

ARTICLES

Green Šukūk: The Introduction of Islam’s Environmental Ethics to Contemporary Islamic Finance

UMAR F. MOGHUL* AND SAMIR H.K. SAFAR-ALY†

TABLE OF CONTENTS

Introduction	2
I. A Brief Introduction to Islamic Law	4
A. Sources and Objectives	4
B. Legal Values	9
C. Evolving Fatwās	10
II. Islam and the Environment	11
A. Foundations	11
B. Islamic Environmental Law	14
1. Land Pollution	14
2. Water Pollution	16
3. Air Pollution	18
4. Resource Conservation	18
5. Minerals	19
6. Plants and Animals	20
7. Liability and Sanctions	23
III. Contemporary Islamic Finance	25
A. Introduction	25

* Umar F. Moghul is a corporate and finance attorney with over fifteen years of experience. His practice has encompassed Islamic investment and financial transactions in the realm of private equity, real estate, cross-border joint ventures, and the design of novel products and transactions. He has advised clients in the energy, healthcare, technology, and business services sectors. He is a lecturer in Law at the University of Connecticut where he teaches courses in Islamic law and Islamic finance and investment law.

† LL.M. (University of California, Berkeley), LL.B. (Hons) (University of Kent, Canterbury), MCI Arb, ACSI, IFQ. Samir is a qualified Solicitor of the Senior Courts of England and Wales, having trained at a leading international law firm based in London, where he focused on banking, disputes, and energy related matters. At Berkeley Law he earned specialization certificates in both Business Law and Energy & Clean Technology Law, served as Senior Editor and Symposium Editor on the Board for the *Berkeley Journal of Middle Eastern and Islamic Law*, helped introduced the university’s first Islamic finance class, and organized the Fourth UC Berkeley Islamic Finance Forum. Samir currently practices as a finance lawyer at the Dubai office of a leading international law firm. © 2015, Umar F. Moghul and Samir H.K. Safar-Aly.

B.	Contemporary Practice	30
1.	Fatwās (Islamic Legal Opinions)	30
2.	The DJIMI Fatwā	31
C.	Contemporary Practice: Şukūk	34
1.	AAOIFI Şukūk Standards	36
2.	Recent Şukūk Market Trends	37
IV.	Coloring Finance Green	40
A.	Sketching a Framework	41
B.	Filling in the Details	46
C.	Finding Congruence with Islamic Ethics	49
D.	Market Opportunities	49
V.	Analysis and Recommendations	53
A.	Standards and Structures	55
B.	Fatwā Criteria	55
C.	Expanded Audit Policy	57
Conclusion	58

“Have you considered that if one morning your water were to disappear into the Earth, who then could bring you flowing water?”¹

INTRODUCTION

It is hard to argue against the seriousness of the environmental crisis that our world faces. To stave off climate change, the world must reduce carbon emissions, restore animal habitats and ecosystems, and cease pollution of our seas and oceans.² Responses to the global environmental crisis have begun to focus not only on contributory behavior but the ethics and actors that engender the crisis behind the scenes. Some investors and financial institutions recognize the looming environmental catastrophes, and they are establishing normative criteria to screen out certain behaviors, products, and even actors as unethical or irresponsible. Although these players represent a small fraction of the global economy, their numbers are growing.

Many leading environmentalists cite the potential role for religion, or at least philosophical approaches stemming from religion, to address the environmental

1. *Qur'an* 67: 30. It is quite intriguing that the verse quoted does not simply say “water” but water that is running, flowing, and gushing. For translations of the Qur'an, we have relied primarily on *The Gracious Quran: A Modern-Phrased Interpretation in English* (Ahmad Zaki Hammad trans., Lucent Interpretations, LLC 2007).

2. The latest report of the Intergovernmental Panel on Climate Change details the impacts of climate change to date, the future risks from a changing climate, and the opportunities for effective action to reduce risks. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY, WG II AR5 (2014), available at <https://ipcc-wg2.gov/AR5/report/full-report/>. The panel is the leading international body for the assessment of climate change. It was established by the U.N. Environment Programme and the World Meteorological Organization in 1988 to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts. See *Organization*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, <http://ipcc.ch/organization/organization.shtml> (last visited Feb. 20, 2015).

crisis. James Gustav Speth has expressed that “the potential of faith communities is enormous.”³ The thirty-year update of the famous book *Limits to Growth*, commissioned by the Club of Rome (a global think-tank on international political issues), posits that the necessary consciousness required to deal with the environmental crisis is “a change advocated in nearly every religious text, a change not in the physical or political world, but in people’s heads and hearts—in their goals.”⁴ The textual foundations of the religion of Islam are no different in this regard.

The Muslim world has consciously connected moral virtue to financial markets in Islamic banking and finance. Islamic financial institutions constitute a subset of socially and ethically conscious industries, although they developed independently. In the wake of the 2008 global economic crisis, Islamic institutions garnered some attention for faring far better than their conventional counterparts.⁵ While conventional banking and Islamic finance have a fair amount to learn from each other, the worlds of Socially Responsible Investment (“SRI”), “green” financing, and Islamic finance have unfortunately rarely overlapped until recently. We hope that this article will encourage dialogue and demonstrate the classical theologically—and ethically—mandated requirement for Islamic finance to develop in these areas.

3. James Gustave Speth, *The Bridge at the End of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability* 214 (2008). Speth was the principal environmental advisor to President Carter’s administration, founder of the World Resources Institute, former Dean of the Yale School of Forestry and Environmental Studies, and former head of the United Nations Development Program. *James Gustave Speth*, Center for Humans & Nature, <http://www.humansandnature.org/james-gustave-speth-people-58.php> (last visited Jan. 19, 2015).

4. DONELLA MEADOWS, JORGEN RANDERS, & DENNIS MEADOWS, *LIMITS TO GROWTH: THE 30-YEAR UPDATE* 240 (2004). The original work is DONELLA MEADOWS, DENNIS MEADOWS, JORGEN RANDERS, & WILLIAM BEHRENS, *THE LIMITS TO GROWTH: A REPORT FOR THE CLUB OF ROME’S PROJECT ON THE PREDICAMENT OF MANKIND* (1972).

5. See MAY KHAMIS ET AL., *IMPACT OF THE GLOBAL FINANCIAL CRISIS ON THE GULF COOPERATION COUNCIL COUNTRIES AND CHALLENGES AHEAD* 67-69 (2010), available at <https://www.imf.org/external/pubs/ft/dp/2010/dp1001.pdf>; see also, Jon Gorvett, *Which Way Forward for Islamic Finance?*, MIDDLE EAST, July 2012, at 34, 35. Islamic principles may also be a source for modern alternative economic thought. See Frank Kane, *Islamic Finance Holds Lessons for Advanced Economies, According to Nouriel Roubini*, NAT’L (Dec. 13, 2013), <http://www.thenational.ae/business/industry-insights/economics/islamic-finance-holds-lessons-for-advanced-economies-according-to-nouriel-roubini> (“There is a need for a more resilient system, and that’s where there is potential for the Islamic system. It is less volatile and potentially more stable than conventional financial systems. The advanced economies can learn from the Islamic system in this respect.”). In the wake of the crisis, even the Vatican’s newspaper, *L’Osservatore Romano*, recognized that “the ethical principles on which Islamic finance is based may bring banks closer to their clients and to the true spirit which should mark every financial service.” Lorenzo Totaro, *Vatican Says Islamic Finance May Help Western Banks in Crisis*, BLOOMBERG (Mar. 4, 2009), <http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aOsOLE8uiNOg>. That Islamic financial institutions have generally fared better than their conventional counterparts is the result of a number of factors, some having to do with Islamic principles, which, for example, prohibit or limit “toxic” assets and products, such as derivatives and the sale of debt, and require far greater proximity of an asset to its financing. Nevertheless, we do not posit that contemporary Islamic finance was immune from the credit crisis or that its actors (both Muslims and non-Muslims alike) are not subject to motivations like greed. There are certainly ethical debates and dilemmas within Islamic finance in practice.

As we present in this article, Islamic law contains a deeply entrenched ethical framework of concern for the environment and its diverse inhabitants. The contemporary Islamic finance industry should integrate these teachings into its ethical-legal review processes. One of the ways in which it may do so is to adopt from the world of socially responsible investment pro-environmental financial mechanisms and standards that are similar to those of Islam, and which can be used to support implementation of Islamic ethics. Using financial instruments prevalent in contemporary Islamic finance, *ṣukūk*—or finance participation certificates—as a case study, this article explores bringing the contemporary Islamic finance industry and socially responsible climate finance markets together to address the current environmental crisis. *Ṣukūk* may finance a variety of projects and assets and have a global breadth of buyers.

Part I introduces the basic concepts of Islamic law, its sources, and some of the elements taken into consideration when constructing an Islamic legal opinion (a *fatwā*). Part II presents a sample of the teachings of Islamic environmental law, including pollution and resource conservation, examines the traditional legally derived sanctions for its contravention, and reflects on historical institutions that monitored Islamic ethics in the business world. Part III introduces the modern Islamic finance industry, *ṣukūk* instruments and markets, and the role that a *fatwā* plays in creating financial instruments. Part IV examines the growing trend towards environmentally conscious finance initiatives and presents some frameworks, criteria, and technical guidelines with a view toward demonstrating their compatibility with Islamic environmental law and ethics. Part IV also studies the potential of “green” *ṣukūk*—*ṣukūk* that also adhere explicitly to pro-environmental criteria—through market opportunities that currently exist in countries with a traditional *ṣukūk* investor base and to address and promote pro-environmental projects. Finally, Part V recommends certain action points in potentially bridging the gap between the Islamic finance industry and SRI markets.

I. A BRIEF INTRODUCTION TO ISLAMIC LAW

A. SOURCES AND OBJECTIVES

Frequently translated as “Islamic law,” the Shari’ah includes much more than law.⁶ The Shari’ah consists of a sophisticated set of interdependent beliefs, theology, values, norms, and laws, and etiquettes meant to establish and maintain life in this world in balance with the atemporal realities that Islam teaches, i.e. positive and negative consequences for one’s actions in the afterlife.⁷

6. See BERNARD G. WEISS, *THE SPIRIT OF ISLAMIC LAW* 17 (1998) (explaining that “[i]n archaic Arabic the term *sharīʿa* means ‘path to the water hole.’ When we consider the importance of a well-trodden path to a source of water for man and beast in the arid desert environment, we can readily appreciate why this term in Muslim usage should have become a metaphor for a whole way of life ordained by God.”).

7. The Islamic framework countenances humans as having both “temporal” components (such as the

The primary sources of the Shari‘ah are the Qur’an, the Sunnah, and the principles contained in both. Muslims believe the Qur’an to be “the book containing the speech of God revealed to the Prophet Muhammad, peace be upon him, in Arabic.”⁸ The Sunnah, or “The Tradition,” the written record of which is termed *ḥadīth*, are the collective acts and sayings of the Prophet Muhammad,⁹ his rulings, plus whatever he has tacitly approved as well as reports that describe his physical attributes and character.¹⁰ Applying methods of hermeneutics, logical reasoning, and legal reasoning (a discipline termed *uṣūl al-fiqh* in Arabic)¹¹ to the texts of the Qur’an and Sunnah, Muslim jurists derive detailed practical rules (known in Arabic as *fiqh*) from the sources of the Shari‘ah.¹² In rendering legal rulings, Muslim jurists also employ past legal rulings and indeed may sometimes directly rely on these rather than interpret anew from the primary texts of the Shari‘ah (perhaps in a fashion not too dissimilar from the concept and role of *stare decisis* within the common law framework).¹³

In this section, we will rely on the views of both classical and contemporary Muslim jurists. It is important here to explain that Islamic law might be considered a jurist’s law insofar as much of it has been and is still developed by jurists outside of prevailing political apparatus.¹⁴ Sunni Muslim jurists eventually organized themselves into four schools of jurisprudence (*madhhab*), known commonly after their eponyms as the Hanafi, Maliki, Shafi‘i, and Hanbali schools.¹⁵ As humans vary in their dispositions, so do their interpretations of the

physical body), and “supra-temporal,” transcendental or timeless “spiritual,” components (such as the soul—*rūh*). This duality is mirrored in the Shari‘ah, with the branch relating to civil transactions (*mu‘amalāt*) being linked to the temporal dimension. Laws in this realm are mutable and dynamic. On the other hand, laws in the branch relating to the supra-temporal (*‘ibadāt*) such as the requirement to pray are considered constant, immutable, and consistent. For more on Islamic eschatology, see ABŪ ḤĀMID MOḤAMMAD IBN MOḤAMMAD AL-GHAZĀ LĪ (D. 1111 CE), *THE REMEMBRANCE OF DEATH AND THE AFTERLIFE* (T.J. Winter trans., The Islamic Texts Society 1989).

8. MOHAMMAD HASHIM KAMALI, *PRINCIPLES OF ISLAMIC JURISPRUDENCE* 14 (Islamic Texts Society, 3rd rev. ed. 2008).

9. It is customary among Muslims to mention a salutation of peace whenever the name of the Prophet Muhammad or any other messenger or prophet of God is mentioned. See ABŪ ḤĀMID MOḤAMMAD IBN MOḤAMMAD AL-GHAZĀ LĪ (D. 1111 CE), *INVOCATIONS & SUPPLICATIONS* 50-54 (Kojiro Nakamura trans., The Islamic Texts Society, 3rd ed. 2010).

10. IMRAN AHSAN KHAN NYAZEE, *THEORIES OF ISLAMIC LAW: THE METHOD OF IJTIHAD* 132 (2007).

11. SHERMAN A. JACKSON, *ISLAMIC LAW AND THE STATE* 121 (1996) (translating this Arabic term as Islamic “theoretical jurisprudence”).

12. MOHAMED MOHAMED YUNIS ALI, *MEDIAEVAL ISLAMIC PRAGMATICS: SUNNI LEGAL THEORISTS’ MODELS OF TEXTUAL COMMUNICATION* 1-2 (2000) (defining *fiqh* as “the understanding of the speaker’s intention” or “the perception of concealed meanings”).

13. See generally JACKSON, *supra* note 11; Mohammad Fadel, *The Social Logic of Taqlid and the Rise of the Mukhtasar*, 3:2 *ISLAMIC L. & SOCIETY* 193 (1996); ABDUL-RAHMAN MUSTAFA, *ON TAQLĪD: IBN AL QAYYIM’S CRITIQUE OF AUTHORITY IN ISLAMIC LAW* (2013).

14. The relationship of the Muslim jurists and the political authorities is complex and nuanced. See Clark B. Lombardi and R. Michael Feener, *Why Study Islamic Legal Professionals?*, 21 *PAC. RIM L. & POL’Y J.* 1 (2012).

15. See George Makdisi, *The Significance of the Sunni Schools of Law in Islamic Religious History*, 10 *INT’L J. MIDDLE EAST STUD.* 1 (1979); Bernard Weiss, *The Madhhab in Islamic Legal Theory*, in *THE ISLAMIC SCHOOL*

Shari'ah differ from time to time.¹⁶ Consequently, theories of Islamic jurisprudence and law are not monolithic. Jurists both contended with and respected competing opinions, recognizing their fallibility as well as the probabilistic nature of their interpretations.¹⁷

Islamic jurisprudence and law is divided into two main categories: (1) those relating to the worship of God (*'ibadāt*); and (2) those relating to interactions between humans and the balance of creation (*mu'amalāt*).¹⁸ This latter category includes those areas that Anglo-American law would describe as torts, property, and contracts law, as well as business and environmental law. This categorization mirrors the dual nature of humans, understood within Islam to have both temporal and supra-temporal components.¹⁹ Generally speaking, different rules govern the derivation and application of law in *'ibadāt* and *mu'amalāt*.²⁰

The objectives of the Shari'ah are known in Arabic as the *maqāṣid al-Sharīah* or common good (*maṣlahah*) of the Shari'ah.²¹ The most important considerations are securing benefits and preventing harm in this world, in connection with the hereafter.²² In order for any rule of Islamic law to be valid and applicable, it must not violate the ultimate intent and purpose of the Shari'ah.²³ The medieval Andalusian Sunni Islamic scholar al-Shāṭibī (d. 1388 CE) sets forth the Divine

OF LAW: EVOLUTION, DEVOLUTION, AND PROGRESS 1, 2 (Peri Bearman, Rudolph Peters, and Frank E. Vogel eds., 2005). The term "Sunni" refers to followers of the Sunni branch of Islam, Islam's largest branch. Sunni Islam is sometimes referred to as the "orthodox" version of Islam. Other major branches of Islam include the Shi'a or Shiite branch (centered primarily around Iran, Iraq and Bahrain), and the Ibaḍr form of Islam (centered primarily in Oman and Tanzania).

16. See MUHAMMAD AL-BASHIR MUHAMMAD AL-AMINE, *GLOBAL ŠUKUK AND SECURITIZATION MARKET: FINANCIAL ENGINEERING AND PRODUCT INNOVATION* 323-28 (Koninklijke Brill NV 2012) (discussing the causes for differences of opinion, including the nature of Islamic law, colonial and postcolonial history and impact, and practical steps taken towards harmonization).

17. See WEISS *supra* note 6, at 88-123 (regarding "probabilism" and "infallibility").

18. Umar Moghul & Arshad Ahmed, *Contractual Forms in Islamic Finance Law and Islamic Inv. Co. of the Gulf (Bahamas) Ltd. v. Symphony Gems N.V. & Ors: A First Impression of Islamic Finance*, 27 *FORDHAM INT'L L.J.* 150, 163 (2003).

