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***Halal* Certification for Financial Products: A Transaction Cost Perspective**

Raphie Hayat^a, Frank den Butter^b and Udo Kock^c

Abstract

Halal certification of financials product may reduce transaction costs for its buyers when it provides a trusted standard for investors that seek to comply with Islamic law. However, we show that in practice it takes considerable amounts of time (20 days) and money (USD 122,000) to obtain a *halal* certification. Mainly, this is because the market is very concentrated and forms a closed circuit. About 20 *Sharia* scholars control more than half the market, of which the top 3 earn an estimated USD 4.5 mln in fees per year. Moreover this market seems plagued by a number of problems, most notably a strong incentive to be excessively lenient in certification, sub-standard governance practices, lack of consensus regarding certification standards and limited knowledge of finance. Therefore it is questionable whether the reduction in transaction costs through *halal* certification outweighs the costs of certification. Consolidation of the numerous ways *halal* certification can be obtained and moving *halal* certification more into the public goods sphere, where a neutral non-profit government induced party should assume the current role of the *halal* certifiers, may enhance the reputation of certifies and reduce the transaction costs associated with *halal* certification.

Keywords: Islamic finance, quality certification, certifier behaviour, transaction costs, information asymmetries, credence goods

JEL codes: L14, L15, D23, D82

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I. Introduction

Standardization and certification are well known methods to reduce transaction costs. From that perspective we look at the economics of certifying financial products as Islamic. Islamic law (*Sharia*) obligates Muslims to only invest in assets that are *halal* (permissible according to Islam). However, specific knowledge is needed to assess whether a financial product is in fact *halal*. Consequently, a market has been created that fulfils this need, the market for *halal* certification of financial products. This market has some very interesting features with respect to value creation by providing a quality standard. Moreover, as the demand for Islamic financial products increases, research on Islamic banking (e.g. Khan, 2010) and investing (e.g. Hayat and Kraeusl, 2011; Hoepner, Rammal and Rezec, 2011) is also on the rise. However it seems that the market for *halal* certification obtained very limited attention in the analysis of economics institutions, which is odd, since *halal* certification is the key feature that separates Islamic from conventional finance.

We aim to fill the gap in two ways. First, we describe the market for (financial) *halal* certificates and the process of getting such a certification. Second, we identify inefficiencies in this process using transaction cost theory and an empirical investigation. From a transaction cost perspective, the market for *halal* financial products is characterized by large information asymmetries between buyers and sellers. The buyer does not know whether the financial product is in fact *halal* or not and has to invest time and money in finding this out. Thus, buying a *halal* financial product is accompanied with high transaction costs. Certification of such products (in theory) has the potential to increase welfare by reducing these transaction costs. However, our analysis reveals that in practice this objective is not achieved and the problem of information asymmetry has just been shifted from one between buyers and sellers to one between sellers and certifiers. Sellers have to make substantial costs and invest time in getting their products certified as *halal*. Partially, this is because the market is controlled by a select few *Sharia* scholars, some of whom make an estimated USD 4.5 mln per year in fees for certifying financial products. It seems that institutions of *halal* certification are still in an early stage of development, and that *halal* certification has not yet reached the stage, where there are only a few worldwide trusted standards. This latter stage is characteristic for a mature market for certification and standards, which is from the perspective of network externalities in principle a “winner takes all” market.

The remainder of the paper is structured as follows: Section II introduces Islamic finance. Section III describes *Sharia* scholars. Section IV describes a typical certification process. Section V discusses *halal* certification as a standard and the channels through which it could reduce transaction costs. Based on that analysis Section VI gives some recommendations. Finally section VII concludes and makes suggestions for further research.

II. Islamic finance and the basics of *halal* certification

Islamic finance is a broad term used for all financial transactions that are permissible by Islamic law (*Sharia*)¹. The main building blocks are the prohibition of *riba* (interest), *gharar* (excessive risk), *maysir* (gambling) and industries that are considered unethical such as alcohol and pornography. These restrictions imply that Muslims cannot receive or pay interest, they should exactly know the countervalue that is offered in a transaction, they may not speculate and they may not derive profit from unethical industries. It follows that next to investing in conventional bonds, most derivatives and structured products is prohibited. Investment products that comply with Sharia law are called *halal*, products that do not comply are called *haram*.

Taking entrepreneurial risk to earn profit, however, is allowed. According to Kuran (2004), Islamic finance in its current form began around the partitioning of India and Pakistan as an attempt to strengthen the Muslim identity. It was most notably advocated by the Pakistani scholar Abul Ala Maududi (1903-1979). Arguably the first Islamic bank was inceptioned in Egypt in 1963 (the Mit Ghamr Islamic Bank). Although initially focused on banking, the industry has branched out over capital markets and insurance as well. Nowadays, there are over 400 Islamic financial institutions operating in 39 countries offering products/services such as banking, equities, mutual funds, insurance and even bonds, so called *Sukuks* (General Council for Islamic Banks and Financial Institutions, 2009). In terms of size it is a relatively modest market, but it has been growing very fast (15 percent per year) for a number of years (Khan, 2010). Banking assets are estimated to be USD 1 trillion in 2010 (Shanmugam and Zahiri, 2009; Hoepner *et al.* 2011) and with a potential market of more than a billion Muslims worldwide these assets are expected to continue growing.

In order for a financial products to be considered *halal*, it must be certified as such by experts in Islamic law, called *Sharia* scholars. Specifically, these scholars should be experts in *Fiqh Al Muamalat*, which is Islamic commercial law. There are different views however on what is considered *halal* or not depending on which school of thought the certifying scholar adheres to. To understand the differences in these schools of thought we must first introduce the sources of Islamic law. Shanmugam and Zahari (2009) give a good overview, they indicate that there are major and minor sources of Islamic law. The main two sources are the *Quran*, which is the holy book of the Muslims and *Hadith*, which are the reported sayings and actions of the Prophet Mohammed. Whatever is explicitly mentioned in the *Quran* or *Hadith* is considered Islamic law. On matters not explicitly discussed herein (and there are many of those) Islamic scholars can debate and if they reach consensus, that consensus becomes law (*Ijma*). *Qiyas* is the method of deducting law from analogy. Essentially, it is using a preceding ruling from Islamic law and applying it to cases that contain the same elements addressed by that ruling. Other (minor) ways to derive law are *Ijtihad* (personal interpretation of a *Sharia* scholar), *Istislah* (taking the public interest into account), *Istihsan* (juristic preference, exceptions to Islamic law to avoid unfairness) and *Urf* (custom, i.e. local or regional practice).

