From Crisis to Recovery: A Comparative Study of COVID-19's Impact on Shariah-Compliant vs. Conventional Firm Profitability

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Abstract

The COVID-19 pandemic has pushed enterprises and health systems alike to a challenge of their resiliency. Our study creates a unique niche in a sea of studies that focus on financial indicators and stock market trends. We explore the dynamics of operational performance, drawing a comparative study assessing Shariah-compliant and non-compliant US market firms. This study explores how the adherence to Shariah principles affect a company's operations during global crises.

Methodology

Research Hypothesis

COVID-19 was an unexpected exogenous shock for all types of firms. Due to their lower risk profile, we hypothesize that Shariah Compliant firms experienced less impact on operating profitability than Conventional firms.

Regression Analysis

- Employed advanced regression techniques i.e., pooled OLS and quantile regression on propensity, and industry-size matched samples.
- Controlled for the endogeneity of SC status of firms using a unique instrument and 2SLS regression.

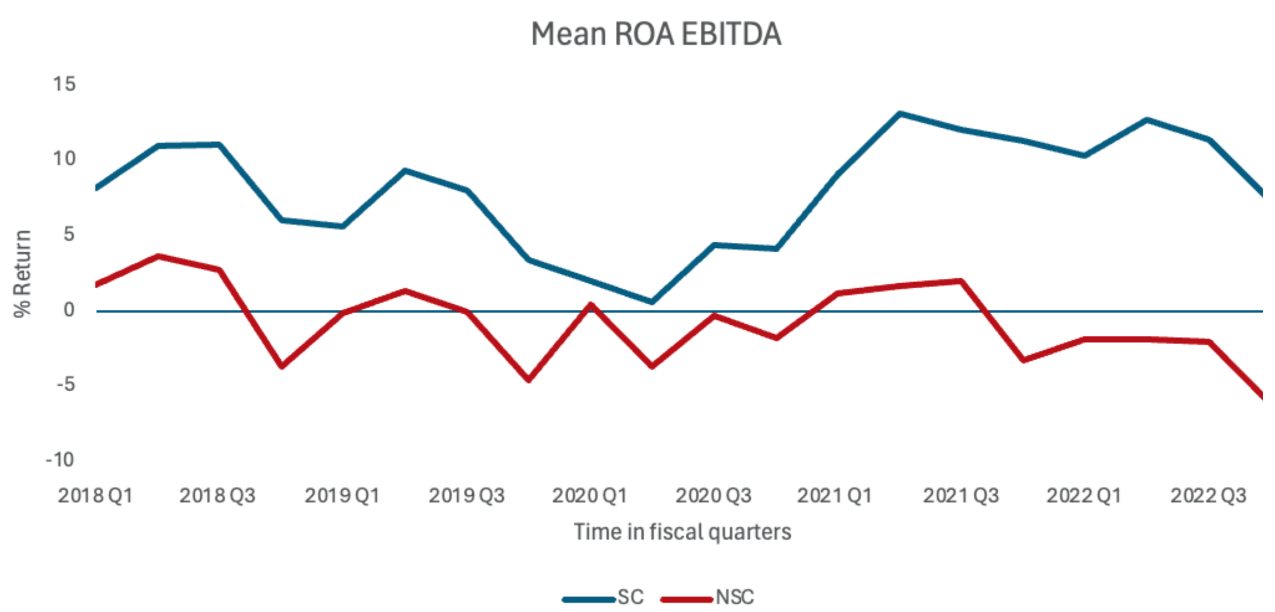
Summary Statistics

	Shariah Compliant (SC)			Non Shariah Compliant (NSC)		
	N	*Mean*	*Median*	*N*	*Mean*	*Median*
Assets (mm US$)	15735	7082.455	1402.242	44039	7950.815	1082.000
Revenue (mm US$)	15733	1436.014	309.681	44010	1341.514	155.767
Sales Growth (%)	15689	4.344	2.560	42856	6.684	2.842
Cash	15734	462.349	85.645	44022	591.500	102.361
Cash and short term inv.	15734	585.265	101.314	44022	752.000	133.704
Leverage	15735	0.490	0.496	44039	0.592	0.578
ROA EBITDA	15735	0.012	0.016	44039	-0.010	0.009
ROA EBIT	15735	0.001	0.006	44039	-0.021	-0.003
ROA Net Income	15735	-0.005	0.001	44039	-0.029	-0.009
PM EBIT	15733	0.086	0.112	44010	-0.288	0.093
PM EBITDA	15733	0.021	0.069	44010	-0.382	0.042
PM Net Income	15733	-0.006	0.046	44010	-0.444	0.014
Total asset turnover	15733	0.251	0.224	44010	0.204	0.160
Fixed asset turnover	15707	2.059	1.244	43745	2.821	1.106
Avg. collection period	14647	207.554	205.194	39671	226.260	205.432
Avg. credit period	15693	120.499	99.768	43566	163.117	110.360

***, **, and * represent statistical significance at 1, 5, and 10% respectively.

Data Analysis

Comparing Profitability: SC firms Outperformed NSC Firms At COVID-19 peak



Quarterly data sourced from Refinitiv and S&P's Compustat North American database for a period of study 2018-2022.