19. *Id.* at 164 ("It suffices to say that, generally speaking, the legal rules of the *'ibadat* cannot necessarily be rationalized in the same manner as can those of the *mu'amalat*. In contrast to the *'ibadat*, the *mu'amalat* constitute a mutable and dynamic body of law, pliable within the bounds of the Shari'ah to the existential and material realities of human life in this world.").

20. ARON ZYSOW, *THE ECONOMY OF CERTAINTY: AN INTRODUCTION TO THE TYPOLOGY OF ISLAMIC LEGAL THEORY* 199 (Lockwood Press 2013); see also MOHAMMAD HASHIM KAMALI, *ISLAMIC COMMERCIAL LAW: AN ANALYSIS OF FUTURES AND OPTIONS* 66-83 (2002).

21. "'Benefit' and 'harm' as defined in the context of objectives of Islamic law are based on a specific concept with its own unique distinguishing features. The benefit spoken of here is not, for example, simply the gratification of impelling desires or short-lived caprices." AḤMAD AL-RAYSUNĪ, *IMAM AL-SHĀṬIBĪ'S THEORY OF THE HIGHER OBJECTIVES AND INTENTS OF ISLAMIC LAW*, at xxxv (Nancy Roberts trans., The International Institute of Islamic Thought, 2005). "[N]on-material forms of benefit and harm are, without a doubt, included in the aforementioned definitions The essence of benefit, then, is pleasure and enjoyment, be it physical, emotional, mental or spiritual, while the essence of harm is pain or suffering, be it physical, emotional, mental or spiritual." *Id.* at 224.

22. See generally AL-GHAZĀLĪ, *supra* note 9.

23. See NYAZEE, *supra* note 10, at 222-23, 242.

objectives as three primary considerations when determining whether a rule violates Shari'ah.²⁴ First, the essentials (*al-darūriyyāt*)—religion, life, intellect, lineage, and property²⁵—are essential “for the achievement of human beings’ spiritual and material well being,” and when missing, they cause “imbalance and major corruption in both this world and the next.”²⁶ Second, the complements (*al-hajiyyāt*) “when fulfilled . . . contribute to relieving hardship and difficulty and creating ease,”²⁷ but their absence “does not lead to overall corruption or serious harm.”²⁸ Finally, the embellishments (*al-taḥsiniyyāt*) “function to enhance and complete the fulfillment of the essentials and the complements, including worthy morals, habits, and customs.”²⁹

This hierarchy was developed by classical Muslim jurists as they contemplated and debated instances in which realization of one objective competed with that of another.³⁰ Legislation (in the general sense of the word) of Islamic laws and principles protects against the destruction of the foregoing interests and ensures their preservation and protection.³¹ In order to prevent inappropriate results and scholars straying too far from the texts of the Shari'ah, Muslim jurists developed an elaborate set of conditions and procedures that permit reliance upon the common good when ruling.³² Summarily, these would include: (1) the interest must be genuine and real—or, under a preponderance of the evidence, the benefit from the laws outweighs their harm; (2) the benefit must be to the people or community as a whole and not to a particular class or segment; and (3) the benefit must not conflict with either a text or scholarly consensus (*ijmā'*).³³

The objectives of Islamic law are essential in the legislative and enforcement mechanisms of Islamic jurisprudence. The literature refers to these objectives broadly at times as “public interests” or “benefits” (*maṣlaḥah*) if translated literally, and sometimes qualify them, such as “unregulated benefits” (*maṣlaḥah al-mursālah*).³⁴ Some contemporary scholars center on these objectives as laws

24. This is not to say that he was the first jurist to do so.

25. KAMALI, *supra* note 8, at 356.

26. AL-RAYSUNĪ, *supra* note 21, at 108.

27. *Id.* at 109.

28. *Id.* at 317.

29. *Id.*

30. *See id.* at 226, 318 (on 318: “An action which has more beneficial effects than harmful effects, then it is this benefit which is taken into consideration by the Law, and it is for the sake of its attainment that human beings are urged or commanded to engage in said action. And conversely, an action which has more harmful effects than beneficial ones, it is this harm which is taken into consideration by the Law, and it is for the sake of its elimination that the Law prohibits the action concerned.”).

31. *Id.* at 109.

32. *See* NYAZEE, *supra* note 12, at 214.

33. KAMALI, *supra* note 8, at 228-63, 358-59. For a discussion of some contemporary debates surrounding consensus, see MUHAMMAD QASIM ZAMAN, *MODERN ISLAMIC THOUGHT IN A RADICAL AGE: RELIGIOUS AUTHORITY AND INTERNAL CRITICISM* 45-74 (Cambridge Univ. Press, 2013).

34. KAMALI, *supra* note 8, at 351-68.

themselves or as the very basis or causes of laws.³⁵ Certain critiques of Islamic finance are based on this premise as well.³⁶

For our purposes,³⁷ “unregulated benefits” (*maṣlaḥah al-mursālah*) allows the construction of new laws whose validity rests on a “claim to safeguard a policy of the law on sheer appropriateness.”³⁸ The new laws are appropriate to Islam but not based on a textually explicit cause, nor a discovered but uncorroborated cause.³⁹ The medieval Persian jurist and scholar, Abū Hāmid Al-Ghazālī (d. 1111 CE) adds, “[T]he established law must necessarily testify for or against every regulated benefit.”⁴⁰ Thus, loosely speaking, the doctrine of unregulated benefits enables the jurist to add to the law.⁴¹ “Every new rule that protects a legal interest is valid unless proven otherwise.”⁴² This doctrine is important in the assessment of standards developed outside the framework of Islamic law and ethics because it may be integrated into the latter. In our case, this jurisprudential concept of “unregulated benefits” (*maṣlaḥah al-mursālah*) is to be applied to financial-environmental regimes such as the Equator Principles and the Climate Bonds

35. See ZAMAN, *supra* note 33, at 108-39; see also FELICITAS OPWIS, STUDIES IN ISLAMIC LAW AND SOCIETY, MAṢLAḤA AND THE PURPOSE OF THE LAW: ISLAMIC DISCOURSE ON LEGAL CHANGE FROM THE 4TH/10TH TO 8TH/14TH CENTURY (Brill Academic Publishers 2010); Felicitas Opwis, *Islamic Law and Legal Change: The Concept of Maṣlaḥa in Classical and Contemporary Legal Theory*, in SHARĪ'A: ISLAMIC LAW IN THE CONTEMPORARY CONTEXT 62 (Abbas Amanat & Frank Griffel eds., Stanford Univ. Press, 2007).

36. Umar Moghul, *Stepping Forward, Backwards, or Just Standing Still? A Case Study in Shifting Islamic Financial Structures Offshore*, in CONTEMPORARY ISLAMIC FINANCE: INNOVATIONS, APPLICATIONS AND BEST PRACTICES 267, 275 (Karen Hunt-Ahmed, ed., John Wiley & Sons, Inc. 2013) (“Legislating on the basis of such purposes, or universals, would likely be a challenging undertaking creating greater legal ambiguity and variation than is found in the existing legal processes of Islamic finance. A common criticism by those Muslim jurists who argue for rulings founded upon their ‘*ilal*’ (singular, ‘*illah*’), or effective causes, against those who argue for rulings to be based upon their *hikam* (singular, *hikmah*), or rationale, is that the latter method may become too distant from the texts of the Shari’ah and thus proceed down a slippery slope. Increased legislation may also upset those uncomfortable with the legal pluralism of Islamic law and those calling for increased standardization as well. But this belies the very important point in Islamic jurisprudence that application of the particulars probabilistically results in fulfillment of the universals. If the universals are in fact not being achieved, is it possible something additionally is done to affect realization of the universals or are the particulars improperly understood and applied?”).

37. For more in-depth studies of the subject, see Shalabi, M.M. *Ta’līl al-Aḥkām: ‘Arḍ wa-taḥlīl li-tartīqat al-ta’līl wa-taṭawwurātihā ft ‘uṣūr al-ijtihād wa-al-taqlīd* (Dar al-Nahda al-Arabiyya, 1981) (in Arabic); see also ZYSOW, *supra* note 20, at 159-254.

38. ZYSOW, *supra* note 20, at 238 (“[I]f you examine the schools [of jurisprudence] you will find that when they do anything or analogize or distinguish two cases, they do not look for any evidence of the Lawgiver’s consideration (*i’tibār*) of this ground by which they analogize or distinguish. Rather, they are satisfied with the mere appropriateness, and this is the unregulated benefit. It is therefore in all the schools.”) (quoting AL-QARĀFĪ, SHIHĀB AL-DĪN ABŪ AL-‘ABBĀS AḤMAD IBN IDRĪS, AL-DHAKHĪRA 394 (1381/1961)).

39. When speaking of cause we refer to the legal or effective cause of a rule of law. See *id.* at 237 (“The validity of these rules rests not on any cause, for there is no cause and thus no analogy at issue.”).

40. *Id.* at 237 (quoting ABŪ HĀMID MOḤAMMAD IBN MOḤAMMAD AL-GHAZĀLĪ, AL-MANKHŪL MIN TA’LĪQĀT AL-UṢŪL 363 (Muhammad Hasan Hitu ed., 1970).

41. *Id.* at 239; see *id.* at 160 (explaining that the old rule is known with certainty to have been intended by The Lawgiver. What relies or builds upon it, what is extended from it may not be known with such certainty and Muslim jurists feel a certain “reticence” to lay down principles, which may rival the “revealed”).

42. *Id.* at 237-38.

Initiative, discussed more fully *infra* in Section IV(A).

B. LEGAL VALUES

Muslim jurists define a legal value (*ḥukm sharʿī*) as a communication from God that concerns the conduct of the legally responsible and that consists of a “demand, an option or an enactment.”⁴³ A legal value comprises: (1) an authorization from God, who is The Lawgiver (*al-Ḥākim*) and sole source of law in Islam;⁴⁴ (2) an object of the legal value (*maḥkūm fīh*); and (3) the legally responsible (*mukallaf* or *maḥkūm ʿalayh*).⁴⁵ *Ḥukm sharʿī* is formally divided into “defining law” (*ḥukm taklīfī*), the area of Islamic law that places actions in one of several categories, and “declaratory law” (*ḥukm waḍʿī*), which declares the relationship between a cause and effect—between a condition and its object.⁴⁶

According to the majority of jurists, there are five categories of Defining Law (*ḥukm taklīfī*) under which behavior is assessed: (1) the obligatory (*wājib*); (2) the recommend (*mandūb*); (3) the prohibited (*ḥarām*); (4) the disapproved or reprehensible (*makrūh*); and (5) the permitted (*mubāḥ*).⁴⁷ An obligatory act’s (*wājib*) commission leads to heavenly reward and its omission leads to punishment.⁴⁸ Obligations may bind an individual or a group.⁴⁹ In the latter case, such obligations are fulfilled if completed by some members of the community.⁵⁰ A recommended act (*mandūb*) is rewarded but its omission is not often punished.⁵¹ Al-Shāṭibī observes that the recommended leads to and supports the obligatory.⁵² A prohibited action (*ḥarām*) is one whose abandonment is required by The

43. KAMALI, *supra* note 8, at 410.

44. *Id.* at 448 (“The demand to act or not to act must originate in an authoritative source that can command the obedience of the *mukallaf* [the accountable person] . . . [because of the] requirement that the proof or evidence in which the law is founded must be identified and explained. Consequently, we find that in their juristic expositions, the *fuqahāʾ* [Islamic jurists] normally explain the evidential basis (*hujjiyyah*) of the rules of Shariʿah that they expound, especially rules which are aimed at regulating the conduct of the *mukallaf*.”).

45. *Id.* at 410.

46. *Id.* at 413, 431-40; AL-SHĀṬIBĪ, IBRĀHĪM IBN MŪSA ABŪ IŞĤĀQ, *THE RECONCILIATION OF THE FUNDAMENTALS OF ISLAMIC LAW 141-256* (Imran Ahsan Khan Nyazee trans., Garnet Publishing Limited 2012).

47. AHMAD HASAN, *PRINCIPLES OF ISLAMIC JURISPRUDENCE: THE COMMAND OF THE SHARIʿAH AND JURIDICAL NORM* 34-35 (1993). The minority, primarily Hanafis, add two more obligation and prohibition categories. For them, if a text conveys a command (to do) and the text is not established definitively in its transmission (*thubūt*), or the meaning (*dalālāh*) the text conveys is not definitive the command is obligatory (*wājib*); otherwise it is termed as necessary (*farḍ*). Both are obligations; they differ in degree. Similarly, if a text conveying a prohibition (do not) is definitive in its transmission (*thubūt*) and meaning (*dalālāh*), such command is termed prohibited (*ḥarām*), according to the Hanafis. Otherwise, it is termed as an undesirable act (*makrūh taḥrīm*). For the Hanafis, both are prohibitions, differing in degree thereof. See ZYSOW, *supra* note 20, at 52.

48. KAMALI, *supra* note 8, at 413-19.

49. *Id.* at 415.

50. *Id.*

51. *Id.* at 419-21.

52. AL-SHĀṬIBĪ, *supra* note 46, at 104-05.

Lawgiver (i.e., God): their omission leads to reward while their commission leads to punishment.⁵³ Actions may be prohibited for intrinsic (*li dhātihi*) or extrinsic (*li ghayri hi*) reasons.⁵⁴ Those actions falling under the former category may be permitted only by dire necessity (*ḍarūrah*), while those actions under the latter category may be permitted by a lesser degree of need (*ḥājah*).⁵⁵ Disapproved actions (*makrūh*) are those that are considered disliked by The Lawgiver: their commission entails reward while their omission does not often subject the actor to punishment.⁵⁶ Finally, permissible actions (*mubāh*) are understood to mean The Lawgiver does not reward commission or omission: “As far as the Lawgiver’s intention is concerned, it makes no difference whether one performs such an action or refrains from it.”⁵⁷ For our purposes, it will be for the jurist to assess how the probable or anticipated environmental impact of a transaction or project will affect the final Islamic legal assessment assigned by an Islamic non-binding legal or advisory opinion (a *fatwā*) to such transaction or project.

C. EVOLVING FATWĀS

Islamic legal determinations fall into two types: (1) *qaḍā'*—litigated binding judgments by courts of law and politically enforceable; and (2) *fatwā*—non-binding advisory opinions issued by legal scholars as Muftis. Historically, many Muftis operated privately without ties to the state.⁵⁸ A Mufti provides advice by responding to a wide range of questions posed privately or by judges and political rulers.⁵⁹ One key distinction between the institutions of *fatwā* and *qaḍā'* is that a Mufti provides determinations of law, assuming a set of facts, while *qaḍā'* includes determinations of fact under a set of laws.⁶⁰ In other words, the facts presented by a *fatwā* petitioner are taken as true.⁶¹ It is this petition or question (*istiftā'*),⁶² posed as a result of an event necessitating knowledge of the applicable Shari'ah principle, which triggers the *fatwā*.⁶³

53. KAMALI, *supra* note 8, at 421-24.

54. *Id.* at 423.

55. AL-SHĀṬIBĪ, *supra* note 46, at 127-29.

56. KAMALI, *supra* note 8, at 424-28.

57. AL-RAYSUNĪ, *supra* note 21, at 148.

58. Nissreen Haram, Use and Abuse of the Law: A Mufti's Response, in M.K. MASUD, B. MESSICK, & D.S. POWERS, MUFTIS, FATWAS, AND ISLAMIC LEGAL INTERPRETATION ISLAMIC LEGAL INTERPRETATION: MUFTIS AND THEIR FATWAS 80 (Harvard Univ. Press, 2005) [hereinafter MUFTIS].

59. *Id.* at 8.

60. *Id.* at 18.

61. *Id.* at 8 (“It was a different matter, however, if a mufti happened to know, or had reason to suspect, that the legal case as described by the petitioner (*surat al-fatwā*) did not conform to the actual case (*surat al-hal*). In such an event, the manuals instruct the mufti not only to answer the petitioner’s question but also to cite and provide the solution for what is suspected to be the actual case.”).

62. See Muhammad Khalid Masud, The Significance of *Istiftā'* in the *Fatwā* Discourse' 48:3 *Islamic Studies*, 341, 349 (Autumn 2009) (explaining: “‘*istiftā'*’ often reflects a process of bargaining. Because a mufti does not have the opportunity to ascertain those facts or to examine them, the *istiftā'* largely controls the *fatwā*.”). Based

Scholars responding to such questions regulated themselves by establishing an ethical and professional criterion for fatwā-giving authority.⁶⁴ Modern Muftis often issue fatwās by committee⁶⁵ and respond to significant societal changes including greater literacy, newer specialized expertise, the internet, and social media. They are generally more detailed than their pre-modern counterparts.⁶⁶ These fatwās often cite supporting textual proofs and employ knowledge and examples from other disciplines.⁶⁷ Fatwās illuminate the relationship between law and society. For our immediate purposes, fatwās will be useful mechanisms for implementing Islam’s environmental ethics in Islamic financial transactions.

II. ISLAM AND THE ENVIRONMENT

A. FOUNDATIONS

Islam’s ethical-legal framework provides a strong and conscious concern for the well-being of the Earth and its varied inhabitants. The basis of this framework is first and foremost religious. As such, it is critical that the religious perspectives of Islam be understood so that we may more fully understand the significance and nature of these concerns, as well as related Islamic laws and the significance of both to contemporary Islamic finance’s ethical-legal review process.

Islam instructs that the universe exists to support life generally and human life particularly.⁶⁸ The Qur’an informs:

on our experience as legal counsel in contemporary Islamic transactions, the *istiftā’* is indeed best described as a process where the sponsor and its legal counsel pose questions to the Mufti concerning a transaction or product beginning at a high level and eventually covering more detailed, nuanced aspects. We would not describe this experience as a bargain but as a conversation in which the sponsor may present additional evidence and arguments in an attempt to inform or persuade the Mufti.