Schools of thought on Islamic law differ mainly in their acceptance of the various sources of law. The liberal views accept more sources while the stricter views accept less sources. Shanmugam

¹ For a more detailed introduction to Islamic finance we refer to e.g. Visser (2009), Shanmugam and Zahiri (2009) and El Gamal (2006).

and Zahiri (2009) and Visser (2009) give a concise overview of the four most widely accepted schools of thought². From most to least liberal, they are: Hanafi, Maliki, Shafi'i and Hanbali. The Hanafi view is most popular. It is based on the writings of Abu Hanifa in 767 and allows personal interpretation (*Ijtihad*), reasoning by analogy (*Qiyas*), consensus among Islamic scholars (*Ijma*), juristic preference (*Istihsan*) and custom (*Urf*). The Maliki view (founded by Malik Ibn Anas in 795) strongly relies on *Hadith* but also allows *Ijma*, *Qiyas* and arguably *Urf*. The Shafi'i view (founded by Muhammad Ibn Idris Al-Shafi'i in 819) relies mostly on *Hadith*. It does not allow *Ijtihad* and *Istihsan* but does allow *Ijma* and *Qiyas*. The Hanbali school is most strict. It was founded by Ahmad Hanbal in 855 and follows a literal interpretation of the *Quran*. According to this view, the *Quran* and *Hadith* are the sole sources of law. It does not allow law based on interpretation and consensus.

The important countries for Islamic finance differ quite a bit in the schools of thought they follow (Visser, 2009). Malaysia for example follows the Shafi'i view, while Bahrain and Saudi Arabia follow the Maliki and Hanbali view respectively. It might be one of the reasons there are no widely accepted standards for Islamic finance. It may also be a reason that in this case the market for certification and standardization will not evolve to a "winner takes all" market but that in the end there will be a few competing *halal* certifiers, which reflect the different schools of thought. Partly because countries adhere to different schools of thought, there is, as yet, no widely accepted authority that oversees and can legally enforce the quality of *halal* certification for financial products. Apparently because of these different schools of thought the network externalities of standardization, which may bring about a "winner takes all" market (see e.g. Schilling, 2002), are not (yet) large enough to come to one or a few uniform standards of *halal* certification.

There are, however, a number of important standard setting bodies (Table I). The most well known and influential are the Bahrain based Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) and the Malaysian Islamic Financial Services Board (IFSB). Both organizations issue standards on interpretation of Islamic law with the AAOIFI focusing more on accounting and auditing and the IFSB focusing on risk management and corporate governance. Others are the Malaysian Accounting Standards Board's (MASB), the International Islamic Financial Market (IIFM) and the Liquidity Management Centre (LMC). The MASB is similar to (and works closely with) the AAOIFI, but has a focus on Malaysia. The IIFM and the LMC are private companies that provide liquidity for secondary markets of certain Islamic financial instruments (mostly *Sukuk* bonds). In addition, the International Islamic Rating Agency (IIRA) provides credit and *Sharia* compliance ratings for financial institutions. Interestingly, while in most cases *Sharia* compliance is binary (either *halal* or *haram*), the IIRA provides *Sharia* ratings ranging from AAA to B. Here AAA stands for the highest level of *Sharia* compliance while B indicates the entity/instrument is *Sharia* compliant but has weaknesses in some areas of *Sharia* quality. A rating below B would thus be considered non *Sharia* compliant. This is another example of difficulties for common consumers to evaluate Islamic financial products. It is not quite clear whether financial products can in fact be considered just *halal* or

² Islam can (arguably) be divided in two main groups, *Sunni* and *Shia*. Here, we follow the law schools of *Sunni* Islam, to which the largest part (~85%) of Muslims belong to and which are most widely followed. *Shia* Muslims mainly follow the *Jafari* school of thought, but the differences with the *Sunni* schools are not very large (Visser, 2009).

not or whether a certification should indicate the level of *Sharia* compliance as with the IIRA ratings. A possible reason for the *halal* or *haram* criterion might be found in Lizzeri (1999), who shows that that quality certifiers have an incentive to use crude rating intervals (e.g. pass or fail) even if they observe true product quality with zero costs. A final observation of table I is the influence of Bahrain, as most of the important standard setting bodies in Islamic finance are based there. Malaysia is the second most influential country in Islamic finance. It may foreshadow that on the further road to a “winner takes all” market, in the end there will be two competing world standards for *halal* certification, namely that of Bahrain, and that of Malaysia.

Table I: Standard Setting Bodies in Islamic Finance

Name	Description	Website	Country
AAOIFI	The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) is an international organization that prepares accounting, auditing, governance, ethics and Shari'a standards for Islamic financial institutions and the industry. Its also provides professional designations such as the Certified Islamic Professional Accountant (CIPA) and Certified Shari'a Adviser and Auditor (CSAA). The AAOIFI was established on 26 February 1990 in Algiers.	www.aoofi.com	Bahrain
IFSB	The Islamic Financial Services Board (IFSB) is an international organization that issues standards for the supervision and regulation of Islamic financial institutions. It has pronounced on corporate governance, risk management, capital adequacy, upervisory review processes, transparency, market discipline, recognition of ratings on Shari'a-compliant financial instruments, and the development of money markets. It also arranges summits, conferences, and workshops on issues relating to Islamic banking.	www.ifsb.org	Malaysia
MASB	The Malaysian Accounting Standards Board's (MASB) primary role is to develop accounting and financial reporting standards. Its financial reporting standards are developed in harmony with the AAOIFI. The standards are developed specifically to meet the needs of Islamic financial practices as well as the needs of the regulatory and economic structure in Malaysia.	www.masb.org.my	Malaysia
IIFM	The International Islamic Financial Market (IIFM) is an organization dedicated to enhance cooperation among Islamic countries and their financial institutions, specifically in promoting trading in the secondary market for Shari'a-compliant financial instruments. It does this for example by standardizing Islamic financial instruments.	www.iif.net	Bahrain
IIRA	The Islamic International Rating Agency (IIRA) is similar to a credit rating agency, but next to creditworthiness, it also provides ratings for sharia compliance and corporate governance ratings to financial institutions.	www.iirating.com	Bahrain
LMC	The Liquidity Management Centre (LMC) was established to facilitate investment of the surplus funds of Islamic financial institutions into quality short and medium term financial instruments structured in accordance with the Shari'a principles. It seeks to develop an active secondary market for short-term Shari'a-compliant treasury products.	www.lmc Bahrain.com	Bahrain

Sources: Shanmugam and Zahari (2009), Visser (2009) and websites listed in the table.

III. Sharia scholars

Sharia scholars are crucial for the Islamic Finance industry. El Gamal (2008) even proposes that the major source behind the industry growth has been due to *Sharia* scholars selling their expertise. According to El Gamal, they have convinced the Muslim public that conventional investing is *haram*, consequently creating demand for *halal* investments. Conveniently, the eligibility of these investments just happens to be determined by the same people that indicated it was *haram* in the first place. El Gamal's view is not widely held, but is interesting because it illustrates the conflict of interest of *halal* certifiers.

