UNIVERSITI TEKNOLOGI MARA

MODELING SHARIAH BUSINESS SCREENING FOR COMPLIANCE IN ISLAMIC FINANCE

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Thesis submitted in fullfillment
of the requirements for the degree of
Doctor of Philosophy
(Information Technology and Quantitative Sciences)

Faculty of Computer and Mathematical Sciences

April 2022

ABSTRACT

This research explores one of the important issues in Islamic finance, which is Shariah-compliant status - a level of acceptance of certain situations or events according to the Islamic faith. In order to determine Shariah-compliant status for products or services of a company, it must go through a series of tedious checks and testing before a Shariah advisory committee puts it on the compliance list. This work focuses on Shariah-compliant status of a company's core business. The screening for Shariah compliant begins with information extraction. Islamic finance has grown exponentially. In returns, it has huge data in the form of notes, descriptions, numbers, and transactions available on the web. Based on this argument, it is not easy to find the connection between one information to another when you have more than one million hits every time you search for some keywords. In order to get information about the company's core business, we reduced the search scope to only the corporate website of that company. The corporate websites of selected companies were crawled and extracted. After some cleaning process, the outcome was found to be adequate to be used as the data sources for screening. Next, the data sources are compared with a list of keywords, known as the screening criteria that have been tabulated from the literature. A negative screening approach was adopted, where, if none of the prohibited elements exist in the company's core business, then it will be deemed as Shariah-compliant, otherwise, it is Shariah non-compliant. The screening process consists of repetitive action. It happens because the company may have multiple core businesses. In this work, we have represented the repetitive actions through a Business Screen State Model. The Business Screen State Model could serve as a general model for automatic screening processes. In addition to that, Business Screening Model was formulated using the screening criteria. The Business Screening Model could be used to provide rules for Shariah classification. The screening criteria can also be embedded into analytic tools for Shariah screening for compliance. Finally, we were able to construct Shariah Business Screening Ontology using a task ontology approach. We illustrate the ontology using structural and behavioral models made of UML class diagram and activity diagram. This ontology represents the knowledge roles and control-flow of the screening process. It can be part of any suitable Shariah screening application.

ACKNOWLEDGEMENT

All praise to Allah, The Merciful. This work is impossible without His consent.

From 2011 to 2021, after all the years I have spent, had given me the opportunity on experiencing a rapid transformation in technological changes and the impact on people's attitude towards social media growth, and on how business transactions were being lifted onto another phase. Despite the Covid-19 pandemic, thankfully, I am able to conclude our findings in this memorable thesis.

I am truly indebted to a number of individuals for their valuable contribution to this thesis. I would like to express my greatest gratitude to my first thesis advisor, PM Dr Nordin Abu Bakar, for his exceptional advice and patience, and his constant support throughout my effort on this thesis. My second and very supportive supervisor, PM Ts Dr Nurazzah Abd Rahman, I would like to thank you for having me as your supervisee, and finally being able to complete the thesis. Not to forget, my other supervisor, PM Ts Dr Nur Atiqah Sia Abdullah, thank you for giving the best encouragement during these critical times.

My deepest gratitude to my husband, Shaharuddin, and our lovely children, Iskandar Zulqarnain, Iskandar Afiq Hafizuddin, Nurulain Durrah, as well as our adorable Muhammad Tariq for their continuous patience, encouragement and loving support. And also my late father and mother, who always give me inspirations. Some honorable mentions to all my friends and colleagues at the faculty for the moments we had spent together; especially Fairuz for being my roommate. Izan for some inspiring thoughts. K Nana, K Zilah, K Zehan, Shikin, Mar, Surya and K Zida for the tears and laughter that we have shared together.

Alhamdulillah.

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