63. Mahdi Lock, *The Adab of the Mufti Being a Translation From the Introduction to Al-Nawawr’s Al-Majmū* 11(2) ISLAMIC SCIENCES 113, 132 (2013) (“If a layperson asks about something that hasn’t happened, then it is not obligatory to respond.”).

64. On such manuals, see for example, Lock, *supra* note 68, at 132; Alexandre Cairo, *The Shifting Moral Universes of the Islamic Tradition of Ifiā’: A Diachronic Study of Four Adab al-Fatwā Manuals* 96 THE MUSLIM WORLD 661, 665 (2006); Sherman Jackson, *The Second Education of the Mufti: Notes on Shihāb al-Dīn al-Qarāfi’s Tips to the Jurisconsult*, 82 THE MUSLIM WORLD 201, 203-04 (1992).

65. This is often the case in contemporary Islamic finance.

66. See e.g., Muhammad Khalid Masud, *Apostasy and Judicial Separation in British India*, in MUFTIS, *supra* note 58, at 198-99 (noting the fatwā collection of Mawlana Ashraf Ali Thanawi Imdad al-Fatwa [d. 1863 CE] to be “long, giving details of the argument and citing sources . . .”); Colin Imber, *Eleven Fetvas of the Ottoman Sheikh ul-Islam Abdurrahim*, in MUFTIS, *supra* note 58, at 142 (describing the fatwā collection of the sixteenth century Sheikh ul-Islam Ebusu’ud Efendi [d. 1574 CE] as “often detailed, as though he were trying to educate the questioner”).

67. See e.g., MUHAMMAD QASIM ZAMAN, *THE ULAMA IN CONTEMPORARY ISLAM: CUSTODIANS OF CHANGE* (Princeton Univ. Press, 2007) (describing the transformation Muslim scholars have undergone and undertaken to maintain their relevance and authority in society).

68. Geoffrey Roughton, *The Ancient and the Modern: Environmental Law and Governance in Islam*, COLUM. J. ENVTL. L. 99, 103 (2007).

And when your Lord extracted from the children of Adam, from their loins, their posterity and He made them bear witness to their own souls[, saying,] “Am I not your Lord?” They said, “Oh yes, indeed! We do so bear witness!” [This We did in the event that] you should say on the Day of Resurrection: Indeed, we were heedless of this [truth].⁶⁹

In addition to life, the theme of trade and business being linked to the environment, environmental appreciation, and ultimately to God, features in classical and contemporary Qur’anic commentary (*tafsīr*) literature. The Islamic jurist, philosopher, and physician al-Rāzī (d. 925/932 CE) states:

If God did not create trees, iron, and the various tools need to manufacture ships; if He did not make known to people how to use all these items; if He did not create water as a running body which allows ships to move on it; if He did not create winds with their powerful movement and if He did not widen and deepen rivers enough to allow the movement of ships in them; it would have been impossible to benefit from these ships. He is the Manager (*al-Mudabbir*) and the Subjugator (*al-Musakhkhir*) of these matters.⁷⁰

Muslim scholars teach that human beings testified to their position within the cosmos as servants to the Divine.⁷¹ God grants life and wealth for humanity to hold in trust (*amānah*) as the servant (*‘abd*) and representative/steward (*khalīfah*) of God.⁷² Humans are neither granted superiority nor license to subdue and exploit absolutely.⁷³ “The faithful servants of the Beneficent [i.e., God] are they who tread upon the Earth gently.”⁷⁴ Their role requires that the trust be subject to the Shari’ah, the comprehensive embodiment of God’s will as understood by Islam.⁷⁵ This understanding appears in verses in the Qur’an such as: “Assuredly the creation of the heavens and the earth is a greater [wonder] than the creation of

69. *Qur’an* 7:172.

70. SARRA TLILI, ANIMALS IN THE QUR’AN 97 (2012), citing Al-Rāzī, Fakhr ad-Dm, *Al-Maḥṣūl fī ‘ilm uṣūl al-fiqh* (1992).

71. See S. NOMANUL HAQ, A COMPANION TO ENVIRONMENTAL PHILOSOPHY 114 (2001).

72. The word in the Qur’an used to encompass nature and the environment is “*kawn*,” literally that which exists or the cosmos. See ALI AHMAD, COSMOPOLITAN ORIENTATION OF THE PROCESS OF INTERNATIONAL ENVIRONMENTAL LAWMAKING: AN ISLAMIC LAW GENRE 49 (2001).

73. S. Nomanul Haq, *Islam and Ecology: Toward Retrieval and Reconstruction*, 130 DAEDALUS 141, 151 (2001) (noting that the subjugation of nature to man in the Qur’an also appears with the reminder that nature is from the creative act of God and it is God who made nature subject).

74. *Qur’an* 25:63; see Adi Setia, *The Inner Dimension of Going Green: Articulating an Islamic Deep-Ecology*, 5(2) ISLAM & SCIENCE 117, 120 (2007) (“This is an ethos that is imbued with religio-spiritual and ethico-moral qualities of mildness (*rifq*), gentleness (*lm*) and serenity (*sakmah*), combined with reverential humbleness (*tawāḍu’*) and emotional fortitude (*qārr*).”).

75. See, e.g., *Qur’an* 3:83 (“Is it, then, other than God’s religion that they seek, when all those in the heavens and the earth submit to Him—willingly or unwillingly and [when it is] to Him that they shall all be returned [for Judgment?]”), *Qur’an* 13:15 (“For to God [alone] bow down all who are in the heavens and earth—willingly or unwillingly—as do their [very] shadows in the early mornings and the late afternoons.”).

human beings. Yet most people understand not.”⁷⁶

The foundational texts of the Shari’ah have long been used by Muslim scholars to establish interconnectedness with animals, birds, insects, plant life,⁷⁷ earth, water, and air,⁷⁸ and imperceptible creatures—all of which are a part of God’s creation.⁷⁹ The Qur’an states: “For there is not a single beast on the earth nor a bird flying with its two wings but that they are communities like you.”⁸⁰ Thus, the Qur’an beseeches humanity to be conscious of all animal life and respect ecosystems accordingly. Similarly, the Qur’an states:

The seven heavens and the earth and all that are in them give due exaltation to Him [i.e., God]. For there is not a [single] thing but that it exalts Him with [all] praise. But you [human beings] fathom not their exaltations. Indeed, ever is He most forbearing, all forgiving.⁸¹

Thus, “[t]here is a due measure (*qadr*) to things, a balance (*mīzān*) in the cosmos, and humanity is transcendentially committed not to disturb or violate this measure (*qadr*) and balance (*mīzān*).”⁸² Nature, the Qur’an emphasizes, is a sign (*āyah*) of “something beyond itself, pointing to some transcendental entity that bestows the principle of being upon the world and its objects . . . [I]t is a means through which God communicates to humanity.”⁸³

76. *Qur’an* 40:57.

77. See Roughton, *supra* note 68 at 108 (stating that the *Sunnah* encourages the planting of trees not only because they might provide some tangible profit but because there was some intrinsic good in planting a tree).

78. See *infra* section II.B. (discussion on land, water, and air pollution).

79. Consider the following Qur’an verses as representative of this interconnectedness: *Qur’an* 80:24-32 (“Then let man look to his own food. Indeed, it is We who have poured out water in showers. Then We clove the land [a measured] cleaving. Then We who have caused to grow therein grains and grapes, and herbage, and olives and date palms, and lush orchards, and fruits and pastures—[all as] enjoyment for you and for your cattle [for a time.]”); *Qur’an* 25:48-49 (“And He is the One who sends the winds bearing glad tidings before His mercy. Thus do we send down, from the sky, purifying water, that We may give life thereby to a lifeless habitation, and [from which] We give drink to some of what We have created—including cattle and many people.”); *Qur’an* 32:27 (“Have they not seen that it is We who drive the water to the barren land, bringing forth thereby crops from which their cattle and they themselves eat?”); *Qur’an* 79:27-33 (“Are you humankind a more prodigious creation than the heaven? He [along] built it. He raised its height and leveled it. And He darkened its night and brought out its morning light. And the earth, after this, He [alone] spread. He brought from it its water and its pasturage. And the mountains, He [alone] anchored [them—all as] enjoyment for you and for your cattle [for a time.]”).

80. *Qur’an* 6:38.

81. *Qur’an* 17:44.

82. Haq, *supra* note 73, at 147.

83. *Id.* at 146 (citing *Qur’an* 50:6-11: “Have they not looked at the heaven above them, how [perfectly] We {i.e., God} built and adorned it? Nor has it [even] a flaw. And the Earth—[it is] We who spread it wide [at its surface], and cast therein anchoring mountains to [balance it as it spins]. And We alone who caused to grow in it something of every delightful variety of plant life—as a [divine] insight [for humankind into the wonders of creation] and as a reminder for every penitent servant. For We sent down, from the sky, blessed water with which We grow gardens and grain of the harvest, and tall date palms with spathes of clustered dates—as a provision for all [God’s] servants. And, thereby, do We give life to a lifeless habitation. Even so shall be the Resurrection [of man].”).

The second source of the Shari'ah, the *ḥadīth*, broadly demonstrates this concern for Earth and its inhabitants.⁸⁴ The *ḥadīth* establish and describe a bond between human spiritual practice and the Earth.⁸⁵ Typically, for comparison with Qur'anic content, the *ḥadīth* contain more detailed ethical and legal expressions. Such *ḥadīth* texts teach land cultivation and conservation, the fair treatment of animals, plants, vegetation, environmentally and socially considerate guidelines on the construction of buildings, water usage, and other mineral resource rights.

B. ISLAMIC ENVIRONMENTAL LAW

From the sources cited above and many others, Muslim jurists derived principles and laws regarding interactions with natural resources and animal life that today may be described as “sustainable.” Some rules limit pollution and establish conservation zones. Jurists endeavored to balance strong individual rights against collective community rights including non-human components of nature, and to remain within the parameters of the intent and objectives of The Lawgiver. To further evidence that these concerns are inherent in Islamic ethics and thus ought to be considered in contemporary Islamic finance, we provide a few salient examples on pollution control, resource utilization, minerals, and plants and animals, as well as the liability framework that enforces these ethics.

1. Land Pollution

Islamic law divides land into two categories: private and public.⁸⁶ The former consists of lands owned by individuals. The latter consists of land that is either: (1) undeveloped (*mūwāt*);⁸⁷ (2) subject to trusts or endowments

84. *Id.* at 163. Consider the following prophetic statements: (i) “When we stopped at a halt, we did not say our prayers until we had taken the burdens off our camels’ backs and attended to their needs.” and (ii) “We were on a journey with the apostle of God and he left us for a while. During his absence, we saw a bird called *ḥummārah* with its two young and we took the young ones. The mother-bird was circling above us in the air, beating its wings in grief, when the Prophet came back and said, ‘Who has hurt the feelings of this bird by taking its young? Return them to her.’” BASHEER AHMAD MASRI, ANIMAL WELFARE IN ISLAM 55, ns. 60, 62 (2007). The bird described in this *ḥadīth*, the *ḥummārah*, refers to the red-headed sparrow, *ammomanes deserti*, more commonly known as the Desert Lark. See generally CH PELLAT, ENCYCLOPEDIA OF ISLAM (P. Bearman et. al. eds., 2014), available at [http://www.iucnredlist.org/details/22717254/0](http://referenceworks.brillonline.com/entries/encyclopaedia-of-islam-2/ibn-lisa-n-al-hummara-SIM_3271?s.num=0&s.q=Ibn+Lisān+al-Ḥummara; BirdLife International, Ammonanes deserti, THE IUCN RED LIST OF THREATENED SPECIES (2013), <a href=).

85. For example, consider the *ḥadīth*: “The Earth has been created for me as a mosque and as a means of purification.” *Saḥīḥ al-Bukhārī: the Translation of the meanings of Saḥīḥ al-Bukhārī*, 1:331 (M. M. Khan, ed. and trans.) (1997). To this point, “[t]o declare the whole earth not only pure in itself but also purifying of that which it touches is to elevate it both materially and symbolically.” Haq, *supra* note 73, at 162.

86. AHMAD, *supra* note 72, at 81.

87. Undeveloped lands are neither settled by humans nor cultivated, i.e. rough grazing land and wilderness areas. Yasin Dutton, *Natural Resources in Islam*, in ISLAM AND ECOLOGY 51, 52 (Fazlun Khalid & Joanne

(*awqāf*);⁸⁸ or (3) owned by the government.⁸⁹ A person who pollutes any land is liable for the damage caused under rules akin to common law nuisance.⁹⁰ The Sunnah provides primary sources that evidence this effect, in which the Prophet Muhammad⁹¹ forbade his followers from polluting rivers, stagnant water, roads, and areas used as shade.⁹² Even during times of war, classical Islamic military jurisprudence provides that sustainability must be accorded to the environment by there being “[n]o destruction of trees, crops, livestock or farmland.”⁹³

Islamic law deals with hazardous activities by first assessing whether the act itself is permitted, often deeming impropriety in dealing with hazardous materials to give rise to liability for damage, including to the person’s own land.⁹⁴ When damage is caused by dangerous activities that are lawful and properly conducted, some jurists hold that the landowner must have received notice of the danger on his or her property.⁹⁵ Others, namely the Hanbalis, hold that such notice is not a necessary condition to liability and that, even if the dangerous activity is permitted and properly conducted, the owner of the land is still liable. This parallels common law strict liability.⁹⁶ This latter minority view suits instances where environmental damage is harder to observe than traditional pollution.⁹⁷

O’Brien eds., 1992); Haq, *supra* note 73, at 169 (“The *Hidaya* [an early Hanafi manual of law] contains and extensive ‘Book on the Cultivation of Waste Lands’ with sections on the definition of *mawat*, the rights of cultivating it, the treatment of adjacent territories, the status of adjacent territories, water courses in *mawat*, matters related to aqueducts running through the *mawat*, and soon. There is a large section here on waters . . .”).

88. For an introduction on trusts in Islamic law, see Muhammad Zubair Abbasi, *The Classical Islamic Law of Waqf: A Concise Introduction*, 26 ARAB L.Q. 121, 121-53 (2012); see also Monica Gaudiosi, *The Influence of the Islamic Law of Waqf on the Development of the Trust in England: The Case of Merton College*, 136 U. PA. L. REV. 1231, 1231-61 (1988).

89. AHMAD, *supra* note 72, at 81.

90. *Id.* at 85 (“Occurrence of damage is a condition for liability or for payment of compensation. This contrasts with the common law trespass per se, or technical offenses under United States statutory law.” (footnote omitted)).

91. See *supra*, note 9.

92. IBN MĀJĀH AL-QAZWĪNĪ, ABŪ ‘ABDULLĀH MUḤAMMAD IBN YAZĪD, SUNĀN IBN MAJĀH, VOL. 1 (N. al-Khattab, trans. 2007), *Ḥadīth* No. 328, at 282.

93. See generally Al-Āthir al-Jazari, ‘Ali ibn (d. 1233 CE), *Al Kāmil fr al-Tārkh (The Complete History)* (Dar Sader; Beirut, 1995), vol. 3, 227.

94. AHMAD, *supra* note 72, at 82.

95. *Id.* at 83.

96. *Id.* at 84.

97. *Id.* at 85-86 (“Today, people may inflict incurable harm to others or unleash irreversible injury on the environment without the victims knowing this for a number of years. Both the vastness of areas and potential victims as well as the intensity of damage make the requirement of notice as a condition for liability, as reasoned by majority of [classical] jurists, completely inappropriate or inapplicable as a basis of liability for modern environmental regulation.”).

Muslim scholars also carefully regulated built environments, and addressed in detail the manner in which windows and doors,⁹⁸ walls,⁹⁹ and rights of way¹⁰⁰ should be constructed and utilized. The goals of such laws were to protect privacy and modesty as well as to limit auditory, olfactory,¹⁰¹ and visual damage,¹⁰² in addition to harm to life and property generally.¹⁰³ The historically significant Ottoman Code (*Majallah*) catalogued notions of what would be termed property and industrial zoning today.¹⁰⁴ The foregoing rulings were constructed with prevailing custom (*urf*) and the law's purposes in mind (*al-Maqāṣid*) and demonstrate the importance of an individual landowner's broad usufruct rights of property she or he owns and where she or he resides, providing that such use neither injures land (whether his or her own or that of another) nor harms community members.¹⁰⁵ These rules were historically enforced under the jurisdiction of the *Muhtasib*, a market inspector of sorts, discussed in further detail below.

2. Water Pollution

Unlike land, ownership of water resources is strongly curtailed and individual use is subject to highly restrictive standards.¹⁰⁶ The Ottoman *Majallah* provides the community the right to use water, even if found on private property.¹⁰⁷ This follows in concept if not historical practice, from the *hadīth* that

98. Akel Kahera & Omar Benmira, *Damages in Islamic Law: Maghribi Muftis and the Built Environment (9th-15th Centuries C.E.)*, 5 ISLAMIC L. AND SOC'Y 131, 144-46 (1998).

99. *Id.* at 142-44.

100. *Id.* at 147-50.

101. *See id.* at 151 (discussing a case in which humidity and smell from a toilet of one home was affecting that of another).

102. *See id.* at 154-57.