According to Zawya.com, a Middle East focused online business intelligence platform, as of November 2011 there are 391 *Sharia* scholars in the World³ and their number seems to be growing fast. Zawya.com obtains data from Funds@Work, a consultancy firm specialized in Islamic finance. According to their 2010 report, there were only 221 *Sharia* scholars in 2010⁴. The difference between the 391 and 221 scholars may be partially accounted for by better coverage and data collection rather than an actual increase in the number of scholars. There is no reliable information on how many *Sharia* advisory firms there are, but they are not as important. The industry is driven by the scholars, who often sit together on the same *Sharia* boards. The difference between *Sharia* advisory firms and *Sharia* boards in general is that the former act as an advisor of parties looking for a certification and intermediate between these parties and *Sharia* scholars. The advisory firms help their clients in the process of applying for a certification. They often have a pool of (well known) *Sharia* scholars which they use to form a *Sharia* board for each certification. In addition they provide consulting and training on how to retain a certification.

So who are these scholars? Table II shows the names of the top 20 *Sharia* scholars based on board positions (first column) and positions in standard setting bodies (last column). The first and last column show that there is a great amount of overlap between the top 10 scholars based on number of board positions and positions in standard setting bodies. Nearly all the top 10 scholars based on the former ranking are in the top 20 based on the latter ranking. Thus, the very people that control the market are the ones responsible for governing it. From a corporate governance perspective, there seems to be much power concentrated in the hands of a small number of people. The concentration indicates that effective monitoring of this market is troublesome since the monitors are not independent. In fact, in many ways they are monitoring themselves. The situation is comparable to a Board of Supervisors consisting of almost the same people as the Board of Directors.

Table II shows some descriptive statistics of the *Sharia* scholars, based on the 2011 report of Funds@Work⁵. The table shows that the market for financial *halal* certificates is very concentrated. The third column of table II shows the distribution of the top *Sharia* scholars based on the number of *Sharia* board positions they hold. This can be interpreted as the number of financial *halal* certificates given per year. Column four shows the cumulative percentage market share of the top 20 scholars and reveals that the top 20 scholars hold more than 54 percent of the entire market, of which a sizable part (21 percent) is held by just three scholars. In fact, data shows that the top 20 percent of the scholars control 80 percent of the market, which is a typical Pareto distribution found in many other economic phenomena (Mizuno *et al.*, 2008)⁶.

³ Data taken from: http://www.zawya.com/shariahscholars/sch_results.cfm

⁴ Taken from:

www.financeislamiquefrance.fr/useruploads/files/Sharia-Network_by_Funds_at_Work_AG.pdf

⁵ Taken from:

www.funds-at-work.com/fileadmin/downloads/Sharia-Network_by_Funds_at_Work_AG.pdf

⁶ Phenomena characterized by Pareto distributions are those in which approximately 80percent of the phenomena is caused by 20percent of the cause. Mizuno *et al.* (2008) for example find that 80percent of revenues of a Japanese convenience store chain are attributable to only 20percent of its customers.

Table II: Sharia Scholars

Top 20 Sharia Scholars	From	# of Board Positions	% (cumulative)	Top 20 scholars in standard setting bodies
Nizam Mohammed Yacoubi	Bahrain	85	7%	Abdul Satar Abdul Karim Abu Ghuddah
Abdul Satar Abdul Karim Abu Ghuddah	Syria	85	15%	Mohammed Daud Bakar
Mohammed Ali Elgari	Saudi Arabia	71	21%	Mohammed Ali Elgari
Abdul Aziz Khalifa Al-Qassar	Kuwait	39	25%	Hussein Hamid Hassan
Abdullah Sulaiman Al Manee'a	Saudi Arabia	36	28%	Ali Mohuddin Al'Qurra Daghi
Hussein Hamid Hassan	Egypt	31	30%	Nizam Mohammed Yacoubi
Mohammed Daud Bakar	Malaysia	27	33%	Abdullah Sulaiman Al Manee'a
Essa Zaki Essa	Kuwait	27	35%	Mohammed Taqi Usmani
Ali Mohuddin Al'Qurra Daghi	Qatar	25	37%	Yusuf Bin Abdullah Al-Shubaili
Ajeel Jasem Al-Nashmi	Kuwait	24	39%	Mohammed Amin Ali Qattan
Esam Khalaf Al-Enezi	Kuwait	21	41%	Mohammed Ali Al-Taskhiri
Esam Mohammed Ishaq	Bahrain	21	43%	Haji Hashim Haji Yahaya
Khaled Mathkour Al Mathkour	Kuwait	21	45%	Mohammed Imran Ashraf Usmani
Mohammed Imran Ashraf Usmani	Pakistan	20	47%	Mohammed Akram Laldin
Mohammed Taqi Usmani	Pakistan	16	48%	Mohammed Abdul Rahim Sultan Al Olamaa
Mohammed Abdul Razaq Al-Tabtabae	?	16	50%	Ayachi Sedek Feddad
Yusuf Bin Abdullah Al-Shubaili	?	14	51%	Abdul Halim Ismail
Abdullah Bin Mohammed Al Mutlaq	Saudi Arabia	14	52%	Ajeel Jasem Al-Nashmi
Ahmad Bazie Al-Yaseen	Kuwait	14	53%	Yusuf Talal De Lorenzo
Mohammed Abdulhakim Zoeir	United Arab Emirates	14	54%	Yusuf Al-Qaradawi
Rest		520	100%	
Total		1141		

Source: Funds@Work

Most of the top *Sharia* scholars are from the Middle East (many from Kuwait or Saudi Arabia) although Malaysia, Pakistan and Sudan are also represented. The only scholar from a non Muslim country is Yusuf Talal de Lorenzo (USA).

Almost all top *Sharia* scholars have a PhD in *Fiqh Al Muamalat* (Islamic commercial law). Only about a third of the top scholars have a degree in Economics or Finance. Instead Legal Studies and Arts are the predominant studies⁷. This raises the question whether the scholars are competent enough to evaluate complex financial products, especially when due to financial innovations these products may gain in complexity in coming years. An interesting recent development is that an increasing number of Western universities and private companies now offer Master level programs and "certificates" in Islamic finance. Some examples are Durham University (UK), IE Business School (Spain) and RSM Erasmus Business School (The Netherlands). It is not clear though yet, how much merit these programs have in the industry

Egypt is dominant when it comes to universities attended by *Sharia* scholars. 61 of 320 scholars that we identified obtained his degree for an Egyptian university. Second is Saudi Arabia (53 scholars) and third is Malaysia (44 scholars). The dominance of Egypt is understandable because of Al Azhar University, which is widely regarded as one of the most prestigious Islamic universities in the world. Saudi Arabia's presence is also understandable as it is where Islam began. The popularity of Malaysian universities is interesting given that only 3 of the top 20 scholars are Malaysian. However it is understandable because Malaysia arguably has the most

⁷ The educational distribution for the top 100 scholars is very similar to the top 20. We omit it here to conserve space.

well developed Islamic finance industry of all Muslim countries, mainly due to strong government support (Jobst *et al.*, 2008).

