Which Firms Use Islamic Financing?

Marizah Minhat
The Business School, Edinburgh Napier University

Nazam Dzolkarnaini
Salford Business School, University of Salford

Abstract

This study explores to what extent the Islamic financing instruments are used by non-financial firms. Based on a panel data of firms from fourteen developing countries for the 2005-2009 period, we find that Islamic financing forms a significant share of the users' capital structures. Less profitable firms are found more likely to use debt than equity in which case Islamic instruments were preferred over conventional debt. The finding suggests that Islamic financing does benefit less profitable firms, which is consistent with the agency cost perspective.

Corresponding author: Nazam Dzolkarnaini, Salford Business School, University of Salford, Salford M5 4WT, United Kingdom, + 44 (0) 161 295 2535, n.dzolkarnaini@salford.ac.uk

1. Introduction

Research about corporate financing has flourished since the infamous proposition of capital structure irrelevance by Modigliani and Miller (1958). Significant progress has been made to understand the determinants of financing choice, which has resulted in voluminous empirical evidence that tested various capital structure theories such as agency theory (Jensen, 1986), trade-off theory and pecking order theory (Shyam-Sunder and Myers, 1999). In essence, the theories attempted to explain factors that could plausibly influence the use of internal funds (i.e., profits) and external funds (i.e., debt and equity) in corporate financing.

However, our understanding of corporate financing decisions remains incomplete, particularly in respect of the use of Islamic financing instruments (referred to as IFIs hereafter). There is a clear gap in the corporate finance literature because it is currently unable to explain the economic rationale of why firms use IFIs to finance their activities. This gap has to be addressed given the fact that Islamic finance industry remains buoyant even during the recent economic slowdown.[1] Our study aims to fill this gap. We conjecture that religion is not the sole factor that influences the decision to use IFIs in corporate financing. We offer plausible economic rationale for this financing behaviour. The insight offered in this study provides an important foundation for future research on corporate financing.

Theoretically, due to the prohibition of interest on debt and promotion of profit and loss sharing, IFIs should possess attributes that are distinguishable from conventional financing instruments (Ayub, 2007). The distinctive nature of Islamic financing invokes a question on whether the decision to use IFIs will be influenced by similar set of factors that influence the use of conventional instruments. To answer this question, we test whether the usual firm-specific factors, namely, profitability, growth opportunities, collateral, size and liquidity influence the use of IFIs by firms.

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[1] Financial Times (12 May 2011).

First, we find that Islamic financing forms a significant proportion of users' capital structures. Second, less profitable firms and those with greater growth opportunities are associated with greater use of debt as measured by leverage (i.e., long-term debt over equity), which is consistent with the pecking order theory. This suggests that, firms attract debt over equity due to greater asymmetric information as proxied by growth opportunities and the shortage of internal funds' (i.e., profitability). Thirdly, profitability is significantly related to the decision to use Islamic financing, in which less profitable firms have more proportion of IFIs instead of conventional debt in their capital structures. Islamic financing attracts less profitable firms due to the presence of adverse selection amongst Islamic financiers, who may discount the agency cost of financing to survive within their restricted investment universe (Aggarwal and Yousef, 2000; Godlewski et al., 2013).

2. Sample and Data

The sample is consisted of large firms from fourteen developing countries that have non-negligible presence of Islamic banks: Bahrain, Bangladesh, Egypt, Indonesia, Jordan, Kuwait, Malaysia, Mauritania, Pakistan, Qatar, Saudi Arabia, Tunisia, United Arab Emirates and Palestine. The corporate firms in these countries may have greater incentives to use Islamic financing due to the ready demand to invest in IFIs created by the Islamic financiers there. The data on IFIs were gathered from the annual reports of the firms for the period 2005-2009. The firms were constituents of the top twenty list of the main stock market index of each country. The sample excludes financial firms.

As reported in Table 1, annual reports were available for 129 firms. IFIs were used by firms in fifty seven percent (i.e., 8/14) of the sample countries, namely, Saudi Arabia, Malaysia, UAE, Pakistan, Indonesia, Qatar, Kuwait and Egypt.

Insert Table 1 about here

Firms' preference of using debt over equity to finance their operations is measured by the ratio of the book value of long-term debt to total equity (de Jong et al., 2008). This leverage ratio is set as the dependent variable when testing the influence of firm-specific factors on the preference to use debt over equity. To study the determinants of Islamic financing among firms, the ratio of long-term IFIs to long-term debt is used as the dependent variable. This ratio reflects the extent of firms' preference of using IFIs over conventional debt to finance their operations.

Profitability is measured as the earnings before interest, tax, depreciation and amortisation divided by the total assets (Bevan and Danbolt, 2004). The firm's market-to-book ratio is a common variable used to proxy for growth opportunities. It is defined as the ratio of the firm's market value of equity to the book value of equity. It contains the highest information content with respect to investment opportunities (Adam and Goyal, 2008). Tangibility is defined as the ratio of tangible fixed assets (net of accumulated depreciation) to the firm's book value of total assets. It measures the firm's collateral level. Liquidity is simply the firm's current ratio which is measured as the current assets divided by the current liabilities. Firm size is measured as the natural log of total sales.

The descriptive statistics for the variables used in this study are presented in Table 2. As reported in Table 2, the average leverage (i.e., long-term debt over equity) of firms is 85%, which is surprisingly high. By comparison, the average presence of IFIs on the firms' capital structure is substantial, which is 28% of their total equity. The average ratio of IFIs to total debt is even higher, which is 46%.