103. A Blacksmith, for instance, had to erect a screen between his smith and the street to prevent sparks from flying onto the street. *See* al-Sunāmī, 'Umar bin Muḥammad (d. 1333 CE), *Kitāb Niṣāb al-Īhtisāb (Book of the Minimum Obligation in Regards to Ḥisba)* in M.I. Dien, *THEORY AND PRACTICE OF MARKET LAW IN MEDIEVAL ISLAM: A STUDY OF KITĀB NIṢĀB AL-ĪHTISĀB* 104 (M.I. Dien ed., 1997) (stating: "Red-hot splinters of iron may kill, blind, burn clothing, cause a death of a riding animal, and so on. Should any of these things happen, the blacksmith is liable for damages.").

104. *See, e.g., Al Majalla al Ahkam al Adaliyyah (The Ottoman Court's Manual)*, available at <http://www.kantakji.com/fiqh/Files/Finance/N252.pdf> ("A forge or a mill is erected adjacent to a house. The house is weakened by the hammering from the forge, or the turning of the mill wheel; or it becomes impossible for the owner of such house to dwell therein by reason of the great quantity of smoke given off by a furnace or a linseed oil factory, erected in close proximity thereto. These acts amount to great injury, which must be removed.").

105. *Id.* art. 1200 (providing various examples of industrial prohibitions/zoning issues such as preventing the construction of a forge, mill, or rubbish heap, i.e. a dump, adjacent to a residential property, the protection of the right of light from the construction of tall buildings, and the prohibition of a cook shop, i.e. a restaurant, in a cloth merchants' market).

106. AHMAD, *supra* note 72, at 87-88.

107. *Al Majalla al Ahkam al Adaliyyah, supra* note 104, art. 1263.

reads “[t]hree things cannot be denied to anyone: water, pasture and fire.”¹⁰⁸ Even when individuals invest their own resources to cultivate a body of water or establish access to it, they most often gain a priority of usage rather than an exclusive right.¹⁰⁹ Further, private owners of land where ground water may be present are also liable for pollution of the water; Intent-based defenses are irrelevant.¹¹⁰ Pollution of water present on public lands is also prohibited and gives rise to liability.¹¹¹ Proper management of water and controls against its pollution are legally required. Islamic law instructs individuals not to waste water, even for uses as religiously significant as the mandated cleansing/ablution prior to prayer (*wudū*).¹¹²

Islamic law first categorizes water, not only for the purposes of its consumption for thirst by the living, but also for its cleansing properties—both physical and spiritual.¹¹³ Islamic law allows natural bodies of water, rainwater, snow, hail, and seawater to be unrestricted and free (*muṭlaq*), even if they become altered by natural causes.¹¹⁴ When impurities mix and overwhelm it, water is deemed polluted and legally impure.¹¹⁵ Water sources such as rivers, lakes, streams, seas, oceans, and almost all wells¹¹⁶ are deemed pure unless contami-

108. IBN MĀJAH, *supra* note 92, *Ḥadīth* No. 2473, at 415. Prophetic statement illustrates the significance of public access to water and its intelligent usage: “Among the three types of people with whom God on the day of Resurrection will exchange no words, nor will He look at them . . . is the one who possesses an excess of water but withholds it from others. To him God will say, Today I shall withhold from you my grace as you withheld from others the superfluity of what you had not created yourself.” *Saḥīḥ al-Bukhārī*, *supra* note 85, at 3:557.

109. AHMAD, *supra* note 72, at 88.

110. *Id.* at 91.

111. *Id.*

112. IBN MĀJAH, *supra* note 92, *Ḥadīth* Nos. 424 and 425, at 324: “The Messenger of Allah saw a man performing ablution, and he said: ‘Do not be extravagant, do not be extravagant (in using water)’”; “. . . the Messenger of Allah passed by Sa’d [a Companion of the Prophet] when he said: ‘What is this extravagance? He said: ‘Can there be any extravagance in ablution?’ He said: ‘Yes, even if you are on the bank of a flowing river.’” *Qur’an* 7:31.

113. See Haq, *supra* note 73, at 168 (“Among the three types of people with whom God on the Day of Resurrection will exchange no words, nor will He look at them is the one who possesses an excess of water but withholds it from others. To him God will say, ‘Today I shall withhold from you my grace as you withheld from others the superfluity of what you had not created yourself.’”). The *Hidaya* manual of Hanafi law also presents systematic discussions of water rights and resources and their maintenance. See *id.* at 168 (citing *Hidaya*).

114. See *Qur’an* 25:48 (“We sent down purifying water from the sky”); at-Tirmidhī, Abū ‘Īsa ibn Sawrah ibn Mūsa aḍ-Ḍaḥḥāk as-Sulamī aḍ-Ḍarr al-Būghī, *Sunān at-Tirmidhī (Jāmi’ at-Tirmidhī)* in *English Translation of Jāmi’ at-Tirmidhī*, Vol. 1 (Abu Khaliyl trans., 2007); Chapter 1 *Kitāb at-Taḥārah ‘an Rasūl-illāh, salAllāhu ‘alayhi wassallam (The Book of Purification from God’s Messenger, peace and blessings of God be upon him)*, (*Ḥadīth* No. 69, at 95—“Abū Hurairah narrated . . . ‘O Messenger of Allāh! We sail the seas, and we only carry a little water with us. If we use it for *Wudh’* [ablution] then we will go thirsty. So shall we perform *Wudh’* from the (water of the) sea? Allāh’s Messenger, peace and blessings of God be upon him said: ‘Its water is pure and its dead . . .’” (emphasis added)).

115. AHMAD, *supra* note 72, at 89.

116. Other than the well of Zamzam. See Nour al-Zahiri and Rita Khounghanian, *A Comparative Study between the Chemical Composition of Potable Water and Zamzam Water in Saudi Arabia*, available at <http://faculty.ksu.edu.sa/khounghanian/Interns%20Seminar/Zamzam-waterpublicationarticle.pdf> (last visited Feb. 20, 2015).

nated to such an extent that their physical and chemical nature has been overwhelmed.¹¹⁷

3. Air Pollution

Classical Muslim jurists addressed the release of pollutants into the air in a manner consistent with their historical context. After emissions of numerous new air pollutants, some suggest extending classical Islamic jurisprudence.¹¹⁸ This is readily performed, given the rationale of the regulation of land and water and the importance of clean air to the preservation of life and property.¹¹⁹ Contemporary interpretations of Islamic law treat air pollutants in a similar fashion: They prohibit pesticides and limit car exhaust, toxins, and noise—especially near residential areas, water sources, and animal habitats.¹²⁰

4. Resource Conservation

Islamic law divides land conservation into two broad categories. One is termed *al-haram*,¹²¹ literally inviolable or sacred, and refers to Mecca and certain parts of Medina. Both are cities in present-day Saudi Arabia and represent the two most sacred sites for Muslims. The second category constitutes all other land and is termed *hima* (inviolable zone) in Arabic; these are undeveloped (*mūwāt*) lands reserved for the purposes of a public good.¹²² With regard to *haram* lands, it has been stated that “[both cities] are sanctuaries for human beings, flora and fauna, none of which may be violated in the zone.”¹²³

117. AHMAD, *supra* note 72, at 89. For a general overview of water rights under Islamic law, see Dante A. Caponera, *Ownership and transfer of water and land in Islam*, in WATER MANAGEMENT IN ISLAM 94, 94-102 (Naser I. Faruqi, Asit K. Biswas, & Murad J. Bino eds., United Nations Univ. Press 2001).

118. See AHMAD, *supra* note 72, at 95-97.

119. See *id.* at 94-98.

120. See Roughton, *supra* note 68, at 114-15 (citing Othman Abd-ar-Rahman & Llewellyn, *The Basis for a Discipline of Islamic Environmental Law* in ISLAM AND ECOLOGY: A BESTOWED TRUST, eds. Foltz, R.C., Denny, F.M. and Baharuddin, A. (Harvard Univ. Press, 2003); ABUBAKR AHMED BAGADER ET AL., ENVIRONMENTAL PROTECTION IN ISLAM 7, 13-14 (Abdul Rahman trans., IUCN, Gland, Switzerland and Cambridge, U.K., 2d ed. 1994); G.O. Olaogun, *Islam and Issues of Environmental Disasters*, in RELIGION AND THE ENVIRONMENT 104, 108 (Gbola Aderibigbe & Deji Ayegboyin eds., 2000); S. Akorede Popoola, *Mosque Siting and Environmental Issues: A Bird's Eye View*, in RELIGION AND THE ENVIRONMENT 80, 85 (Gbola Aderibigbe & Deji Ayegboyin eds., 2000).

121. For clarity, the term *haram*, or sacred, used here differs from the word *harām*, or prohibited, discussed earlier. The latter word contains an additional letter (an *alif*), indicated by the second letter ‘ā’ therein, that the former lacks. The two words are related but not the same.

122. See *supra* note 87 and accompanying text on undeveloped land.

123. AHMAD, *supra* note 72, at 99 (citing a *hadith*: “It [Mecca] is sacred by virtue of the sanctity conferred on it by God until the day of resurrection. Its thorn trees shall not be cut down, its game shall not be disturbed, the objects lost within it shall be picked up only by one who will announce them, and its fresh herbage shall not be cut . . .” (internal citation omitted)).

Hima land began as a pre-Islamic institution whereby a powerful individual would declare a fertile land forbidden for public access in an exploitive act of land confiscation.¹²⁴ The Prophet Muhammad modified this practice such that it became a mechanism exercisable only by governmental authority to ensure sustainable land management, the creation of wildlife reserves, afforestation, and plant and ecosystem preservation.¹²⁵ To ensure proper employment of *hima* land, Islamic law imposes certain conditions upon its declaration. The Maliki school of jurisprudence (*madhhab*), for example, requires that: (1) there is a public need and benefit to the community for such *hima*; (2) the area is proportional in size to the ecological concern at hand; and (3) the land so declared is not built upon, commercialized, or cultivated for financial gain.¹²⁶ Human activity is restricted, as it is in *al-haram* (sacred) lands: hunting, fishing, felling of trees, and cutting of vegetation are prohibited.¹²⁷ Early in Islamic legal history, persons were appointed in charge of *hima* lands to ensure they were utilized for the purposes for which they were set aside by government action.¹²⁸

5. Minerals

Islamic law begins its treatment of minerals by dividing them into those that are openly seen and those that are concealed.¹²⁹ Concealed deposits include those that require extraction to derive a finished product. Open deposits are considered common property.¹³⁰ Governments cannot assign them to particular individuals.¹³¹ Among Muslim scholars, there are two opinions as to whether minerals on private land may be assigned to or exploited by the landowner. Even among those who contend that ownership may be assigned, some disagree as to whether such assignment conveys full ownership or only the right of usufruct during the landowner's life.¹³² The other opinion contends that because mineral deposits are provided naturally and without any effort on the part of the landowner, they cannot necessarily be owned individually. However, this view does hold that if someone develops land and identifies the mineral deposit she or he is considered its owner and has sole rights thereto.¹³³

124. Haq, *supra* note 73, at 165-66.

125. *Id.* at 166-67.

126. *See* Dutton, *supra* note 87, at 54-55.

127. AHMAD, *supra* note 72, at 103.

128. *Id.* at 101.

129. Dutton, *supra* note 87, at 66; *see also* WALIED M. H. EL-MALIK, MINERAL INVESTMENT UNDER THE SHARI'A LAW (Graham & Trotman, 1993); Mike Bunter, *Sovereignty over Minerals and Petroleum in the Islamic (Shariah) Law and the Question of Ownership*, OIL, 4 GAS & ENERGY LAW INTELLIGENCE 1, 1-22 (2006).

130. Dutton, *supra* note 87, at 66.

131. *Id.*

132. *Id.*

133. *Id.*

6. Plants and Animals

Consistent with the religious perspective described above, Islamic law requires humans to maintain a dignified relationship with plants and animals.¹³⁴ Humans may enjoy certain benefits of nature only within a set of parameters deemed respectful of the rights of all to maintain “environmental equilibrium” and fulfill their communal obligation under Islamic law.¹³⁵

Numerous prophetic teachings lay the foundations for a high respect for plant life—so much so that Islamic law is understood to consider wild vegetation common property¹³⁶ and is understood to recommend forestation.¹³⁷ There are rulings relating to the prohibition of causing unnecessary damage to plant life where necessity or justification is defined narrowly. Even in times of war and during warfare activity, Islamic rules on military conduct provide protection against environmental damage and needless deforestation, preserving the natural capital of the environment.¹³⁸ Such rulings ought to be considered in construction projects financed by facilities from Islamic financial institutions, in light of classical Islamic jurisprudence. While the texts that speak to forestation probably fall short of establishing a legal obligation per se, they could be used to readily establish a recommendation. Insufficient plant life or air pollutants may cause enough harm to give rise to an obligation that would likely fall upon the community to fulfill.¹³⁹

Islamic jurisprudential literature richly advances the rights and interests of animals.¹⁴⁰ Many Qur'an verses and *ḥadīth* provide guidance as to the human

134. On the significance of animals, consider the following text: “Treat your sheep well, make sound their resting place, and pray in their environs, for they are amongst the animals of the Garden [i.e., Paradise in the Hereafter].” MUḤAMMAD IBN AL-ḤASAN ASH-SHAYBĀNĪ, *THE MUWAṬṬĀ OF IMAM MUḤAMMAD (THE MUWAṬṬĀ OF IMAM MĀLIK IBN ANAS (d. 795 CE) IN THE NARRATION OF IMAM MUḤAMMAD IBN AL-ḤASAN ASH-SHAYBĀNĪ)* 104 (Mohammed Abdurrahman, Abdassamad Clarke, and Dr. Asadullah Yate trans., 2010).

135. AHMAD, *supra* note 72, at 108.

136. *Id.* at 111.

137. *Id.*

138. In sending his armies to *ash-Shām* (Syria), the first Caliph, Abū Bakr aṣ-Ṣadrq, is reported to have provided the following instructions: “I advise you ten things . . . [which commands include:] Do not cut down fruit-bearing trees. Do not destroy an inhabited place. Do not slaughter sheep or camels except for food. Do not burn bees and do not scatter them.” IMAM MĀLIK IBN ANAS, *IBN MĀLIK IBN ABĪ ĀMIR AL-ASBAḤĪ (d.795 CE), AL-MUWAṬṬĀ OF IMAM MALIK IBN ANAS: THE FIRST FORMULATION OF ISLAMIC LAW* Book 21 (*Jihād*), No. 21.3.10 (Aisha Abdurrahman Bewley trans., 1989). Note: For clarification purposes, the title of Caliph (*Khalīf*) is one given to the Head of State within the Islamic Empire or community (*ummah*). The term literally means “successor,” that is, a successor to the Prophet Muhammad in an administrative capacity. The first four Caliphs after the Prophet would be known later in history as *Khulfa’i Rashidm*—the Rashudeen Caliphs (the “Rightly Guided Successors”), 632–61 CE.

139. KAMALI, *supra* note 8, at 415.

140. See TLILI, *supra* note 70, at 50-51 (in the Tenth Century CE, an anonymous Islamic scholarly group based in Basra, Iraq, known only as the ‘Brotherhood of Purity’ (*Ikhwān aṣ-Ṣafā’*) published an epistle entitled “The Case of the Animals versus Man before the King of the Jinn,” a fictional legal suit in which animals take humanity as a whole to the King of the Jinn’s court on account of their role in the world serving humankind. The animals make several arguments that successfully refute an anthropocentric reading of the Qur’an, demonstrat-

treatment of and interaction with animal life.¹⁴¹ Seven out of the 114 chapters of the Qur'an are titled after animals, including the longest one, *al-Baqara* (The Cow).¹⁴² Rules are derived from these chapters requiring good care and prohibiting cruelty,¹⁴³ including during times of war.¹⁴⁴ Muslim jurists have held the owner of an animal—in some respects it being considered an individual¹⁴⁵ and not simply a species—liable for its well-being.¹⁴⁶ One of the great classical Qur'anic exegesis (*tafsīr*) writers and Maliki jurists, the Andalusian al-Qurṭubī (d. 1273 CE) recognized that humans may use beasts of burden for transportation purposes but must consider the weight placed on an animal used for transport,

ing the egalitarian nature of the Qur'anic worldview. *Jinn* are entities akin to humans and angels created from flameless or “scorchless fire.” See *Qur'an* 15:27; AMIRA EL-ZEIN, *ISLAM, ARABS, AND THE INTELLIGENT WORLD OF THE JINN* (2009).

141. See, e.g., MASRI, *supra* note 84, at 36 (“Do not clip the forelock of a horse, for a decency is attached to its forelock; nor its mane, for it protects the horse; nor its tail, for it is its fly trap . . . Do not set up living creatures as a target [for mere sport].”); *Ṣaḥīḥ al-Bukhārī*, *supra* note 85 at 3:559; Haq, *supra* note 73, at 169-70 (“The one to whom his horse is a source of reward is the one who keeps in the path of God and ties it by a long rope in a pasture or a garden. Such a person will get a reward equal to what the horse’s long rope allows it to eat in the pasture or the garden. And if the horse breaks its rope and crosses one or two hills, then all marks of its hoofs and its dung will be counted as good deeds for its owner. And if it passes by a river and drinks from it, then that will also be regarded as a good deed on the part of its owner . . . [similarly, w]hen you travel in a fertile country, give the camels their due from the ground, and when you travel in time of drought make them go quickly. When you encamp at night keep away from the roads, for they are where beasts pass and are the resort of insects at night . . . [also d]o not treat the back of your animals as pulpits for God the most high has made them subject to you only to convey you to a place which you could not otherwise reach without much difficulty.”); AL-SHAYBĀNĪ, *supra* note 134, at 104 (“Once a Companion (i.e. a contemporary) of the Prophet [Muhammad] was seen crumbling up bread for some ants with the words, ‘They are our neighbors and have rights over us.’”).