Table III: Education of *Sharia* Scholars

Panel A: Supplementary Education

Education besides <i>Sharia</i>	
Legal Studies	28%
Arts	23%
Economics	23%
Finance	11%
Business Administration	6%
Education	6%
Other	5%
Total	100%

Panel B: Universities Attended by *Sharia* Scholars

University	Country	Scholars	University	Country	Scholars
Al Azhar University	Egypt	44	Harvard University	USA	6
Imam Muhammed Ibn Saud Islamic University	Saudi Arabia	25	Qatar University	Qatar	5
International Islamic University Malaysia	Malaysia	19	International Islamic University Islamabad	Pakistan	5
University of Malaya	Malaysia	16	Darul Uloom Karachi	Pakistan	5
Islamic University of Medina	Saudi Arabia	15	University of Chicago	USA	4
Umm Al Qura University	Saudi Arabia	13	United Arab Emirates University	UAE	4
University of Damascus	Syria	9	University of Wales	Wales	3
University of Cairo	Egypt	9	University of Khartoum	Sudan	3
University of Jordan	Jordan	8	Omdurman Islamic University	Sudan	3
Karachi University	Pakistan	8	McGill University	Canada	3
Ain Shams University	Egypt	8	Islamic Science University of Malaysia	Malaysia	3
University of Kuwait	Kuwait	7	Darul Uloom Deoband	India	3
Edinburgh University	Scotland	7	Boston University	USA	3
University of London	England	6	Birmingham University	England	3
National University of Malaysia	Malaysia	6			

Source: Funds@Work

Data from Funds@Work (not shown here) also indicates that the top *Sharia* scholars tend to sit in the same boards together. Scholars that sit in the AAOIFI have an average probability of more than 70percent of sharing a board with another AAOIFI member. This indicates that the suppliers of *halal* certification form a rather closed network.

There are no widely accepted criteria for what actually constitutes a *Sharia* scholar, or which of these scholars are allowed to give a *halal* certification for financial products. Only a few countries have identified specific criteria at the government level. Table IV (based on Grais and Pellegrini, 2007) shows a list of criteria to determine eligibility of *Sharia* scholars for a number of (Islamic) countries. In these cases, being an eligible *Sharia* scholar means that such a person is allowed to certify financial products as *halal*. In most cases though, it is not just one scholar that gives the certification, but a *Sharia* board, often consisting of three members. According to table IV and to the best of our knowledge, Malaysia and Pakistan are the only countries that have detailed and specific requirements for people wanting to become *halal* certifiers of financial products. In Malaysia, these certifiers (also called *Sharia* advisors) have to be registered with the

Malaysian Securities Commission. They have to apply for a registration and meet "fit and proper criteria", which for example include a minimum Bachelor's degree in *Fiqh Al Muamalat* and at least 2 years of experience in Islamic finance. This list of registered *Sharia* advisors is publicly available⁸. Interestingly, the list shows only 45 names. Looking back at Panel B of table II reveals that only 5 of the top 20 scholars are registered *Sharia* advisors. Clearly, such registration is not yet taken seriously by the industry. In Pakistan, a minimum level of education and experience as well as minimum grades are required. In most other countries, the criteria for assessing *Sharia* scholar eligibility is undeveloped. Many countries do not specify any criteria and most others only specify vague claims such as "members must have the proper experience" and "show honesty and integrity". The fourth column of table IV show that only three countries have set limits to the number of *Sharia* board positions a scholar may have. Malaysia and Pakistan allow only 1, while Indonesia allows 4. The case of Malaysia is troubling, since the top two *Sharia* scholars (Nizam Mohammed Yacoubi and Abdul Satar Abdul Karim Abu Ghuddah) both have 85 board positions and are clearly violating this rule. Still, they are both on Malaysia's Securities Commission registered *Sharia* advisor list.

Table IV: Fit & Proper Criteria for *Sharia* Scholars

Country	Fit & Proper Criteria	Criteria Based on	Restrictions on Board positions	Required Board members
Bahrain	General integrity, reputation, competence, experience and conflict of interest clauses.	Bahrain Monetary Agency (BMA) Rule Book, Volume 2, LR-1A.2	Unspecified	Minimum 3
DIFC	Competence (based on previous experience and qualifications), conflict of interest (may not be directors or controllers of the institution they are reviewing)	DFSA Rulebook: Islamic Financial Business Module	Unspecified	Minimum 3
Indonesia	Integrity (not on Disqualified List of Bank Indonesia), competence (have knowledge of and experience in <i>Fiqh Muamalat</i> , and knowledge of banking/finance), financial reputation (no history of bankruptcy)	Bank Indonesia Regulation Number: 11/3/PBI/2009	Max 4	Minimum 2, Maximum 50% of number of Board of Directors
Jordan	Unspecified	Jordan Banking Law of 2000, Law No. 28 of 2000, as amended by temporary Law No.46 of 2003	Unspecified	Unspecified
Kuwait	Unspecified	Kuwait Law No.30 of 2003	Unspecified	Minimum 3
Lebanon	Unspecified (background must be in Islamic law and finance/banking)	Lebanon Law No. 575	Unspecified	3
Malaysia	A number of criteria, among others: Must be a Muslim, must be a registered with the Malaysia Securities Commission, minimum bachelor's degree from a recognized institution in <i>Fiqh Muamalat</i> , minimum of 2 years experience in Islamic finance, proficiency in Arabic and English, must attend at least 75% of Sharia Committee meetings and intergrity and conflict of interest clauses.	Ammdment of Central Bank of Malaysia Act 1958, Guidelines on the Governance of Shariah Committee for the Islamic Financial Institutions, BNM/GPS1	Max 1 per industry	Unspecified
Pakistan	Minimum 4 years of experience in religious rulings, at least a Shahadat ul Aalmia degree (a standardized <i>Sharia</i> based educational program) from any recognized Board of Madaris with minimum 70% marks and Bachelor's Degree with a minimum of 2nd Class, sufficient understanding of banking and finance, integrity and conflict of interest clauses.	State Bank of Pakistan, IBD Circular No. 02 of 2004, Annexure-IV, Revised vide IBD Circular 2 of 2007	Max 1	Minimum 1
Philippines	Unspecified, members must be Islamic scholars and jurists of comparative law	Manual of Regulations for Banks, Implementing Rules and Regulations of Republic Act No. 6848	Unspecified	Minimum 2, Maximum 5
Thailand	Financial integrity, competence, honesty and conflicts of interests.	Islamic Bank of Thailand Act B.E2545.	Unspecified	Maximum 4
UAE	Unspecified	Federal Law No. 6 of 1985	Unspecified	Minimum 3