Insert Table 2 about here

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3. Empirical Analysis and Results

Unbalanced panel regression models were used to test the determinants of conventional debt and IFIs use among firms. Bevan and Danbolt (2004) argue that the empirical evidence on capital structure determinants based on pooled cross-sectional regressions may be biased due to their failure to control for firm-specific, time-invariant heterogeneity. A formal Hausman specification test for fixed versus random effects panel estimation was used to identify the estimation method which is suitable for each financial policy measure.

Columns 1 and 2 of Table 3 report the results for conventional debt determinants whereby a leverage ratio is used as the dependent variable. The profitability coefficients across two different regression models are negative and significant, which are consistent with the prediction of pecking order theory (Myers and Majluf, 1984). The shortage of internal funding (i.e., profitability) may signal greater uncertainty about a firm's prospect for solvency, hence is likely to attract higher agency cost of equity. Therefore, debt is preferred to minimise the agency cost of financing. Debt is also preferred by firms with greater growth opportunities, who suffer from greater information asymmetry about their future cash flows. This argument is consistent with the observed significant positive relationship between leverage and growth opportunities.

Insert Table 3 about here

Columns 3 and 4 of Table 3 report the significance of profitability on firm's decision to use Islamic financing. Both fixed-effect and random-effect models reveal consistent results that suggests profitability affects the decision to use IFIs. The negative relation between IFIs and firm's profitability suggests that less profitable firms are more likely to have greater proportion of IFIs on their capital structure.

4. Conclusions

The preference for IFIs over conventional debt amongst less profitable firms is consistent with the notion that IFIs attract cheaper source of financing due to the ready demand created by the restricted Islamic financial market to lend or invest according to Sharia' (Godlewski et al., 2013). Godlewski, et al. (2013) argue that less profitable firms may prioritize IFIs over conventional debt financing because the former can be viewed as more accessible and advantageous form of financing that attracts lower agency cost of financing in the presence of high demand for IFIs from less-diversified Islamic financiers. Also, financing less profitable firms may be a second-best solution for Islamic financiers who are under constant need to justify their existence and operations by continuously investing in IFIs. While conventional financiers would generally turn down less profitable firms, Islamic financiers who suffer an adverse selection problem may lend to such firms. It is not impossible for the firms to divert funds or have high-cost investment projects that would reduce profitability (Aggarwal and Yousef, 2000). This argument suggests that Islamic financiers may have underestimated the agency cost of financing, which can be detrimental in the absence of proper risk management.

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Table 1 Sample distribution by country, data availability, and the use of IFIs (2005-2009)

No.	Country	No. of firms with annual reports available (2005-2009)	No. of firms with IFIs	Percentage (%)
1	Bahrain	3	0	0
2	Bangladesh	9	0	0
3	Egypt	9	1	11
4	Indonesia	16	4	25
5	Jordan	3	0	0
6	Kuwait	9	2	22
7	Malaysia	20	13	65
8	Mauritius	9	0	0
9	Pakistan	14	4	29
10	Palestine	2	0	0
11	Qatar	16	4	25
12	Saudi Arabia	6	4	67
13	Tunisia	1	0	0
14	UAE	12	4	33
	Total	**129**	**36**	**28**

Table 2   **Descriptive statistics of variables**

Variables	Mean	Median	Std. Dev.	Min.	Max.	Skewness	Kurtosis
Leverage variables							
Long-term debt / equity	0.85	0.62	0.92	0	5.72	2.40	10.70
Long-term IFIs / equity	0.28	0.10	0.41	0	1.61	2.00	5.91
Long-term IFIs / long-term debt	0.46	0.27	1.19	0	1.00	8.74	83.43
Explanatory variables							
Profitability	0.12	0.11	0.08	-0.15	0.33	-0.21	4.55
Liquidity	1.76	1.54	0.94	0.17	5.58	1.42	5.72
Growth opportunities	2.24	1.96	1.54	0.24	8.47	1.74	6.77
Collateral	0.41	0.47	0.25	0.01	0.90	-0.22	1.96
Size (ln Sales)	20.36	20.32	1.74	14.92	24.42	-0.33	3.98

Table 3   Panel data results of the determinants of the use of debt and IFIs

Explanatory Variables	Long-Term Debt / Equity		Long-Term IFIs / Long-Term Debt	
	(1) *Fixed Effects*	*(2)* *Random Effects*	*(3)* *Fixed Effects*	*(4)* *Random Effects*
Profitability	-2.19**	-2.43**	-6.35**	-6.30***
	(-1.97)	(-2.40)	(-2.30)	(-3.73)
Growth opportunities	0.17***	0.18***	-0.11	0.05
	(3.05)	(3.49)	(-0.78)	(0.60)
Collateral	0.04	0.56	-0.08	0.32
	(0.05)	(1.12)	(-0.04)	(0.70)
Size	0.44***	0.10	0.09	-0.01
	(2.69)	(1.35)	(0.22)	(-0.03)
Liquidity	0.07	-0.05	-0.41	-0.16
	(0.57)	(-0.49)	(-1.26)	(-1.31)
Constant	-8.30**	-1.50	0.39	1.27
	(-2.48)	(-1.00)	(0.05)	(0.91)
Joint test statistic (regression)	3.03**	17.06***	2.82**	21.32***
Corr (μ_i, x)	-0.63	0.00	-0.39	0.00
F-statistic (all $\mu_i = 0$)	7.98***	-	0.76	-
Hausman test FE vs RE (χ^2)	21.95***	-	4.17	-
R^2 within	0.20	0.13	0.19	0.15
R^2 between	0.02	0.25	0.13	0.26
R^2 overall	0.01	0.15	0.14	0.19

t-statistics in parentheses for fixed effects and *z*-statistics in parentheses for random effects model. Joint test statistic for fixed effects is the F-statistic. Joint test statistic for random effects model is the Wald χ^2. ***, ** and * indicate statistical significance at 1%, 5% and 10% levels, respectively (2-tail test).