142. TLILI, *supra* note 70, at 71.

143. See AHMAD, *supra* note 72, at 110, quoting Izz al-Dīn ‘Abdul Salām al-Sulamī (d. 1261 CE), *Qawā'id al-Aḥkām fī Maṣāliḥ al-Anām* 11 (stating “[t]he rights of livestock and animals with regard to their treatment by man: These are that he spend on them the provision that their kind require, even if they have aged or sickened such that no benefit comes from them; that he not burden them beyond what they can bear; that he not put them together with anything by which they would be injured, whether of their own kind or other species, and whether by breaking their bones or butting or wounding that he slaughter the with kindness if he slaughters them, and neither flay their skins nor break their bones until their lives have passed away; that he not slaughter their young within their sight; that he set them apart individually that he make comfortable their resting places and watering places; that he put their males and females together during their mating seasons’ that he not discard those which he takes in hunting; and neither shoot them with anything that breaks their bones nor bring about their destruction by any means that renders their meat unlawful to eat.”).

144. ABDULLAH H. AL-KADI, *MAKKAH TO MADINAH: A PHOTOGRAPHIC JOURNEY OF THE HIRAH ROUTE* 164 (2013) (“It is related in the *Sīrah* literature [biographies of the Prophet Muhammad] that as the ten thousand strong Muslim army traveled through the narrow valley of Al-‘Arj on their way to the opening of Makkah in 630 CE/8 AH, the Prophet, may the peace and blessings of God be upon him, noticed a dog nursing her pups in the middle of a narrow section of the road. The Prophet, may the peace and blessings of God be upon him, assigned one of his men to guard her as the army made its way through the valley so she would not be disturbed.”).

145. See Haq, *supra* note 73, at 170 (“Each animal is to be considered as an individual since the tradition speaks of animals being given proper names . . .”).

146. Some argue that the root of biomedical research and agribusiness problems is the approach in which animals are considered commodities. See *The Guardian Campaign—In Defense of Animals*, <http://www.idausa.org/campaigns/the-guardian-campaign> (last visited Feb. 20, 2015).

with potential implications for humans (both positive and negative) in the hereafter based on conduct.¹⁴⁷ If “owners are unable to provide for their animals, Muslim jurists stipulate that they should sell them, let them go free so that they may find food and shelter, or slaughter them if eating their flesh is permissible.”¹⁴⁸ Classical medieval and contemporary Qur’anic commentators speak of animals as possessing knowledge of God’s existence, glorifying and remembering The Lawgiver in their own ways.¹⁴⁹

Islamic law has very detailed rules about the immediate act of animal slaughter.¹⁵⁰ Even more compelling are the rules governing the context: Slaughterers must not allow the animal to witness the slaughter of another, keep animals waiting for their slaughter, or sharpen a knife in their presence.¹⁵¹ Rules govern animals’ treatment following slaughter as well.¹⁵² Some of these rules are relevant to meat production today.¹⁵³ Hunting purely for sport and inciting

147. See TLILI, *supra* note 70, at 86 (*Hadith* stating, “If you travel at the time of abundance allow the camels to have their share from the land [i.e. to graze], but if you travel at the time of drought hasten to your destination.”); Al-Qurtūbī also reports an event where ‘Umar ibn al-Khaṭṭāb, the second Caliph, “was seen beating a man for overloading his camel, thus suggesting perhaps that, in addition to being morally wrong, mistreating animals of burden in violation of Islamic law is an act punishable in this world as well, and not only in the next.” *Id.*

148. Haq, *supra* note 73, at 170-71.

149. For more conservative views, see generally MUHAMMAD TAQI USMANI, *THE ISLAMIC LAWS OF ANIMAL SLAUGHTER: A DISCUSSION ON THE ISLAMIC LAWS FOR SLAUGHTERING ANIMALS & A SURVEY OF MODERN-DAY SLAUGHTERING METHODS* (Amir A. Toft trans., 2006).

150. TLILI, *supra* note 70, at 131 (“al-Ṭabarī [d. 923 CE] concedes that, unlike disbelievers, livestock also intuitively know their Lord and obey Him. Although al-Rāzī appears to be less certain of livestock’s possession of this type of knowledge, he still cites opinions to the same effect. For example, he quotes Muqātil [ibn Sulaymān al-Balkhī] (d. 150 [AH]/767 CE), who says, “livestock know their Lord and remember Him . . .”).

151. See, e.g., DENYS JOHNSON-DAVIES, *THE ISLAND OF ANIMALS* (Univ. of Texas Press, 1994) (*hadith*, “Do you wish to slaughter the animal twice, once by sharpening your blade in front of it and another time by cutting its throat?”); MASRI, *supra* note 84, at 50 (the Prophet [Muhammad] forbade all living creatures to be slaughtered while tied up and bound); Haq, *supra* note 73, 172-73 (the jurist Burhan ad-Dm al-Farghanī Marghinānī, writes “It is abominable first to throw the animal down on its side, and then to sharpen the knife, for it is related that the Prophet [Muhammad] once observing a man who had done so, said to him, ‘How many deaths do you intend that this animal should die? Why did you not sharpen your knife before you threw it down?’ It is abominable to let the knife reach the spinal marrow, or to cut off the head of the animal. The reasons . . . are FIRST, because the Prophet has forbidden this, and SECONDLY, because it unnecessarily augments the pain of the animal, which is prohibited in our LAW. In short, everything which unnecessarily augments the pain of the animal is abominable . . . IT is abominable to seize an animal destined for slaughter by the feet, and drag it . . . IT is abominable to break the neck of the animal whilst it is in the struggle of death.” (emphasis in original)).

152. MASRI, *supra* note 84, at 35 (“[It] was forbidden by the Holy Prophet [Muhammad] to molest the carcass in any way; for example, by breaking its neck, skinning, or slicing off any of its parts until the body was dead cold . . . time should be given for the rigor mortis to set in before cutting.”).

153. In light of genetic engineering of animals as well as plants, consider the possible implication of *Qur’an* 4:119, which says “Moreover, I [referring to the speech of Satan] shall most surely, fill them with fancies. Thus, I shall command them: And they shall slit the ears of cattle [in false ritual]. And I shall command them: And they shall seek to change the creation of God.” *Qur’an* 4:119.

animals to fight one another are strictly prohibited, and carnivores cannot be consumed or killed absent danger to life or property.¹⁵⁴

7. Liability and Sanctions

This discussion has found Islamic liability for infractions against nature. Most of these violations fall under the rubric of civil liability, but Islamic criminal law governs some violations, such as those of the *al-ḥaram* (i.e. sacred).¹⁵⁵ Persons found guilty of civil violations are liable for damages, with a goal to restore the damaged object to its original condition.¹⁵⁶ Harm to non-fungible items generally requires monetary compensation, such as the cleaning of a site where toxic substances have been dumped.¹⁵⁷

Hisbah refers to an administration monitoring the implementation of certain laws and ethical practices generally in the public realm.¹⁵⁸ An officer of this institution, *muḥtasib*, was historically tasked with receipt and investigation of primarily public complaints and would enforce in certain instances.¹⁵⁹ Claims against the state may also be enforced by the *hisbah*, such as those relating to bribery or misappropriation of public funds.¹⁶⁰ Adjudication, however, is not within the scope of this authority unless prescribed in unambiguous terms.¹⁶¹

Examples of areas that an officer of the *hisbah*, a *muḥtasib*, would regulate include weights used in merchant scales, parcel standardization, anti-competitive

154. AHMAD, *supra* note 72, at 110.

155. Punishments for such violations would be discretionary (*ta'zīr*), in distinction to others that are fixed by the texts of the Shari'ah. See AL-SHAYKH AL-ISLAM IBN TAYMIYYA, PUBLIC DUTIES IN ISLAM: THE INSTITUTION OF THE *HISBA* 62 (Muhtar Holland trans., 1983).

156. AHMAD, *supra* note 72, at 119.

157. In the case of our proposed green *şukūk* offering, damages caused would likely be governed by the laws mutually agreed upon the parties or the laws governing the underlying assets.

158. Hamid Hosseini, *Understanding the Market Mechanism before Adam Smith: Economic Thought in Medieval Islam*, 27 HISTORY OF POLITICAL ECONOMY 539, 539-61 (1995); see IBN TAYMIYYA, *supra* note 155; Mohammad Saeed et. al., *International Marketing Ethics from an Islamic Perspective: A Value-Maximization Approach*, 32 J. BUS. ETHICS 127, 127-42 (2001). The word literally means "calculation" or "verification." YASSINE ESSID, A CRITIQUE OF THE ORIGINS OF ISLAMIC ECONOMIC THOUGHT: ISLAMIC HISTORY AND CIVILIZATION VOLUME 11 109-73 (1995).

159. MUHAMMAD AKRAM KHAN, *Appendix: Al-Hisba and the Islamic Economy in al-Shaykh al-Islam Ibn Taymiyya*, in PUBLIC DUTIES IN ISLAM: THE INSTITUTION OF THE *HISBA* 137 (Muhtar Holland trans., 1983) (officers were usually persons of "a high degree of integrity, insight, reverence and social status . . . [and] scholar[s] of the Shari'ah with a high degree of in-depth knowledge in the social customs and mores."). Although the office was first mentioned between 754 and 775 CE, this office was first referred to as '*Amil al-Sūq* (Market Officer) and in Islamic Spain as '*Şāhib al-Sūq*' (Holder of the Market). 'ABD AL-RAḤMĀN BIN NAṢR AL-SHAYZARĪ (d. 1193 CE), *Nihāyat al-Rutba fr̄ Ṭalab al-Ḥisba (The Utmost Authority in the Pursuit of Hisba)* in THE BOOK OF THE ISLAMIC MARKET INSPECTOR 2-11 (Ronald Buckley trans., 1999). In Christian Spain, the role of '*Şāhib al-Sūq* continued as *El Señor del Zoco*. See generally PEDRO CHALMETA, *EL ZOCO MEDIEVAL: CONTRIBUCIÓN AL ESTUDIO DE LA HISTORIA DEL MERCADO* (2010); For a general overview See GERALD HAWTING, *THE FIRST DYNASTY OF ISLAM: THE Umayyad Caliphate AD 661-750* (2000); M.A SHABAN, *THE 'ABBASID REVOLUTION* (1979).

160. KHAN, *supra* note 159, at 147.

161. AHMAD, *supra* note 72, at 123.

and monopolistic practices, and the quality of circulated currency.¹⁶² A *muhtasib* could also establish consumer protection professional rules for butchers, veterinarians, money changers, milk and spice sellers, cloth merchants and tailors, and grain and flour merchants.¹⁶³ Many of these rules had significant environmental implications, i.e. for noise control, the release of pollutants, health and safety, and sustainable food practices.¹⁶⁴ The *hisbah* office “paid special heed to various municipal services especially [hygienic] conditions in the town . . . [and] look[ed] into the entire municipal administration such as street lighting, removal of garbage, architectural designs of buildings, water supply and antipollution sanctions.”¹⁶⁵ This attention also extended to vegetation and animal life.¹⁶⁶ Certain limits on private real property rights were also enforced by a *muhtasib*. Persons could not undertake construction projects obstructing their neighbors’ light or air, and commercial facilities could not be built in residential zones because of pollution.¹⁶⁷ Businesses and private individuals were not permitted to build extensions that encroached on public roads and walkways within the city.¹⁶⁸ Such rules were often designed and enforced under the rubric of the legal maxim: “There shall be no harm, nor the reciprocation of harm.”¹⁶⁹

While the office of the *muhtasib* stood historically as a governmental institution, private individuals could undertake functions voluntarily as a non-

162. AL-SHAYZARĪ, *supra* note 159, at 43-45.

163. *Id.* at 46, 52-53, 62-63, 78, 81-83, 87-88, 94-96, 100-01; al-Sunāmī, ‘Umar bin Muḥammad (d. 1333 CE), *Kitāb Niṣāb al-Iḥtisāb (Book of the Minimum Obligation in Regards to Ḥisba)* in *THEORY AND PRACTICE OF MARKET LAW IN MEDIEVAL ISLAM: A STUDY OF KITĀB NIṢĀB AL-IḤTISĀB* 104 (Mawil Dien trans., 1997).

164. See, e.g., Abbas Hamadani, *The Muhtasib as Guardian of Public Morality in the Medieval Islamic City*, *DOMES: DIGEST OF MIDDLE EAST STUDIES*, Spring 2008, at 92; see also al-Sunāmī, *supra* note 103.

165. KHAN, *supra* note 159, at 141 (“Obviously need for a smooth availability of these services on an efficient scale has only increased these days.”).

166. See AL-SHAYZARĪ, *supra* note 159, at 38 (stating “[T]he *muhtasib* should order them [merchants with inventory] to take the loads off their animals. This is because the loads injure and hurt the animals when they stop walking, and the Prophet forbade the harming of all animals apart from those that are eaten.”).

167. See Kahera & Benmira, *supra* note 98, at 143; c.f. Spahic Omer, *The Concepts of God, Man, and the Environment in Islam: Implications for Islamic Architecture*, 2 *J. OF ISLAMIC ARCHITECTURE* 7 (2012) (relating Islamic architecture as worship in function and use of materials because “[natural b]uilding materials . . . [previously] belonged to the flawlessly executed universal web singing God’s praises and celebrating His glory. Although they have been removed from their original contexts, the building materials from nature are still utilized for some other perfectly fitting goals related to man, thereby causing their intrinsic ‘holy pursuit’ to remain unaffected or perturbed . . . Before they are used in buildings, building materials from nature worship God in unison with the rest of nature’s components. It is thus only fair that they are used in those buildings where God is worshipped as well.”).

168. al-Sunāmī, *supra* note 103, at 121-26.

169. On this and other legal maxims, see AMIAD MOHAMMED, *MUSLIMS IN NON-MUSLIM LANDS: A LEGAL STUDY WITH APPLICATIONS* 118-24 (2013); Omer, *supra* note 167, at 7 (based on this maxim, it is held that “built environments must be sustainable, that is, that they do not generate any harm to either people or their natural surroundings.”). See generally BASHIR A. KAZIMEE, *WASHINGTON STATE UNIVERSITY, HERITAGE AND SUSTAINABILITY IN THE ISLAMIC BUILT ENVIRONMENT* (Bashir A. Kazimee ed., 2012).

government initiative.¹⁷⁰ There are important limitations to such an undertaking: A privately initiated *ḥisbah* activity may not compel compliance, award penalties, or receive formal complaints.¹⁷¹ Private implementation nevertheless provides the legal and historical basis for contemporary Islamic finance to further its *ḥisbah*-like functionality and support environmental consciousness.¹⁷² Similar to historical Islamic practice, the contemporary Islamic finance industry may construct bodies of its own to serve as alternate dispute resolution centers for Islamic institutions commit, under which the centers receive and review environmental complaints in a form of grievance mechanism.¹⁷³ Resolution of these complaints could even receive governmental enforcement, as in the case with arbitral awards under the New York Convention.¹⁷⁴ Islamic legal experts could, furthermore, undertake audit and review at transactional and institutional levels together with other relevant technical environmental and social impact experts. Working with professional independent environmental audit and review agencies would be crucial in supplementing the technical expertise required by Islamic financial institutions.

III. CONTEMPORARY ISLAMIC FINANCE

A. INTRODUCTION

Islamic finance and socially responsible investing (“SRI”)¹⁷⁵ parallel one another in many respects.¹⁷⁶ Perhaps most importantly, both are significant

170. See IBN TAYMIYYA, *IBN TAYMIYYA ON PUBLIC AND PRIVATE LAW IN ISLAM* (Omar A. Farrukh trans., 1st ed. 1966); AL-SHAYZARĪ, *SUPRA* NOTE 159, AT 149 (“TO HOLD IT AS A STRICT CONDITION THAT THE *MUḤTASIB* BE COMMISSIONED BY THE RULER IS AN ARBITRARY AND GROUNDLESS JUDGMENT.”).

171. AHMAD, *supra* note 72, at 124.

172. KHAN, *supra* note 159, at 144 (“The *muhtasibs*’ [officers] manuals describe him checking any transactions involving *riba*. . . The *muhtasib* [or *ḥisbah* officer] used to lay down forms of agreement permissible in the Shari’a and those that may involve *riba*.”).

173. See generally Camille Paldi, *The Dubai World Islamic Finance Arbitration Center and the Dubai World Islamic Finance Arbitration Center Jurisprudence Office as the Dispute Resolution Center and Mechanism for the Islamic Finance Industry: Issues and a Proposed Framework* (Aug. 2013) (unpublished M.A. dissertation, Durham Univ.).

174. Properly termed *The Convention on the Recognition and Enforcement of Foreign Arbitral Awards*, 330 UNTS 38; 21 UST 2517 (entered into force June 7, 1959). The New York Convention enables countries that are signatories and have ratified the convention into their domestic legislation to allow reciprocal enforcement of arbitral awards issued in other signatory jurisdictions (usually, with provisions for national courts to object enforcement on the grounds of public policy, among other rationales).

175. YOUR SRI, *Glossary*, YOURSRI.COM, https://yoursri.com/support/contact-us/yourSRI_Glossary.pdf (defining SRI as “a generic term covering any type of investment process that combines investors’ financial objectives with their concerns about environmental, social, and governance (ESG) issues.”); G. Forte & F. Miglietta, *A Comparison of Socially Responsible and Islamic Equity Investments*, J. MONEY, INV. & BANKING, May 2011, at 116, 118 (“[B]usiness ethicists have not reached a general consensus [on the definition of SRI, because] the world of ethical investments and definitions associated with it is greatly influenced by the cultures of various countries. While religious criteria were originally used, they have been supplanted at times by environmental strategies, anti-war projects, and human rights activism.”).