Source: Grais and Pellegrini (2007) and country websites

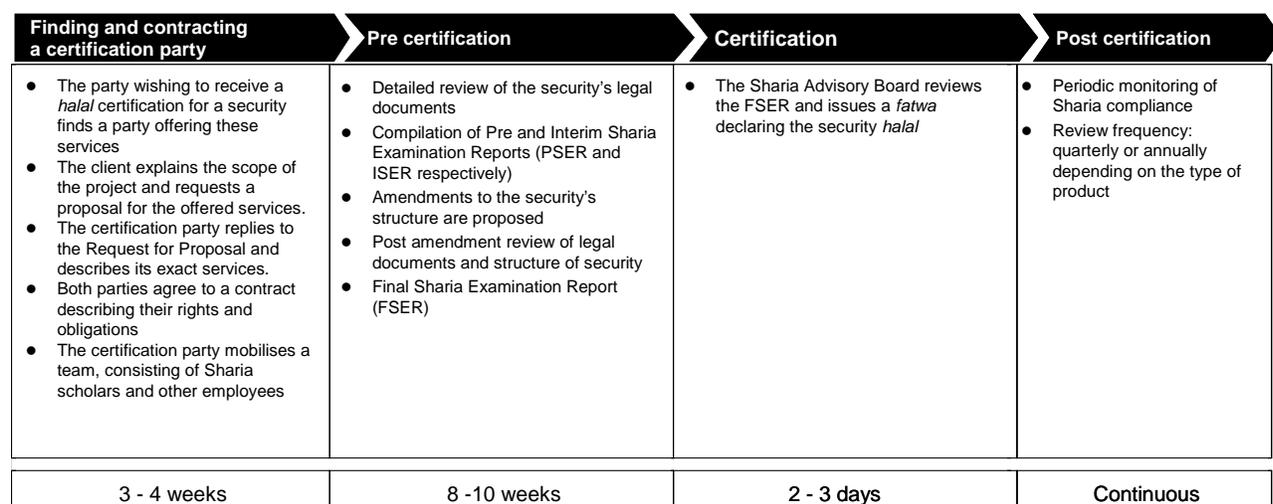
⁸ <http://www.sc.com.my/main.asp?pageid=253&menuid=280&newsid=&linkid=&type=#a>

IV The *halal* certification process

The *halal* certification process for financial products is costly and lengthy. The scheme presented in Figure 1 is based on a Requests For Proposals (RFP) that we have sent to a number of *Sharia* advisory firms for the certification of an Islamic Equity Fund (IEF)⁹. IEFs are very similar to conventional mutual funds, except they exclude firms from industries that are considered unethical such as alcohol and pornography and firms with high leverage (usually a leverage ratio of no more than 33percent is allowed). IEFs have become very popular among Muslim investors in recent years, even though they have been found to underperform the Islamic market in many cases (e.g. Hayat and Kraeusl, 2011; Hoepner *et al.*, 2011).

In the RFP we asked for an overview of the certification process and the costs. We received a reply from 8 such companies, for which 6 provided an overviews of the certification process. From this, we constructed a typical *halal* certification process for a plain vanilla Islamic financial product.

Figure 1: The *Halal* Certification Process



Source: Sample of authors' RFPs sent to *Sharia* advisory companies

As Figure 1 shows, the first part of the process is finding and contracting a party that is able and willing to provide a certification. Based on our sample, this process takes approximately 3-4 weeks. It is also the stage in which the panel of *Sharia* scholars (the *Sharia* board) is assembled that will actually certify the product. The party looking for certification has to make a choice here to develop the legal structure of the product itself and run the risk of having it completely rejected or developing it in cooperation with the certifier but incurring higher costs. In the second stage, the main legal documents are drafted and subjected to a preliminary review. A Pre and

⁹ We sent the same email (available on request) to all the companies. In this email we described some very basic characteristics of the fund, namely that it has an approximate size of EUR 200 mln, invests in listed equities, is targeted mostly for institutional investors and has a geographical focus. For confidentiality reasons, we do not report the company names.

Interim *Sharia* report is written, containing proposed changes in the products (legal) structure. The client incorporates these changes in the product and re-submits the legal documents to the certifier. Based on the revised documents, a final *Sharia* report is written, which is sent for review to the *Sharia* board. The third stage is the actual certification. Here, the *Sharia* board reviews the final *Sharia* report and accepts or rejects the product as being *halal*. This process takes approximately 2-3 days. It results in a document provided to the client with a signed statement by the *Sharia* board that the relevant financial product is deemed *halal*. The final stage is an ongoing process in which the *Sharia* board regularly re-assesses the product and retains or withdraws the certification. Depending on the product, this takes place annually or quarterly.

The conclusion from our request and the answers we obtained is that involvement from the certifier is required from the beginning of the structuring process. Also, the certification itself requires a relatively small amount of time (2-3 days), but the pre certification process is quite lengthy. A large part of the pre certification process is finding and contracting a certifier. Finally, to keep the certification, continuous monitoring is required. The fact that it takes a considerable amount of time to get a financial product certified as *halal* could hinder the industry's growth. Benaissa, Jopart and Tanrikulu (2007) give the example of an Islamic bank in the Gulf region that developed a new financial product in two months, but had to wait three months to obtain *halal* certification.

Apart from the time delay in getting a financial product *halal* certified, the costs of certification are important. There is only some anecdotal evidence on the actual costs of getting a *halal* certification for financial products (e.g. Morais, 2007 and Devi, 2008). In order to get a fair estimate, in the previously mentioned RFPs, we explicitly asked in our request for a description of the costs. Of the 8 companies that replied, 7 gave an indication of these costs. There are two cost components, a fixed payment for the initial certification and a periodic payment for (annual) re-certification, which must be paid throughout the life of the product. Based on our sample of RFPs, table II and other data from Funds@Work, we conducted a back of the envelope estimate of the market size for financial *halal* certificates. Table V shows the results. The fixed costs range from USD 25K to USD 125K and the annual costs range from USD 6K to 60K¹⁰ with averages of USD 88K and 34K for fixed and annual costs respectively. So on average, obtaining a *halal* certificate for a plain vanilla financial product will cost a substantial amount of money, around USD 122K the first year and USD 34K in the years thereafter. These costs are similar to the fees charged by credit rating agencies, which have been estimated be around USD 100K at initiation of a financial product (Faux, 2011) and around USD 45K per year thereafter (The Allen Consulting Group, 2004). The overall market for these certificates is small though when set against the total size of the Islamic Finance industry. Given the number of current *Sharia* board positions (1141) and the average costs per board (USD 122K), we arrive at an estimate of USD 139 mln. Moreover, if we assume that the high end costs are typical for at least the top three *Sharia* scholars, we can give a rough estimate of their annual income, which we estimate to be around USD 4.5 mln per scholar¹¹. Per person these amounts are quite substantial and make the

¹⁰The ranges are based on overall minima and maxima. They cannot be interpreted to say that the cheapest certification is USD 32K (6K +25K). The cheapest overall costs for certification we found was USD 85K.