Baseline regression

	ROA EBITDA	ROA EBIT	ROA Net Income	PM EBITDA	PM EBIT	PM Net Income
COVID	-0.0189***	-0.0202***	-0.0198***	-0.245***	-0.291***	-0.303***
	(0.00288)	(0.00294)	(0.00281)	(0.0342)	(0.0362)	(0.0368)
Shariah Compliant (SC)	0.0107***	0.0102***	0.0106***	0.189***	0.208***	0.225***
	(0.00192)	(0.00197)	(0.00193)	(0.0326)	(0.0340)	(0.0348)
COVID x Shariah Compliant	0.00406**	0.00388**	0.00388**	0.112***	0.113***	0.117***
	(0.00160)	(0.00163)	(0.00160)	(0.0266)	(0.0280)	(0.0289)
Fiscal Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	-0.0534***	-0.0655***	-0.0668***	-0.775***	-0.868***	-0.893***
	(0.00490)	(0.00495)	(0.00487)	(0.0833)	(0.0866)	(0.0884)
N	25,248	25,248	25,248	25,248	25,248	25,248
Adjusted R-squared	0.1701	0.1771	0.1856	0.0974	0.0984	0.097

***, **, and * represent statistical significance at 1, 5, and 10% respectively.

Two-Stage Least Squares (2SLS) Regression

	First Stage		Second Stage		
	Shariah-compliant (SC)	*Margins*	*ROA EBITDA*	*ROA EBIT*	*ROA Net Income*
Shariah Compliant (predicted)			0.0365***	0.0368***	0.0356***
			(0.00364)	(0.00377)	(0.00367)
COVID			-0.0210***	-0.0221***	-0.0208***
			(0.00267)	(0.00274)	(0.00261)
COVID x Shariah Compliant			0.0138***	0.0146***	0.0130***
			(0.00380)	(0.00386)	(0.00383)
Percentage of Shariah-compliant firms within each industry	3.257***	0.933***			
	(0.178)	(0.0445)			
Fiscal Quarter Fixed Effect	Yes	Yes	Yes	Yes	Yes
Constant	-1.142***		-0.0711***	-0.0811***	-0.0826***
	(0.106)		(0.00361)	(0.00365)	(0.00358)
N	58,283	58,283	58,283	58,283	58,283
Pseudo-R-squared	0.1255				
R-squared			0.181	0.184	0.204

***, **, and * represent statistical significance at 1, 5, and 10% respectively.

Key Findings

- On average, we found that COVID-19 caused a significant decrease in firms' profitability, however, this trend is notably less significant for SC firms.
- SC firms are more profitable than their conventional counterparts, even after the pandemic.
- The higher profitability of SC firms relative to NSC firms during the pandemic is due to their ability to maintain lower costs and operate with greater efficiency.

Implications

For Businesses

Integration of Shariah compliance principles can enhance company resilience.

For Investors

Consideration of SC options can diversify portfolio risk, given SC firms' demonstrated dependability over NSC firms during economic downturns.

Scan the QR code for detailed tables and references