176. Salma Sairally, *Evaluating the ‘Social Responsibility’ of Islamic Finance: Learning From the Experiences of Socially Responsible Investment Funds*, 1 ADVANCES ISLAMIC ECON. & FIN. 279, 280 (2007) (stating, “Based on similar core values—such as individual responsibility, commitment to the social interest, promotion

growing market trends that limit the profit motive and are initiated from private sector conscience, i.e. “conscious capitalism.”¹⁷⁷ Their notions of what is ethical and how to go about implementing values differ in some ways but share much. Although the two might work together and learn from one another, active overlap and joint initiatives seem few and far between. Islamic finance can look to key principles of the Shari’ah as well as SRI themes in order to incorporate a greater focus on environmental impact. SRI might look to Islamic finance to learn about the ethical impact of risk sharing and asset-financier proximity, among other things.

The differences between Islamic finance and SRI begin with the religious basis of Islamic finance.¹⁷⁸ Islamic finance falls back upon the Shari’ah as its authoritative ethical and legal reference.¹⁷⁹ This immutable grounding creates a stable set of parameters for contemporary Islamic finance. SRI, on the other hand, does not use a single referent; there is wide variety of interpretation as to what is considered ethically and socially responsible.¹⁸⁰ Moreover, parties may change definitions of ethical norms.¹⁸¹ Muslim jurists at times interpret the Shari’ah in differing ways that affect the scope of permissible investment products and transaction structures, resulting in both challenges and flexibility. Contemporary

of human welfare, care for the environment, and concern for economic and social justice—Islamic finance has been promoted as a socially responsible paradigm rooted on religious tenets.”)

177. Dana Brakman Reiser & Steven A. Dean, *Hunting Stag with Fly Paper: A Hybrid Financial Instrument for Social Enterprise*, 54 B.C. L. REV. 1495, 1500 (2013) (“Social enterprise appears to be a growing trend. Efforts to blend business and philanthropy are widely reported in the media. Conferences, blogs, trade associations, and consultancies dedicated to the subject continue to spring up. Top business schools are even creating programs devoted specifically to the study of social enterprise.”).

178. Some academics place the origins of SRI in religion but note a separation. See generally RUSSEL SPARKES, RESPONSIBLE INVESTMENT 39-54 (Rory Sullivan & Craig Mackenzie eds., 2006). Other faith-based organizations have created investment programs based on their principles. The Interfaith Center on Corporate Responsibility (ICCR) has advanced and advocated SRI principles in representation of mainly Christian and Jewish investment organizations, primarily through shareholder activism across a portfolio of over \$100 billion in assets under management. See Interfaith Center on Corporate Responsibility, <http://www.iccr.org/about-iccr> (last visited Feb. 20, 2015).

179. Readers are reminded that rather than two or three categories of legal and ethical assessment (permitted, prohibited, and/or required), Islamic law presents five. *Supra* section I.B.

180. SRI funds do not always have a formal committee but usually rely on a set of guidelines that varies from fund to fund or manager to manager. See Irfan Ahmed, *Incorporating Socially Responsible Investing in Islamic Equity Investments* 31 (Aug. 6, 2009) (unpublished MSc thesis, Cass Business School) (on file with author); BENJAMIN J. RICHARDSON, SOCIALLY RESPONSIBLE INVESTMENT LAW: REGULATING THE UNSEEN POLLUTERS 2 (2008).

181. See Benjamin J. Richardson, *Putting Ethics into Environmental Law: Fiduciary Duties for Ethical Investment*, 46 OSGOODE HALL L. J. 243, 260 (2008); Reiser & Dean, *supra* note 176, at 1511 (New business organizational forms have been created in a number of U.S. states, such as the benefit corporation and the flexible purpose corporation. These new forms temper the goal—if not the duty—of profit maximization with an ethical purpose without being a not-for-profit entity. These entity forms suffer from the insecurity of a change to a for-profit business that may not be socially responsible. Such a change can come about with business-as-usual action by a sufficient number of shareholders “without any regulatory oversight or other outside review.”).

Islamic financial institutions use Shari'ah ethical-legal advisors to interpret, contextualize, and enforce their referent using “regulatory oversight.”¹⁸² These advisors are usually Muslim jurists working for a sponsor financial institution as employees or outside consultants in what is typically referred to as a Shari'ah Supervisory Board.¹⁸³

Islamic law sets forth substantive principles that govern what activities investment may further. Investment may not further: alcohol and pork, the adult-industry, gambling-related activities, the arms industry, non-mutual insurance, and conventional banking. According to some contemporary interpretations, some such activities are tolerated on a de minimus basis.¹⁸⁴ SRI also employs negative screens.¹⁸⁵ Unlike the contemporary Islamic finance industry, however, SRI uses positive screens as well.¹⁸⁶ Islamic law and contemporary Islamic finance are not complete strangers to positive action for such better-

182. Contemporary Islamic finance is only able to use Islamic enforcement if the relevant jurisdiction offers it, and many jurisdictions in which it operates do not. Even those entity types created specifically for Islamic businesses do not appear to differ significantly from their conventional counterparts except that they must operate per Islamic principles with the assistance of experts in Islamic law. *See, e.g.,* LAW REGULATING ISLAMIC FINANCIAL BUSINESS: DIFC LAW NO. 13 OF 2004 (2004), available at http://dfsa.complinet.com/net_file_store/new_rulebooks/d/f/DFSA1547_7726_VER40.pdf; ISLAMIC FINANCE RULES MODULE TO THE DUBAI FINANCIAL SERVICES AUTHORITY (DFSA) RULEBOOK, available at http://dfsa.complinet.com/net_file_store/new_rulebooks/d/f/DFSA1547_13808_VER80.pdf. While cosmetic in appearance, this difference has the significant effect of controlling the profit motive or obligation. Practically, a court applying Islamic law may not decide this matter, even in Muslim-majority jurisdictions. *See* Bashar H. Malkawi, *Shari'ah Board in the Governance Structure of Islamic Financial Institutions*, 61 AMER. J. COMP. L. 539, 548 (2013) (stating that “the integrity of IFI’s [Islamic financial institutions] greatly depends on the status of Shari’ah compliance, its impact of products, professional competence, and behavior towards, and observance of, Shari’ah norms.”). *But see* Karim Ginena, *Shari'ah Risk and Corporate Governance of Islamic Banks*, 14 CORP. GOVERNANCE 86, 91 (2014) (“An Islamic bank that claims in its memorandum and/or articles of association that it adheres to tenets of shari’ah yet fails to deliver on its claim may find itself facing lawsuits from stakeholders that are unhappy with the false advertising and/ or non-commitment of the institution to its claims.”).

183. *See* Malkawi, *supra* note 182, at 552-54, 559 (noting that the Accounting and Auditing Organization for Islamic Financial Institutions permits a non-jurist member of a Shari'ah advisory board who may “scrutinize and understand the banking business.”); *see* MOHD DAUD BAKAR, ISLAMIC FINANCE INNOVATION AND GROWTH 78 (Simon Archer & Rifaat Ahmed Abdel Karim eds., 2002); *see also* Lombardi, *supra* note 14, at 4 (“Moreover these modern Shari’a court judges and lawyers not only find themselves working in new and evolving institutional contexts, they also come to that work with backgrounds in novel types of training that differ significantly from those of classical Islamic jurists.”).

184. *See* McMillen, *supra* note 207, at 1-3.

185. Ahmed, *supra* note 180, at 28-30 (stating that such negative screens can include the prohibition of one or more of alcohol, tobacco, gambling, weaponry, animal testing, human rights, and labor relations and commenting that some SRI funds are also involved in community investment in the form of community credit unions and microfinance).

186. Islamic finance proponents might note that Islamic finance intends to contribute to societal betterment with negative screens. Examples of positive screens used by SRI include working towards environmental sustainability, developing positive relationships with stakeholders, supporting human rights and countering bribery. *See id.* at 3, 40 (A U.K.-listed company named Vedanta Resources, passed the Shari'ah screens of the FTSE Shari'ah U.K. index based on its negative screens and financial filters, but “was found to be involved in serious human rights violations and practices that have caused long term damage to the environment. This results in a conflicting circumstance, as it is contrary to the teachings of Shari’ah to be involved in such business

ment.¹⁸⁷ This commonality has enabled some managers to offer stock screens bringing together Islamic and SRI criteria.¹⁸⁸

Perhaps the most conspicuous difference between Islamic finance and SRI is that the former regulates the legal structure of how capital is provided. Here, we refer principally to the prohibitions of interest (*ribā*), inappropriate uncertainty (*gharar*),¹⁸⁹ and gambling (*qimār/maysār*),¹⁹⁰ which have parallels in other laws and traditions.¹⁹¹ We focus on *ribā* as it is particularly relevant to understanding *sukūk*.¹⁹²

practices.”). Citing Vedanta’s human rights record, the Church of England divested its holdings. *Church Takes ‘Unprecedented’ Step to Sell Stake in Vedanta*, SURVIVAL INTERNATIONAL (Nov. 4, 2014, 2:11 AM), <http://www.survivalinternational.org/news/5518>.

187. Ahmed, *supra* note 180 (“according to Shariah, businesses must be ‘responsible’ and ‘committed’ to good causes. The findings of these scholars strengthen the argument that the practices of Islamic investment and SRI are overlapping, and therefore, there is room for merger of these two investment styles.” (internal citations omitted)). Islamic law has voluminous discussions regarding societal betterment by positive action.

188. Examples of such a combination are the Dow Jones Islamic Sustainability Market Index and recent investment funds launched by SEDCO Capital and Arabesque using U.N. Principles on Responsible Investment as a guideline. See *SEDCO Capital Says Funds Managed According to Environmental, Social and Governance Principles*, BUSINESS INTELLIGENCE MIDDLE EAST (May 27, 2013, 1:43 PM), <http://www.bi-me.com/main.php?id=61968&t=1>; See *id.* at 52 (noting through his study that merging Islamic and SRI criteria that “there is no additional cost to the investor in adding an additional layer of screening to Islamic investing. It would certainly be possible to create an Islamic and socially responsible portfolio that generates higher returns. This can be achieved by choosing stocks globally to increase diversification.”); *Memberships*, ARABESQUE, <http://arabesque.com/memberships> (last visited Feb. 20, 2015). Other asset managers who offer Shari’ah-compliant investments that have also signed up to the UN PRI include Saturna Capital, Kagiso Asset Management and Mulkia Investment Company. *Signatories to the Principles for Responsible Investment*, PRINCIPLES FOR RESPONSIBLE INVESTMENT, <http://www.unpri.org/signatories/signatories/> (last visited Jan. 28, 2015); *Sharia investing: UNPRI*, KAGISO ASSET MANAGEMENT, <http://www.kagisoam.com/sharia-investing/sharia-investment-approach/unpri-2/> (last visited Jan. 27, 2015).

189. The prohibition of *gharar*, a term which has been translated as “trading in risk” or as aleatory sales has been taken by jurists to refer to ignorance of the material attributes of a transaction, such as the availability or existence of the subject matter, its qualities, quantity, deliverability, and the amount, terms, and timing of payment. For *gharar* to have legal consequences: (i) it must be excessive and not trivial; (ii) it must pertain to the subject matter of the sale; and (iii) society must not be in need of the contract in question. This last requirement explains why forward sale (*salam*) and manufacture (*istisna’*) contracts have traditionally been permitted under Islamic law, despite the arguable presence of *gharar* in these contracts. Broadly speaking, the taint of *gharar* can be prevented when the parties to a contract have adequate knowledge of the subject matter, the value costs, and whether the object of sale is in existence and available for sale. See Moghul & Ahmed, *supra* note 18, at 170-72.

190. See, e.g., Sherin Kunhibava & Balachandran Shanmugam, *Shari’ah and Conventional Law Objections to Derivatives: A Comparison*, 24 ARAB L.Q. 319, 323-25 (2010).

191. Cf. HANS VISSER, ISLAMIC FINANCE: PRINCIPLES AND PRACTICE 52-55 (2d ed. 2013). The Qur’anic basis for this prohibition can be found at 2:219 and 5:90-91. KAMALI, *supra* note 20, at 155 (“The hallmark of both *maysār* and *qimār* thus appears to be involvement of two or more opponents in a combative game which each plays with the sole purpose of winning at the expense of the other. The gain of one party is equivalent to the loss of the other.”).

192. See generally Mohammad Hashim Kamali, *Uncertainty and Risk Taking (Gharar) in Islamic Law*, 7 INT’L ISLAMIC UNIV. MALAY. L.J. 199 (1999) (discussing *gharar*); NABIL A. SALEH, UNLAWFUL GAIN AND LEGITIMATE PROFIT IN ISLAMIC LAW: RIBA, GHARAR, AND ISLAMIC BANKING (1986) (discussing *gharar* and *ribā*); ABDULKADER THOMAS, INTEREST IN ISLAMIC ECONOMICS: UNDERSTANDING RIBA (2006).

Ribā is now commonly said to include interest on a loan.¹⁹³ The alternative to debt-based contracts are sales contracts containing mutual exchanges of property rights. In contrast, an interest-bearing loan transaction consists of a sum of money loaned today for a larger sum in the future without the transfer of the property rights over the principal to the borrower.¹⁹⁴

The sale of an income stream or debt is also generally prohibited under the rules of *ribā*, unless it is coupled with the sale of an asset.¹⁹⁵ Broadly speaking, Islamic law requires a capital provider to bear an asset or market risk in order to be entitled to profit.¹⁹⁶ A lender bearing only a credit risk is thus not lawfully entitled to gain from its lending. Islamic finance in principle may best be described to be about risk sharing rather than risk shifting, the dominant motif of conventional finance. When effective, risk sharing has significant social impact—an impact often overlooked by ethics-based critiques of contemporary Islamic finance. Contemporary Islamic finance still struggles with this principle in practice and focuses on this prohibition of *ribā*.¹⁹⁷

193. See Moghul & Ahmed, *supra* note 18, at 168-69 (“The prohibition of *riba* also applies to trading that involves certain other commodities, such as certain foodstuffs, gold, and silver. When these commodities are traded, the trades must be made in equal measure and without deferment.”); HOSSEIN ASKARI ET AL., GLOBALIZATION & ISLAMIC FINANCE 60 (2010) (“In a series of verses, the Koran exhorts humans to take individual and collective actions to achieve social unity and cohesion and then to strive to preserve and protect collectivity from all elements of disunity. . . . Unity and social cohesion are so central among the objectives of the Koran for mankind and all conduct prohibited maybe regarded as those that caused this unity and conversely those prescribed to promote and protect social cohesion.” (citation omitted)).

194. ASKARI ET AL., *supra* note 193, at 59.

195. See AL-BASHIR AL-AMINE, *supra* note 16, at 322 quoting Mohamed Akram Laldin, *The Generation Game*, ISLAMIC BUSINESS AND FINANCE, July 2008, at 8-10 (“There are some differences between the practices followed in Malaysia and the practices followed in the GCC . . . The reality is that despite the differences, there is more in common between the two centres than there are differences. There are subtle differences, take *Bay’ al-‘Inah* or sale-and-buyback [which] is not permitted in the GCC but used in Malaysia.”). *But cf.* Amir Shahrudin, *The Bay al-‘Inah Controversy in Malaysian Islamic Banking*, 26 ARAB L.Q. 499 (2012) (discussing the controversy surrounding the creation of an Islamic credit card—the *Bay’ al-‘Inah*—in Malaysian Islamic banking, which is considered by a majority of Shari’ah jurists to be *ribā*).

196. A simple conventional loan transaction would be said to impose a credit risk upon the lender—the lender risks whether or not the debtor will repay them—and not a market/asset risk in which the lender bears a risk in the performance of the business or asset financed. This is based on the legal maxim or canon: “*Al-Kharāj bi al-ḍamān* ([Entitlement to] profit must be accompanied by risk).” Umar F. Moghul, *No Pain No Gain: The State of the Industry in Light of an American Islamic Private Equity Transaction*, 7 CHI. J. INT’L L. 469, 478-79 (2007) (discussing *al-kharāj bi al-ḍamān*). See generally MOHAMMAD HASHIM KAMALI, SHARI’AH LAW: AN INTRODUCTION 141-60 (2008) (discussing Islamic legal maxims).