¹¹ Calculated as the product of the total costs per certification (USD 185K) and the total number of board positions of the top three scholars (241), divided by the average size per board (3.3.) and the sample size (3).

scholars very prone to opportunistic behavior. They have a strong incentive to be excessively lenient in giving *halal* certifications.

Table V: Size of Financial *Halal* Certification Market

Market Size (USD 000s)	
<i>Costs per board</i>	
Fixed, max	125
Annual, max	60
Fixed, min	25
Annual, min	6
Fixed, average	88
Annual, average	34
Total	122
Total number of board positions	1.141
Market Size average (USD mln)	138.795
Average members per board	3,3
Estimated average salary of top 3 advisors	4.504

Sources: Funds@Work, received Request For Proposals and authors' estimations.

V. *Halal* certification as a standard

Transaction cost economics considers opportunistic behavior as one of reasons of the existence of transaction costs. The aim of standardization and certification is to confine the possibilities for opportunistic behavior. That is why lessons from transaction cost theory, and in general, from the theory of new institutional economics, can be useful for a discussion on how the value creating potential of *halal* certification can be enhanced.

Quality standards in general, including halal certification, can potentially reduce transaction costs as less information on quality and other product characteristics has to be collected and price negotiations can be streamlined. The economic theory of transaction costs developed by Coase (1937, 2005) was subsequently elaborated by Williamson (1975), who defines transaction costs as “*the costs of running the economic system*”. Nowadays, the term transaction costs mainly relates to the transaction itself: it covers *all costs involved in entering into, implementing and complying with a transaction*. A distinction can be made between “hard” and “soft” transaction costs (Den Butter, 2012). Hard transaction costs include observable costs such as transport costs, import duties and customs tariffs. The soft costs comprise all costs of making and monitoring contracts, information costs, costs due to cultural differences and miscommunication, unwritten laws, trust building, networking, risk costs, costs due to safety regulations and provisions, and so on. *Halal* certification aims to reduce these soft transaction costs.

Three sources of transaction costs can be distinguished, namely: bounded rationality, opportunistic behaviour and asset specificity, all of which play a role in *halal* certification.

Bounded rationality has two reasons: (a) information complexity and (b) information uncertainty. Information complexity refers to the fact that individuals have limited abilities to process all available information. Hence, an individual is unable to process all relevant aspects of a transaction. Informational uncertainty, by contrast, refers to the fact that it is impossible to

perfectly foresee all future states of the world. *Halal* certification can ideally relieve much of the informational complexity and uncertainty so that transaction costs associated with this bounded rationality are reduced. Information asymmetry arises when one party in a transaction has more information about the characteristics of a product (including its quality). Dranove and Jin (2010) argue that in markets characterized by information asymmetries, a mechanism that ensures quality such as certification, if conducted properly, has the capacity to increase welfare through two mechanisms. First it facilitates matches between sellers and buyers. Second, it allows consumers to buy products that fit their idiosyncratic needs, a process which Dranove and Jin refer to as horizontal sorting.

Transaction costs theory can also help us identify the limits of *halal* certification. According to Dranove and Jin, the potential for welfare increase is even larger for credence goods, which are goods of which the quality cannot be verified even after purchase. *Halal* certificates are a typical example of such credence goods. Their quality (in the sense of being *halal* or not) cannot accurately be verified even after their purchase, which exacerbates information asymmetries between buyers and sellers. Even if the buyer of a financial asset has some knowledge on how to evaluate whether it is *halal*, he can not truly verify this. What is acceptable to one school of thought may not be so for another school.

It has already been mentioned that the high financial rewards may induce *Sharia* scholars to *opportunistic behaviour*. When individuals exhibit opportunistic, they may use the incompleteness in contracts, which exist through bounded rationality, for their own gains. This opens up opportunities for strategic behaviour and executive hazards. This in turn causes the necessity for trading partners to monitor each other and to enforce contracts legally. In the case of opportunistic behaviour of *Sharia* scholars it implies that there is not much value in their certification of financial products so that the certification does not contribute to reduce the transaction costs.

Finally, *asset specificity* is defined as the extent to which an investment supporting a transaction has more value in that specific transaction than in any other purpose. Asset specificity determines the scope of the continuing interest of both contracting parties in each other (Williamson, 1985). When there is no asset specificity, markets are perfectly contestable, and individuals will not want to invest in continuing economic relationships. Asset specificity relates to goods or services that are bound to certain specifications. When the first transaction has been defined and approved with respect to these specifications, the following transactions can take advantage of the fact that the specifications are known and thereby fewer transaction costs need to be made. By contrast, the more goods or services are tailored to the individual requirements of the buyer, the higher the asset specificity. If someone wants to buy an Islamic financial asset, for example a non listed company, he or she will have to invest considerable time and money to assess whether it is actually *halal*. Such investments are quite specific and include for example detailed knowledge of *Fiqh Al Muamalat*. Such investments will not benefit that person much in other transactions, they are tied to buying Islamic assets. It is a well established concept in transaction cost economics that due to opportunistic behavior underinvestment will occur in relationships requiring specific investments (Nunn, 2007). In our example, the opportunistic behavior arises because the seller of a *halal* financial product might game the buyer by asking a

higher price after the buyer has already invested in the relationship. The buyer will anticipate such “hold up” behaviour and consequently underinvest in the relationship.

It is obvious that there is a relationship between asset specificity and standardization. Standardization will make the specifications transparent and, therefore, reduce asset specificity. Uniform standards ensure that traders need to spend less time defining the specifications of the goods or services, so that they will encounter fewer transaction costs. This would be equally true for good and uniform *halal* certification as a quality standard.

