysia (UUM) and INCEIF in International Accounting and Islamic Finance respectively. He has worked in Saudi Arabia for several years as accountant and financial manager. He is at present a PhD candidate of USIM majoring in Islamic Finance and Capital Market.
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ABSTRAK

Tujuan kajian ini adalah untuk menentukan tahap hutang syarikat patuh Syariah, penentu-penentu struktur modal mereka, dan pengaruh pemilikan pengurusan ke atas hubungan di antara struktur modal dan penentu. Kajian ini menggunakan keratan rentas dan masa-siri data yang meliputi 263 syarikat patuh Syariah yang tersenarai di Bursa Malaysia untuk tempoh 2006-2011. Hipotesis kajian ini diuji dengan menggunakan tiga kaedah iaitu pooled ordinary least square, fixed effects (kesan tetap) dan random effects (kesan rawak). Keputusan menunjukkan bahawa, 79% daripada syarikat-syarikat patuh Syariah mempunyai tahap hutang kurang daripada 33%. Kedua, hubungan yang signifikan wujud di antara keketaraan, keuntungan, kecairan, dividen, pulangan saham, risiko, zakat dan cukai dengan leverage syarikat patuh Syariah. Akhir sekali, dengan mengambil kira pemilikan pengurusan sebagai pemboleh ubah, hanya keuntungan, kecairan, dividen, zakat, cukai, dan bukan hutang cukai sheild (NDTS) didapati memberi kesan yang signifikan terhadap struktur modal syarikat.
ABSTRACT

The aims of this study are to determine the level of debt of Shariah-compliant firms, the determinants of their capital structure, and the influence of managerial ownership on the relationship between capital structure and its determinants. The study uses cross-sectional and time-series data covering 263 Shariah-compliant firms listed on Bursa Malaysia over the period 2006-2011. Pooled ordinary least square, fixed effects and random effects methods are used to test the hypotheses of this study. The results show that, first, 79% of Shariah-compliant firms have debt level less than 33%. Second, a significant relationship exists between tangibility, profitability, liquidity, dividends, stock return, risks, zakah, and tax with leverage of Shariah-compliant firms. Finally, in the presence of managerial ownership as moderating variable, only profitability, liquidity, dividends, zakah, tax, and NDTS are found to be a significant with compliant firms' capital structure.
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GLOSSARY

Bai' dayn: Trading in debt
Gharar: Uncertainty
Ijarah: Leasing
Istisna: Advance Purchase
Mazahebs: Four prominent Islamic schools of thoughts.
Miysir: Gambling
Mudarabah: Joint-venture
Mudarib: Entrepreneur
Murabaha: Cost plus Financing
Musharakah: Partnership
Quran: The Holy Scripture that Allah revealed to Prophet Mohammed
Riba: Interest
Rubul Maal: Capital provider
Sadaqat: Charity
Shariah: Islamic Law
Sukuk: Islamic Bonds
Sunnah: Practice and saying of Prophet Mohammed (peace be upon him).
Umum balwa: Common plight
Waqf: Charitable trust
Zakah: Islamic Taxation System
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<tr>
<td>AAOIFI</td>
<td>Accounting and Auditing Organization of Islamic Financial Institutions</td>
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<tr>
<td>ACE</td>
<td>Access, Certainty and Efficiency</td>
</tr>
<tr>
<td>AGE</td>
<td>Age</td>
</tr>
<tr>
<td>BL</td>
<td>Book leverage</td>
</tr>
<tr>
<td>BLUE</td>
<td>Best unbiased linear estimates</td>
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<td>BM</td>
<td>Bursa Malaysia</td>
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<tr>
<td>CME</td>
<td>Chicago Mercantile Exchange</td>
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<td>CON</td>
<td>Consumption</td>
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<td>DIV</td>
<td>Dividends</td>
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<td>Dow Jones Islamic Market Index</td>
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<td>Durbin-Watson Test</td>
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<td>EBIT</td>
<td>Earnings ratio before interest and taxes</td>
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<td>EMAS</td>
<td>Expressway Monitoring Advisory System</td>
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<td>EPS</td>
<td>Earnings per share</td>
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<td>ETFs</td>
<td>Exchange Traded Funds</td>
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<td>FE</td>
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<td>FEM</td>
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<td>FTSE</td>
<td>Financial Times Stock Exchange</td>
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<td>GCC</td>
<td>Gulf Cooperation Council</td>
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<td>GMM</td>
<td>Generalized Method of Moments</td>
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<td>HST</td>
<td>Hausman test</td>
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<td>IFSB</td>
<td>Islamic Financial Services Board</td>
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<td>IND</td>
<td>Industry</td>
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<td>IOSCO</td>
<td>International Organization of Securities Commissions</td>
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<td>KLCI</td>
<td>Kuala Lumpur Composite Index</td>
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<td>KLSECI</td>
<td>Kuala Lumpur stock exchange composite index</td>
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<td>LSDV</td>
<td>Least Square Dummy Variable</td>
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<td>ML</td>
<td>Market leverage</td>
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<td>MM</td>
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<td>MSCI</td>
<td>Morgan Stanley Capital International</td>
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<td>Ordinary Least Square</td>
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RE  Random effects
REM  Random Effects Model
ROA  Return on assets
ROI  Return on investment
ROS  Return on sales
RSK  Risk
S&P  Standard & Poor's
SAC  Shariah Advisory Council
SC   Security Commissions
SES  Stock Exchange of Singapore
SMEs Small and medium sized enterprises
SR   Stock return
SZE  Size
TA   Total assets
TAN  Tangibility
TAX  Taxes
TNG  Tangibility
TOL  Tolerance
TRD  Trade
UK   United Kingdom
US   United States
VIF  Variable Inflation Factor
Vol  Volume
WLS  Weighted Least Squares
ZAK  Zakah
BIBLIOGRAPHY


Naim, A. 2010."Shari'a Criteria for investing in Companies with Mixed Activities", Chapter 9,