197. See Karim Ginena & Jon Truby, *Deutsche Bank and the Use of Promises in Islamic Finance Contracts*, 7 VA. L. & BUS. REV. 619, 634-35 (2013) (“Structured Shari’ah compliant financial deals that involve a contract or more in addition to binding enforceable bilateral promises are eligible to some Shari’ah concessions. The reason for such concessions is that Shari’ah permits . . . what it does not in standalone contracts. Jurists have many legal maxims to this effect such as, ‘provisions in ordinary contracts entail more validity requirements than provisions in implicit and subsidiary contracts.’ Hence the following is overlooked if found present in the auxiliary objectives or contracts or binding promises of these structured deals: *gharar*, excessive *jahalah* [ignorance of the attributes of a transaction], *ribā al-buyu’* [trade usury], and the non-fulfillment of the conditions of currency exchange, the sale of a deferred debt for another, and the absence of some pillars or conditions that make a contract valid such as offer and acceptance.”). See also *id.* at 635-36 (quoting medieval

B. CONTEMPORARY PRACTICE

1. Fatwās (Islamic Legal Opinions)

Many fatwās in the Islamic finance industry do not present their underlying analysis because they are written or publicly released in conclusory form.¹⁹⁸ In some instances, they often do not set forth any of the scope, assumptions, facts, textual bases, or jurisprudential arguments used to arrive at their conclusions. In a departure from typical classical legal practice, many of these fatwās do not set forth questions responded to.¹⁹⁹ Although the question can be generally inferred from the answer, the exact facts underlying the conclusion cannot be inferred as readily.²⁰⁰ We note that relatively more detailed expressions seem to be found in the event a transaction is deemed of particular importance, such as for widely available retail products.²⁰¹ Practitioners, particularly lawyers, involved in a given matter may have greater knowledge of the course of the Islamic legal process than is set forth in the related fatwā given their intimate role in the structure design and their regular discussions with the involved Shari'ah advisors

Palestinian Hanbali scholar and jurist Muwaffaq al-Dm 'Abd Allāh ibn Aḥmad Ibn Qudāma al-Maqḍisr (d. 1223 CE) ("And if he sells what has *ribā* [a *ribawr* commodity such as gold] for something that is not of the same type in addition to something that is of the same type that is not intended such as a house whose ceiling is gold plated, then it is permissible. I do not know any disagreement regarding this. Likewise if he sells a house for another with each of them having a gold or silver plated ceiling then this is allowed because the *ribawr* item [gold] is not intended in the sale so there is no difference between its existence and non-existence."). Whether the inclusion of an asset is secondary to the primary object of the contract or is auxiliary to the transaction merits discussion. See AMJAD, *supra* note 169, at 112 (describing legal stratagems as a tool employed mostly by the Hanafi school to implement the spirit of the law rather than a strict application of its letter).

198. It important to note that our discussion of fatwās in contemporary Islamic finance refers to publicly available fatwās, those to which we have been privy in the course of our legal practices, and the sources stated in this Article. We are privy to more information than is contained in the final written expression of the fatwā not because of that final expression, but because of our role as counsel in the process of the transaction to which the fatwā speaks. See *generally* A COMPENDIUM OF LEGAL OPINIONS ON THE OPERATIONS OF ISLAMIC BANKS: MURABAHAH, MUDARABAH, AND MUSHARAKAH (Yusuf Talal DeLorenzo ed. & trans., 1997) (the fatwās in this work appearing to vary in length, complexity, and citations to primary and secondary Islamic texts, depending on the question posed to the Islamic Scholar).

199. Chibli Mallat, *Tantawi on Banking Operations in Egypt*, in MUFTIS, *supra* note 58, at 286-97.

200. With the exception of reasoned opinions in structured finance transactions, this appears to parallel the practice in Anglo-American transactional law where opinions set forth their scope, assumptions, exclusions, and final conclusion. Perhaps a critical distinction between fatwās in contemporary Islamic finance and Anglo-American jurisprudence is the lack of religious implications of the latter not only for authors and the advised but stakeholders broadly, who rely on these legal opinions, and that Islamic finance often uses "need," "hardship," or the "attainment of a benefit" in permitting the otherwise impermissible.

201. See, e.g., UNIV. ISLAMIC FIN. <http://www.myuif.com/fatawa/> (last visited Feb. 20, 2015) (offering retail banking and finance products in the U.S.; fatwā approving a *murābahah* home finance product offered by HSBC Bank U.S.A. and its affiliates) (on file with Mr. Moghul). Some industry scholars have written statements similar to fatwās regarding points of contention or particular products. See, e.g., MUHAMMAD TAQI USMANI, SUKUK AND THEIR CONTEMPORARY APPLICATIONS (Yusuf DeLorenzo trans.), available at <http://www.muftitaiusmani.com/images/stories/downloads/pdf/sukuk.pdf>; Yusuf Talal DeLorenzo, *The Total Returns Swap and the "Shari'ah Conversion Technology" Stratagem*, in CONVENTIONAL? THE RELATIONSHIP BETWEEN ISLAMIC FINANCE AND THE FINANCIAL MAINSTREAM 11 (Charles Beard ed., 2008).

(and others) throughout that design process. But their knowledge may possibly be insufficient, either due to their lack of familiarity with the relevant Islamic legal disciplines or due to the limited transactional context. It is thus difficult to assess with certainty the exact arguments employed in many of these fatwās.

Nevertheless, the conclusions reached by these fatwās exemplify the practicality of Islamic finance law and Islamic jurists' methods—sometimes more so than applicable national or “secular” law.²⁰² Furthermore, some of these fatwās represent the ability of Islamic law to adapt and create new innovative legal rulings, even if the conclusions reached are intended as temporary allowances.²⁰³

2. The DJIMI Fatwā

The fatwā by the Shari'ah Board of the Dow Jones Islamic Market Indexes (“DJIMI fatwā”) softens a command to create a legal dispensation—and perhaps does more.²⁰⁴ The Board wrote in much more detail than the normal practice but did not set forth the complete textual and jurisprudential basis.²⁰⁵ Issued in 1998, the DJIMI fatwā is said to have addressed the question of whether an Islamic investor may make non-controlling investments in the publicly traded equity of an entity that is engaged in unacceptable business activities.²⁰⁶ It concluded that some such public equity investing under the Shari'ah is permitted conditionally.²⁰⁷

202. In his legal practice, Mr. Moghul has observed a number of instances in which the non-Islamic party has been much more inflexible and unwilling and the Islamic scholar and method more willing and deferential. In other instances, he has observed Islamic ethical-legal issues debated and discussed for lengthy periods of time and heavily negotiated within the client and between the client and its counterparty. In Mr. Moghul's opinion, readers of a fatwā, as well as customers and investors, are usually unable to ascertain this process in meaningful detail unless they have been privy to the transaction process, which is usually privileged and confidential.

203. See AMJAD, *supra* note 169, at 109-12; see e.g., Victoria Lynn Zyp, Islamic Finance in the United States: Product Development and Regulatory Adoption (Apr. 21, 2009) (unpublished M.A. thesis, Georgetown University) (“We hereby reaffirm our fatwa . . . with the understanding that . . . the Company and its licensees are working for the implementation of the optimal form of mudaraba deposit.” (quotations omitted)), available at <https://repository.library.georgetown.edu/bitstream/handle/10822/552821/ZypVictoriaLynn.pdf?sequence=1>.

204. A law may be altered by reference to “attenuating circumstances . . . that may soften it or even entirely suspend it.” KAMALI, *supra* note 8, at 436-37. When so altered, it is referred to as a legal dispensation or concession (*rukhsah*), of the unabated command (*‘azmah*). AL-RAYSUNĪ, *supra* note 21, at 320 (“*Azmah* (the original, established intention behind a given action commanded by the Law) is the rule, while *rukhsah* (the type of allowance granted in connection with certain actions commanded by the Law for the purpose of alleviating hardship) is the exception; hence, the *‘azmah* embodies The Lawgiver's (i.e. God's) primary intention, while the *rukhsah* embodies a secondary intention.”); KAMALI, *supra* note 8 at 438 (concessions may address necessity or need, removal of a hardship, or the accommodation of a public need, among other things). There is quite a bit more detail to the discourse surrounding unabated rulings and concessions thereto. See AL-SHĀṬIBĪ, *supra* note 46, at 252-56.

205. SHARI'AH SUPERVISORY BOARD, STATEMENT ON THE DOW JONES ISLAMIC MARKET INDEX 3 (1998) (on file with the authors) [hereinafter DJIMI Fatwā].

206. The DJIMI Fatwā itself does not state the question it purports to answer. Thus we, and others, attempt to reconstruct it.

207. Michael McMillen, *Islamic Capital Markets: A Selective Introduction*, WHO'S WHO LEGAL (July 2013)

As a preliminary matter, the equity security structure must be permissible under Islamic laws regardless of the subject company.²⁰⁸ Thus, for instance, preferred stock with a liquidation preference would be disallowed.²⁰⁹ Next, the analysis turns to the business of the company in question. If the core business of a company is prohibited, then the DJIMI Fatwā prohibits investment in its equity securities. The DJIMI Fatwā tolerates certain non-permissible business activities if they are not “primary” or “basic” to the business of the company.²¹⁰ Next, the receipt and or payment of *ribā* is tolerated so long as certain ratios with respect to the subject company do not exceed 33%.²¹¹ The ratios assess (1) interest-bearing debt; (2) cash and marketable securities; and (3) accounts receivable²¹²—each against market capitalization.²¹³ Companies failing to meet these criteria are screened out. Furthermore, the DJIMI fatwā calls for a periodic application of its screens to assess ongoing compliance, and it “emphasize[s] that more precise tests [to calculate elements of the ratios] must be adopted to if they become available.”²¹⁴

<http://whoswholegal.com/news/features/article/30640/islamic-capital-markets-selective-introduction> (last visited Feb. 20, 2015) (“[This] fatwa may be the most influential fatwa issued in the history of modern Islamic finance and is one of seven critical factors enabling the growth of modern Islamic finance.”).

208. See Michael McMillen, *Sequelae of the Dow Jones Fatwa and Evolution in Islamic Finance: The Real Estate Investment Example*, NEW HORIZON 12, 13 (May 31, 2013). The fatwā also states that fixed income securities are prohibited under the rules of *ribā* (interest). *Id.*

209. Moghul, *supra* note 196, at 491 (discussing preferred stock); see DJIMI Fatwā, *supra* note 205, at 3.

210. DJIMI Fatwa, *supra* note 205, at 8. (“It must be stated emphatically at this point that [the above-mentioned] formula is one that applies to investors interested in companies offering shares on the international market over which Muslims have no control. It should not be understood as an endorsement of the practice, by Muslim-owned businesses, of interest-based borrowing.”). The terms “basic” and “primary” are not defined. So it is not clear to the authors whether an Islamically “disapproved” (*makrūh*) business would be carved out. Note that not all index providers use the same screens to filter for Islamic compliance. Ahmed, *supra* note 180, at 18-19.

211. S & P DOW JONES LLP, *Dow Jones Islamic Market Indices*, S & P DOW JONES INDICES, <http://www.djindexes.com/islamicmarket/> (last visited Feb. 20, 2015) (click on “Screens for Shari’ah compliance” button).

212. See DJIMI Fatwā, *supra* note 205, at 9 (“The Shari’ah allows investing in shares of companies in which the primary business activity is deemed lawful if the accounts receivable do not represent the majority . . . of the total assets. Thus, if the primary business of the company is halal, and the sale methodology for obtaining corporate revenue is through installment payments, which may be deemed incidental or subordinate if the accounts receivable do not exceed 45% of the total assets, then investment in such a company will be permissible.”).

213. See Irfan Ahmed, *supra* note 180, at 23 (“A major source of debate is the use of Total Assets or Market capitalization as the ratio divisor used to calculate financial ratios. Advocates of using market capitalization argue that it indicates the true value of the company as determined by market forces, and using trailing market capitalization smoothes out seasonality effects. Proponents of total assets as the divisor consider it as a better judge of value. The argument is that since it is based on a reliable accounting methodology, it is independent from any external influence or speculation.”); DJIMI Fatwa, *supra* note 205, at 6 (explaining that the basic premises for allowing investment in companies with some component of the impermissible is that (i) the Islamic shareholder is not a party to prohibited activities but will make proxy votes to disapprove of them, (ii) the primary business of the company is lawful, and (iii) “Many Islamic investors have modest savings, and the opportunities for investing money in ways that will prove both profitable to them and beneficial to humanity are limited.”).

214. McMillen, *supra* note 208.

Impermissible income derived from de minimis unlawful business activity must be donated to charity²¹⁵ in what is referred to in the Islamic finance industry as a “purification process.”²¹⁶ A “Muslim investor may not derive any benefit, whether financial (like a tax write-off) or spiritual (like the pleasure of the Almighty) from the impure income.”²¹⁷ Other Shari’ah advisories also apply allowances of non-core business activities, sometimes for real estate or private company investing,²¹⁸ which has expanded the industry’s breadth and activity. This has not been without differences in opinion among Muslim jurists and others.²¹⁹

This fatwā interests us for two reasons. First, it encourages an environmental consciousness among Islamic investors by advising “Muslims to seek out and examine the merits of companies that have pro-environmental and pro-animal rights policies, that support their communities, [and] that give voice to the disenfranchised, provide humanitarian services, and the like.”²²⁰ Second, the fatwā “legislates” standards for non-core unlawful business and creates applicable ratios.²²¹ These are now employed in contemporary Islamic finance’s ethical-legal review with the effective force of law.²²²

A fatwā within Islamic finance may thereby produce standards supported by other principles of Islamic jurisprudence, and that the content of such a fatwā may grow to wide acceptance and usage. Such standards, as will be shown below, would be produced or adopted to support already existing teachings of the Shari’ah. Such standards would also be aimed at achieving the objectives we understand to be intended by The Lawgiver (i.e. God).²²³

215. See generally IBN RAJAB AL-HANBALĪ, THE COMPENDIUM OF KNOWLEDGE AND WISDOM [a translation of *Jami’ al-Uloom wal-Hikam ft Sharh khamasinā Ḥadrthan min Jawāmr al-Kalim*] 415-30 (Yahya & Safira Batha eds., Abdassamad Clarke trans., 2007) (discussing charity in Islam).

216. SAIFUL AZHAR ROSLY, CRITICAL ISSUES ON ISLAMIC BANKING AND FINANCIAL MARKETS: ISLAMIC ECONOMICS, BANKING AND FINANCE, INVESTMENTS, TAKAFUL, AND FINANCIAL PLANNING 373 (2005).

217. Muslims cannot hold income obtained unlawfully under Islamic ethics—even to later give it away validly and lawfully in charity. SOHAIL JAFFER, ISLAMIC ASSET MANAGEMENT: FORMING THE FUTURE FOR SHARI’A-COMPLIANT INVESTMENT STRATEGIES 57 (2004) (“[T]he act of purifying impure income by way of charitable contributions neither assures absolution for the transgression nor clearing of the conscience. Even so it is the only legitimate way to mitigate the sin and dispose of the dubious income.”).

218. Mr. Moghul has persuaded Islamic private equity investors using the DJIMI Fatwa to argue that businesses with minimal impermissible non-core activity or interest-bearing (*ribāwī*) transactions should receive investment.

219. See McMillen, *supra* note 208, at 14.

220. See DJIMI Fatwa, *supra* note 205, at 4.

221. Of course, the role of the jurist is interpretive and declarative. See WEISS, *supra* note 6, at 126-30.

222. For instance, a public company failing to meet any one ratio is screened out and deemed unlawful as a target of Islamic investment.

223. See *supra* section II.A.

C. CONTEMPORARY PRACTICE: ŞUKŪK

For some time the şukūk (singular, *şakk*)²²⁴ market has received the lion's share of focus when it comes to Islamic finance. Its emergence and decline, subsequent regrowth, continued potential, and place among some of Islamic finance's first bankruptcies and restructurings all receive critical attention.²²⁵ Given the breadth of projects and assets that can be financed by şukūk and the variety of conventional and Islamic buyers,²²⁶ şukūk present noteworthy vehicles to support environmentally conscious efforts. It is anticipated that the presence of tangible assets and steady, usually sovereign-backed revenue streams²²⁷ would be attractive to investors and facilitate Islamic structuring.²²⁸ The support of "green" or carbon-conscious-projects, whether by Islamic real estate or private equity investors, should be encouraged as well for reasons set out below.

The Accounting and Auditing Organization for Islamic Financial Institutions ("AAOIFI")²²⁹ defines şukūk as certificates of equal value representing an ownership interest in defined assets, usufruct, or services, as well as equity in a project or investment activity.²³⁰ Widely relied upon in the industry, şukūk standards promulgated by AAOIFI emphasize that the instruments are not

224. The English word "check" potentially traces its origins from the Arabic word "*şakk*." Wajih H. Abdel Rahman, *A Critical Linguistic Study of Lexical Borrowing in Arabic and English*, 3 J. KING SAUD UNIV. 33, 34 (1991) (Saudi Arabia).

225. McMillen, *supra* note 207, at 2.

226. See AL-BASHIR AL-AMINE, *supra* note 16, at 10 (noting that a number of şukūk buyers are not Muslim as are a number of customers of Islamic finance generally and that "[i]t has been reported that 63% of HSBC's total Amanah [HSBC's Islamic 'window'] customers in Malaysia, for example, are non-Muslim."); see also *id.* ("It is a fact that Hong Kong's Islamic community is not big, but we are confident that the development of Shari'ah compliant financial markets can take off even in environments in which the domestic Islamic community is relatively small, simply for the fact that investors nowadays are looking beyond domestic boundaries and traditional finances." (quoting Eddie Yue, Deputy Chief Executive of the Hong Kong Monetary Authority)).

227. This is typical of a sovereign-backed Power Purchase Agreement model within the context of projects regarding electricity generation. See *Power Purchase Agreements (PPAs) and Energy Purchase Agreements (EPAs)*, PUBLIC-PRIVATE PARTNERSHIP IN INFRASTRUCTURE RESOURCE CENTER, <http://ppp.worldbank.org/public-private-partnership/sector/energy/energy-power-agreements/power-purchase-agreements> (last visited Feb. 20, 2015). Take for example the Saudi King Abdullah City for Atomic and Renewable Energy program (discussed below) for renewable and nuclear energy. OXFORD BUSINESS GROUP, *THE REPORT: SAUDI ARABIA 2013* 145 (2013) ("The first two tenders for solar power will be based on power purchase agreements (PPAs). Under these, the government agrees to buy a set amount of electricity over fixed period for an agreed price from a given operator.").

228. For a broad overview of sovereign şukūk, see AL-BASHIR AL-AMINE, *supra* note 16, at 88-92. On corporate şukūk, see *id.* at 92-94.