VI. Recommendations

The previous discussion shows that in practice *halal* certification is plagued by the same problems as the Islamic financial products themselves. There is no consensus on what is considered *halal* and it requires considerable time and money to get a *halal* certification, mainly due to the high fees of *Sharia* scholars. Moreover, these high fees can induce the *Sharia* scholars to opportunistic behaviour. How can these problems be mitigated? Below, we discuss a number of possible solutions:

Certify the certifiers: A single outside party that governs the market for certifiers is a good idea, but can only be successful if such a party is independent. Currently, such a role is attempted by the AAOIFI and IFSB, who seem to lack this crucial quality. Grais and Pellegrini (2007) indicate that there are also national *Sharia* boards (Central *Sharia* Boards) in Malaysia, Kuwait, UAE, Indonesia, Sudan and Pakistan. However, more than one governing party raises chances for differing opinions. Furthermore, the current national *Sharia* boards are mainly concerned with standardization of *Sharia* interpretation and disputes within *Sharia* boards. This solution also raises the question of who governs the many certifiers of certifiers in those cases.

Allow more competition: Competition in certifier markets could also work, but is problematic when the underlying assets are complex (Skreta and Veldkamp, 2009) or the certification process is not transparent (Farhi, Lerner and Tirole, 2008)¹². Both can be argued for *halal* financial products. In such cases, competition will lead sellers to shop around for favorable certification. In addition, Becker and Milbourn (2011) find that competition (in the case of credit ratings) can also lead to inflated and lower quality ratings through another mechanism than shopping around. It reduces the incentive for certifiers to provide high quality ratings due to lower expected future profits as a result of the increased competition.

Disclose conflict of interest: The problem here is that consumers often do not properly discount advice from certifiers even if they disclose a possible bias (Cain, Loewenstein and Moore, 2005). Cain *et al.*, argue that certifiers might strategically take advantage of this fact and give even more biased ratings. The certifiers may even feel "morally licensed" to do so since any conflict of interest has already been disclosed.

¹² The latter may warrant some explanation. Sellers have an extra incentive to shop around for certification when the application process is not transparent because they do not fear that prior rejections of certification become widely known.

Reputation: Some authors downplay certifier bias in Islamic finance, arguing that it will be mitigated by reputation effects (e.g. Grais and Pellegrini, 2006). *Sharia* scholars that get the reputation of being too lenient in giving *halal* ratings will suffer reputation loss and thus refrain from such activities. However, Mathis *et al.* (2009) show that (for credit rating agencies), reputation will only discipline certifiers when a large fraction of their income comes from certifying simple assets. When assets become complex certification become less stringent, especially when the certifier's reputation is good. In addition, Bolton, Freixas and Shapiro (2009) show that (also for rating agencies), certifiers will inflate ratings when consumers are naïve or when the expected reputation loss from rating inflation is low.

Make certification non profit: The lessons from new institutional economics show that a single, external, neutral and non profit party that gives *Sharia* ratings can be a good solution. It may seem unrealistic to avoid at least some partiality here. The members of this central certification party would likely include at least some of the current top *Sharia* scholars. However, let us assume that it is not deemed necessary that financial *Sharia* scholars must be scholars in Islamic commercial law with knowledge of finance and that they could also be experts in finance with knowledge of Islamic commercial law. In that case, a country with good institutional quality and financial talent could specialize in such certification and provide it on a non profit base to the Islamic financial community. The individual scholars earn a fixed salary and are possibly limited in the amount of products they can certify. The Islamic financial community then pays for this as a collective. It requires (international) governmental intervention though since such certification becomes a public good. Free rider problems will otherwise prevent its inception. We acknowledge that such a solution is an idealized and still far remote one, but nevertheless it provides at least a model to strive to. Moreover it prevents that *halal* certification of financial products eventually ends up in the lock-in of a “two winner” market with Bahrain and Malaysia as domiciles of the major certifiers.

VII. Conclusions

In principle, *halal* certification by a *Sharia* scholar can reduce the asymmetries of information and the related transaction costs. Muslims no longer have to assess whether a financial product is *halal* themselves, thereby avoiding transaction costs such as investing time to learning Islamic law and monitoring costs. However, in practice *halal* certification itself still entails high explicit (hard) as well as implicit (soft) transaction costs. The explicit costs for certifying a typical financial product (an investment fund) are estimated to be around USD 122,000 per annum for the first year and USD 34,000 per annum in the following years. The implicit costs which arise among others due to the relatively large amount of time it takes for certification, are estimated to be between 11 and 14 weeks on average. As yet it remains difficult to assess whether the *Sharia* scholar (certifier) has done its job right.

There are also a number of additional problems. First, there is no consensus on what constitutes *halal* due to different schools of thought on Islamic law.

Second, the market for *halal* certification of financial products it is highly concentrated and consists of a rather closed circle of just a handful of individuals. Although there are around 400

Sharia scholars, the top 20 supply more than half the market, earning monopoly like rents. Especially the top scholars make substantial amounts of money. We estimate the top 3 to make an average of USD 4.5 million per year. Entrance to this position is difficult. The top scholars enjoy substantial brand values, there is a large difference in costs from getting a certification from a well known scholar as opposed to one that is less well known. There is thus a clear risk of what Dranove and Jin call a certifier bias. The certifiers have a strong incentive to be excessively lenient in giving *halal* certificates to attract business. There is ample evidence of such certifier bias in related industries such as credit ratings (e.g. Mathis, McAndrews and Rochet 2009; Bolton *et al.*, 2009) and stock recommendation (e.g. Hong and Kubik, 2003). For Islamic finance specifically it has also been noted by El Gamal (2006).

Third, *Sharia* scholars often work together and sit in standard setting bodies (e.g. the AAOIFI) that aim to supervise the industry. The latter indicates that some of these certifiers are supervising themselves, which many would perceive as bad governance.

Fourth, the competence of *Sharia* scholars in evaluating complex financial products is questionable. Our findings indicate that Malaysia and Pakistan are the only Muslim countries that have specific criteria for becoming a financial *halal* certifier. Theoretically, anyone with proper knowledge of Islamic commercial law (*Fiqh Al Muamalat*) could qualify. In practice, many of these certifiers have PhDs in *Fiqh Al Muamalat*, mostly from Egyptian and Saudi Arabian universities such as Al Azhar University and Imam Muhammed Ibn Saud Islamic University. But less than 40percent have degrees in Economics, Finance or Management. As financial innovations might get increasingly complex, it could harm the credibility of these *Sharia* scholars.

In order to deal with these problems we propose several solutions such as: a certifier for certifiers, more competition, disclosure of conflict, reputation loss and making certification non-profit. The last solution has some important policy implications: a neutral country with high governance quality should specialize in the oversight of *halal* certifiers. This oversight should preferably be non-profit.

A suggestion for further research is that a *halal* certification might also contain information about the risk and return characteristics of certain financial products, such as Islamic Equity Funds (IEFs). Since IEFs are only allowed to invest in stocks with low leverage, they might favor growth stocks (e.g. Hoepner *et al.*, 2011) and low beta stocks (e.g. Hayat and Kraeussl, 2011). In this respect, the *halal* certification might also reduce transaction costs by providing risk return information to potential investors. Another suggestion is to find out whether Muslim investors are willing to accept less return on assets because they derive utility from investing in a *Sharia* compliant way. Elfenbein and McManus (2010) for example find that people are willing to pay more for products linked to charity, implying a utility effect of charity. Investing in a *halal* way might induce a similar effect.

References

- Becker, B. and T. Milbourn (2011), How Did Increased Competition Affect Credit Ratings?, *Journal of Financial Economics*, 101(3), pp. 493-514.
- Benaissa, N-E., X. Jopart and O. Tanrikulu (2007), Rethinking Regulation for Islamic Banking, *The McKinsey Quarterly* (March 2007 Special Edition: Reappraising the Gulf States).
- Butter, F.A.G. Den (2012), *Managing Transaction Costs in the Era of Globalization*, Cheltenham: Edward Elgar, to appear.
- Bolton, P., X. Freixas and J. Shapiro (2009), The Credit Ratings Game, National Bureau of Economic Research (NBER) Working Paper no. 14712.
- Cain, D.M., G. Loewenstein and D.A. Moore (2005), The Dirt on Coming Clean: Perverse Effects of Disclosing Conflicts of Interest, *Journal of Legal Studies*, 34(1), pp. 1-25.
- Coase, R.H. (1937), The nature of the firm, *Economica* 4(16), pp. 386-405.
- Coase, R.H. (2005), The institutional structure of production, Ch. 2, in: C. Ménard and M.M. Shirley (eds.), *Handbook of New Institutional Economics*, Berlin: Springer, pp. 31-39.
- Devi, S. (2008), Scholars and Harmony in Short Supply, *Financial Times*, 17 June.
- Dranove, D. and G.Z. Jin (2010), Quality Disclosure and Certification: Theory and Practice, *Journal of Economic Literature*, 48(4), pp. 935-936.
- Elfenbein, D.W, and B. McManus (2010), A Greater Price for a Greater Good? Evidence That Consumers Pay More for Charity-Linked Products, *American Economic Journal: Economic Policy*, 2(2), pp. 28-60.
- El Gamal, M.A. (2006), *Islamic Finance: Law, Economics and Practice*, Cambridge University Press, New York.
- El Gamal, M.A. (2008), Contemporary Islamic Law and Finance: The Trade-Off Between Brand Name Distinctiveness and Convergence, *Berkeley Journal of Middle Eastern and Islamic Law* 1(1).
- Farhi, E., J. Lerner and J. Tirole (2008), Fear of Rejection? Tiered Certification and Transparency, National Bureau of Economic Research (NBER) Working Paper no. 14457.
- Faux, Z., S&P, Moody's Boosting Rating Fees Faster Than Inflation, Bloomberg News, 15 November 2011, <http://www.bloomberg.com/news/2011-11-15/credit-rating-fees-rise-faster-than-inflation-as-governments-fret-expenses.html>
- General Council for Islamic Banks and Financial Institutions (GCIBAFI), (2009). Islamic Finance in the World 2009, Report published by the Information and Financial Analysis Center of GCIBAFI, <http://www.cibafi.org/Images/Attaches/2010102444426421.pdf>
- Grais, W. and M. Pellegrini (2006), Corporate Governance in Institutions Offering Islamic Financial Services, World Bank Policy Research Working Paper 4054.
- Grais, W. and M. Pellegrini (2007), Corporate Governance in Institutions Offering Islamic Financial Services: Issues and Options, *Journal of Islamic Economics, Banking and Finance*, 3(1).
- Jobst, A., P. Kunzel, P. Mills and A. Sy (2008), Islamic Bond Issuance: What Sovereign Debt Managers Need to Know, *International Journal of Islamic and Middle Eastern Finance and Management* 1(4), pp. 330-344.
- Hayat, R. and R. Kraeussl (2011), Risk and Return Characteristics of Islamic Equity Funds, *Emerging Markets Review*, 12(2), pp. 189-203.

- Hoepner, A.G.F., H.G. Rammal and M. Rezec (2011), Islamic Mutual Funds' Financial Performance and International Investment Style: Evidence From 20 Countries, *The European Journal of Finance*, DOI:10.1080/1351847X.2010.538521.
- Hong, H., and J.D. Kubik (2003), Analyzing the Analysts: Career Concerns and Biased Earnings Forecasts, *Journal of Finance*, 58(1), pp. 313-351.
- Khan, F. (2010), How Islamic is Islamic Banking?, *Journal of Economic Behavior & Organization*, 76(3), pp. 805-820.
- Kuran, T. (2004), *Islam & Mammon: The Economic Predicaments of Islamism*. Princeton University Press, Princeton.
- Lizzeri, A. (1999), Information Revelation and Certification Intermediaries, *The RAND Journal of Economics*, 30(2), pp. 214-231.
- Mathis, J., J. McAndrews and J-C. Rochet (2009), Rating the Raters: Are Reputation Concerns Powerful Enough to Discipline Rating Agencies?, *Journal of Monetary Economics*, 56(5), pp. 657-674.
- Mizuno, T., M. Toriyama, T. Terano and M. Takayasu (2008), Pareto Law of the Expenditure of a Person in Convenience Stores, *Physica A*, 387, pp. 3931-3935.
- Morais, R.C. (2007), Don't Call It Interest, *Forbes*, 23 July, pp. 122-132.
- Nunn, N. (2007), Relationship-Specificity, Incomplete Contracts, and the Pattern of Trade, *Quarterly Journal of Economics*, 122(2), pp. 569-600.
- Schilling, M.A. (2002), Technology Success and Failure in Winner-Take-All Markets: the Impact of Learning Orientation, Timing and Network Externalities, *Academy of Management Journal*, 45(2), pp.387-398.
- Shanmugam, B. and Z.R. Zahari (2009), A primer on Islamic Finance, Research Foundation Publications of CFA Institute, Charlottesville.
- Skreta, V. and L. Veldkamp (2009), Ratings Shopping and Asset Complexity: A Theory of Ratings Inflation, *Journal of Monetary Economics*, 56(5), pp. 678-695.
- The Allen Consulting Group (2004), Debt and Equity Raising Transaction Costs, Report to The Australian Competition and Consumer Commission, December 2004
- Visser, H. (2009), *Islamic Finance*, Edward Elgar Publishing, Northampton.
- Williamson, O.E., 1975, *Markets and Hierarchies: Analysis and Antitrust Implications*, New York, Free Press.
- Williamson, O.E. (1985), *The Economic Institutions of Capitalism*, New York: Free Press.