229. ACCT. & AUDITING INST. FOR ISLAMIC FIN. INST., <http://www.aaofi.com/en/about-aaofi/about-aaofi.html> (last visited Feb. 20, 2015) (establishing that "The Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) is an Islamic international autonomous non-for-profit corporate body that prepares accounting, auditing, governance, ethics and Shari'a standards for Islamic financial institutions and the industry.").

230. ACCOUNTING & AUDITING ORG. FOR ISLAMIC FIN. INST., *STANDARDS FOR ISLAMIC FINANCIAL INSTITUTION* 307 (2007) (Standard 17 § 2).

bonds.²³¹ They are better understood as participation certificates or pass-through certificates.²³² Whatever underlies a şukūk—whether an asset, business, or usufruct in which the fractional ownership is granted to şukūk-holders—must also be permissible under Islamic law. It may be helpful to understand şukūk as business or asset securitizations.²³³ Business securitizations are based upon the credit of a business entity, either the issuer or another credit-supporting entity, as in the case of a conventional bond. Most şukūk, as discussed below, have been of this type coupled with the credit support of a sovereign state.²³⁴ şukūk-holders share pro rata in the revenue, if any, generated from such asset, business, or usufruct. Asset securitization şukūk, on the other hand, involve a transfer (and in rare cases what is termed a true sale²³⁵) of assets to the issuing entity, often a trust or other special purpose entity. Of this type, there have been fewer issuances.²³⁶

This ownership interest distinguishes şukūk from conventional bonds.²³⁷ Revenue sharing, rather than principal and interest payments, flows from this asset ownership. The nature and extent of ownership in contemporary şukūk issuances continues to be a point of contention.²³⁸ In our view, this topic should be the subject of further study in light of local governing laws. If the cash flow payable in a particular şukūk transaction were structured, and not in fact derived from actual activity involving the underlying asset, Islamic laws may not permit payment, especially in light of issues surrounding the nature of ownership often transferred to şukūk holders.²³⁹

231. *Id.* at 309 (§ 4/2).

232. McMillen, *supra* note 207.

233. *Id.*

234. *Id.*

235. AL-BASHIR AL-AMINE, *supra* note 16, at 269. *See generally* Michael McMillen, *Contractual Enforceability Issues: Sukuk and Capital Markets Development*, 7 CHI. J. INT'L L. 427, 452-53 (2007) (discussing true sales).

236. Michael McMillen, *Asset Securitization Sukuk and Islamic Capital Markets: Structural Issues in the Formative Years*, 25 WIS. INT'L L.J. 703, 739 (2008).

237. AL-BASHIR AL-AMINE, *supra* note 16, at 120 (“The problem seems to rest on the attempt by some şukūk issuers to accommodate the well-known concept of beneficial ownership in the English legal system into Islamic law. Unfortunately, what they have failed to realize is that ownership in Islamic law is beneficial as well as legal and there’s no way of separating the two.”). Nevertheless, al-Bashir al-Amine goes on to note that some Shari’ah scholars have allowed şukūk transactions to proceed forward on the basis of such a division of ownership. *See id.* at 121.

238. *Id.* at 119-20.

239. *Id.* at 110 (“The permissibility of trading shall not be used as a trick or stratagem to securitise debts and trading them by transforming the fund activities into trading on debt and by adding certain assets as a trick for negotiability.”); *see* AL-RAYSUNĪ, *supra* note 21, at 133 (“Whoever performs . . . actions with some other intent is not conducting himself in a legitimate manner.” (quotation omitted)); *see also id.* at 384 n.151 (“In other words, he seeks to circumvent the legal ruling in question by preserving its outward form while dispensing with its essence and intent; in this manner, he strives through legitimate action to achieve some aim other than that for which the action was originally prescribed.”); *id.* at 133 (speaking on al-Shāfi’i’s assertion that legal stratagems are for the most part invalid and prohibited in accordance with the views of “the majority of Companions and their successors.”); KAMALI, *supra* note 8, at 312-22 (noting that companions are contemporaries of the Prophet Muhammad whose example is accorded a special weight and whose fatwās are accorded particular status and

1. AAOIFI Şukūk Standards

The AAOIFI şukūk standards divide şukūk into fourteen types.²⁴⁰ A şukūk structure is usually coupled with another nominal contract form, such as a lease (*ijāra*), so that the rental income generated from the lease of the asset is shared pro rata among the şukūk investors.²⁴¹ Several of the fourteen AAOIFI şukūk standards regard leases of existing assets (and leasehold interests) or assets to be acquired. Others types relate to agricultural activities, construction, or agency (*wakāla*) structures (usually used today for investment activity);²⁴² the acquisition of goods (via a *murābahah* structure);²⁴³ forward sale contracts for commodities (*salam*);²⁴⁴ and/or investment in enterprises or projects via passive or active partnerships (*mushārahah* and *muḍārahah*).²⁴⁵

Of these types, lease-based şukūk (*şukūk al-ijāra*), have been the most common.²⁴⁶ Such structures may be said to have predetermined returns because the income stream payable to the şukūk-holders is generated by way of one or more leases pursuant to which the rent is set.²⁴⁷ But since the onset of the 2008 credit crisis, the cost-plus-mark-up şukūk (*şukūk al-murābahah*) have seen a dramatic increase.²⁴⁸ This structure also generates a predetermined rate of return (insofar as the *murābahah* equates to a sale and not a financing). In accordance with Islamic principles, this particular şukūk type cannot be traded.²⁴⁹ The use of *mushārahah* and *muḍārahah* structures appear to have declined following the global financial crisis,²⁵⁰ which is not unsurprising given the structures then using these contract forms were subjected to strong criticism from important quarters.²⁵¹ AAOIFI²⁵² and market participants responded to these criticisms by

that successors are those persons in following generations, usually referring to the three generations immediately following the Companions. They too have a particular special status.

240. See ACCOUNTING & AUDITING ORG. FOR ISLAMIC FIN. INST., *supra* note 230, at 307-09 (§ 3).

241. MOHAMMAED AYUB, UNDERSTANDING ISLAMIC FINANCE 396 (John Wiley & Sons Ltd. et. al, 2007); see ACCOUNTING & AUDITING ORG. FOR ISLAMIC FIN. INST., *supra* note 231, at 307-08 (§ 3/2).

242. AYUB, *supra* note 241, at 347-49.

243. *Id.* at 213-40; see ACCOUNTING & AUDITING ORG. FOR ISLAMIC FIN. INST., *supra* note 230, at 311 (§ 5/1/5/5).

244. AYUB, *supra* note 241, at 241-62; see ACCOUNTING & AUDITING ORG. FOR ISLAMIC FIN. INST., *supra* note 229, at 311 (§ 5/1/5/3).

245. AYUB, *supra* note 241, at 307-46; see ACCOUNTING & AUDITING ORG. FOR ISLAMIC FIN. INST., *supra* note 230, at 312 (§§ 5/1/5/6, 5/1/5/7). For a detailed discussion of the structure of *ijārah* (lease), *wakālah* (agency), *mushārahah* and *muḍārahah* (types of partnership financing) based şukūk along with several case studies, see AL-BASHIR AL-AMINE, *supra* note 16, at 145-242.

246. AYUB, *supra* note 241, at 396.

247. This is true even if rent amounts are tied to an interest rate benchmark, such as LIBOR (London Interbank Offered Rate). See AL-BASHIR AL-AMINE, *supra* note 16, at 124; *Islamic Interbank Benchmark Rate (IIBR)*, THOMSON REUTERS, <http://thomsonreuters.com/iibr> (last visited Feb. 20, 2015) (describing an Islamic interbank profit rate).

248. *Id.* at 87.

249. AYUB, *supra* note 241, at 405.

250. AL-BASHIR AL-AMINE, *supra* note 16, at 87.

251. See, e.g., *id.* at 115-43 (One critique came from prominent contemporary Shari'ah scholar Muhammad

creating new mechanisms.²⁵³ As discussed in greater detail below, a strong counter to these challenges is for contemporary Islamic finance to issue green şukūk and integrate green standards into its norms.

2. Recent Şukūk Market Trends

Global şukūk volume rose from \$18.1 billion in 2006 to \$30.8 billion in 2007.²⁵⁴ The number of issuances rose from 129 in 2007 to 165 in 2008—an increase worth approximately \$15 billion (a reduction when compared to figures from 2006, however, this is representative of the market crisis).²⁵⁵ Şukūk issuance rose to approximately \$23.3 billion in 2009, with power, oil, gas, and financial services dominating issuances, although there were fewer total issuances in 2009 than in 2008.²⁵⁶ The year 2010 witnessed a record high value of issuances, representing approximately \$51.2 billion.²⁵⁷ The first half of 2011 followed this trend with \$43.8 billion in global issuances.²⁵⁸

Since the third quarter of 2012, aggregate şukūk issued exceeded conventional bond issuance in the countries of the Gulf Cooperation Council (“GCC”)²⁵⁹ for the first time.²⁶⁰ Since inception of the şukūk market until November 2008 total issuances reached nearly \$89 billion.²⁶¹ Total issuances in 2012 stood at \$143.4 billion, a 54% rise from total issuances in 2011. Readers familiar with conventional bond markets will know that this is a tiny fraction of total conventional

Taqi Usmani, who was concerned with the legal and financial structuring involved in many şukūk transactions and why these defeat many of the relevant rules of Islamic finance. These have been assessed by other Shari’ah scholars as well as the Accounting and Auditing Organization for Islamic Financial Institutions, which issued further standards in reply; see Muhammad Taqi Usmani, *Sukuk and Their Contemporary Applications* (Yusuf DeLorenzo, trans., 2007), available at <http://www.iefpedia.com/english/wp-content/uploads/2009/11/Sukuk-and-their-Contemporary-Applications.pdf> (last visited Feb. 20, 2015); see also ACCOUNTING & AUDITING ORG. FOR ISLAMIC FIN. INST., STATEMENT ON SUKUK (February 2008), available at https://islamicbankers.files.wordpress.com/2008/09/aaofi_sb_sukuk_feb2008_eng.pdf.

252. AL-BASHIR AL-AMINE, *supra* note 16, at 133-35.

253. Andrew Coats & Habib Motani, *Purchase Undertakings in Recent Sukuk Issuances: Different Objectives and Approaches*, in Ali, S.N. (ed.) ISLAMIC FINANCE: INNOVATION AND AUTHENTICITY 8 (S.N. Ali ed., 2010) (discussing instances of revised purchase undertakings structures in light of comments made by contemporary Shari’ah scholar Muhammad Taqi Usmani, *supra* note 251).

254. AL-BASHIR AL-AMINE, *supra* note 16, at 64.

255. *Id.*

256. *Id.* at 68 Fig. 1.

257. *Id.* at 68.

258. *Id.*

259. The full name of the GCC is The Cooperation Council for the Arab States of the Gulf. The GCC’s current members are the Kingdom of Bahrain, the State of Kuwait, the Sultanate of Oman, the State of Qatar, the Kingdom of Saudi Arabia and United Arab Emirates. See COOPERATION COUNCIL FOR THE ARAB STATES OF THE GULF, <http://www.gcc-sg.org/eng/indexc64c.html?action=GCC> (last visited Feb. 20, 2015).

260. *Sukuk Issuance Beats Conventional Bonds in GCC*, EMIRATES 24/7 (Oct. 8, 2012) <http://www.emirates247.com/business/economy-finance/sukuk-issuance-beats-conventional-bonds-in-gcc-2012-10-08-1.478340>.

261. McMillen, *supra* note 208, at 1.

bond issuances for both these years.²⁶² The year 2013 saw fewer issuances overall than the preceding year at \$119.7 billion, but ended with the largest fourth quarter on record with \$36.7 billion in issuances.²⁶³ The primary global *ṣukūk* market in the first half of 2014 reached \$66.2 billion—8.2% higher than the same period in 2013.²⁶⁴ The *ṣukūk* market continues to grow in value.

2014 also saw a continued expansion of the market into new geographical territory. Some countries successfully added themselves to growing global ranks and issued new sovereign *ṣukūk*, including the United Kingdom, Luxembourg, South Africa, and Hong Kong.²⁶⁵ In November 2014, the World Bank, acting as Treasury Manager for the International Finance Facility for Immunisation Company (“IFFIm”), launched its inaugural *ṣukūk*, raising over \$500 million for the Gavi Alliance (a global organization dedicated to improving access to vaccines for children in the world’s poorest countries).²⁶⁶ France, South Korea, Thailand, Japan, and Mexico have shown strong interest in the market, among others.²⁶⁷

262. *Id.*

263. RASAMEEL STRUCTURED FIN., 2013 GLOBAL ANNUAL SUKUK REPORT 1 (2014), available at <http://www.rasameel.com/downloads/RSFGlobalSukukMarketAnnual2013.pdf>.

264. RASAMEEL STRUCTURED FIN., QUARTERLY GLOBAL SUKUK REPORT JULY 2014 (2014) available at <http://www.rasameel.com/downloads/RSFGlobalSukukReport1H2014-sep11.pdf>.

265. See Press Release, U.K. Gov’t HM Treasury, Hon. George Osborne, MP, Government Issues First Islamic Bond (June 25, 2014), available at <https://www.gov.uk/government/news/government-issues-first-islamic-bond>; Bernardo Vizcaino, *Luxembourg’s Debut Sukuk Sees Strong Demand from Government Accounts*, REUTERS (Oct. 1, 2014, 2:38 AM), <http://www.reuters.com/article/2014/10/01/luxembourg-sukuk-idUSL6N0RWODY20141001> (on October 1, 2014, Luxembourg issued a \$200 million, 5-year sovereign-*ṣukūk*, becoming the first AAA-rated government to issue euro-denominated *ṣukūk*); Elaine Moore, et. al., *South Africa Joins Sukuk Bond Rush*, FINANCIAL TIMES (Sept. 17, 2014), <http://www.ft.com/cms/s/0/0c468e00-3e73-11e4-a620-00144feabdc0.html#axzz3FrZdBAIq> (On September 17, 2014, South Africa issued a \$500 million 5.75-year *ṣukūk* which was more than four times oversubscribed, with an order book of \$2.2 billion); *Hong Kong to List \$1 Billion Sukuk in Dubai*, KHALEEJ TIMES (Sept. 13, 2014), http://www.khaleejtimes.com/biz/inside.asp?section=uaebusiness&xfile=/data/uaebusiness/2014/September/uaebusiness_September176.xml (On September 10, 2014, Hong Kong launched a AAA-rated \$1 billion, 5-year *ṣukūk* on NASDAQ Dubai priced at 23-basis points above U.S. Treasury Bonds, attracting almost \$5 billion in orders); ANDREAS JOBST ET. AL., IMF POLICY DISCUSSION PAPER: ISLAMIC BOND ISSUANCE—WHAT SOVEREIGN DEBT MANAGERS NEED TO KNOW 8 (2008), available at <https://www.imf.org/external/pubs/ft/pdp/2008/pdp03.pdf> (the German State of Saxony-Anhalt launched the first sovereign-*ṣukūk* in a non-Islamic jurisdiction worth \$147 million in 2004); MOODY’S INVESTORS SERVICE, *Sovereign Sukuk Issuance to Rise as New Governments Enter Islamic Capital Markets*, MOODY’S INVESTORS SERVICE (Sept. 2, 2014), https://www.moodys.com/research/Moodys-Sovereign-sukuk-issuance-to-rise-as-new-governments-enter—PR_307600 (Moody’s expected sovereign-*ṣukūk* issuance will exceed 2013 levels to reach around \$30 billion by year-end 2014, with the overall outstanding amount to reach \$115 billion.); Umar F. Moghul, *A New York Sukuk?* DOW JONES ISLAMIC MARKET INDEXES Q. NEWSLETTER at 1-2 (June 2011), available at http://www.djindexes.com/mdsidx/downloads/newsletters/Islamic/DJIM_Quarterly_Newsletter_201106.pdf (discussing the proposed *ṣukūk* legislation in the New York State Senate).

266. On November 27, 2014, the World Bank, acting as a Treasury Manager for the IFFIm, announced the successful and oversubscribed issuance of a three-year *ṣukūk al-murābaḥa* (which carries a quarterly coupon of +15 basis points over 3-month U.S. Dollar LIBOR), raising over \$500 million. See *International Finance Facility for Immunisation issues first Sukuk, raising US\$ 500 million*, IIFIM (Nov. 27, 2014), [http://www.iffim.org/Library/News/Press-releases/2014/International-Finance-Facility-for-Immunisation-issues-first-Sukuk,-raising-US\\$-500-million/](http://www.iffim.org/Library/News/Press-releases/2014/International-Finance-Facility-for-Immunisation-issues-first-Sukuk,-raising-US$-500-million/).

267. AL-BASHIR AL-AMINE, *supra* note 16, at 63; Rob Dwyer, *Mexico Eyes Sovereign Sukuk*, EURO MONEY.

U.S. corporations such as GE Capital and Goldman Sachs have also issued şukūk.²⁶⁸

Although their geographic range broadens, most şukūk issuances have come from Malaysia and the GCC. Malaysia has historically been responsible for approximately two-thirds to three quarters of global issuances, followed by Saudi Arabia, Qatar, and the United Arab Emirates (“U.A.E.”).²⁶⁹ Interestingly, most issuances in Malaysia have been by corporations whereas those in the GCC nations have been by the sovereign or government-related entities.²⁷⁰ Financial services, power and utilities, transport, and real estate comprised most non-governmental issuances in 2013 and the first half of 2014.²⁷¹ The şukūk market is no longer confined to countries in the Muslim world or Islamic financial institutions. Increasingly, şukūk cover assets based in the U.K., continental Europe, Asia, and the United States.²⁷² Issuances are also expected to rise in the coming year or two beyond record levels witnessed in 2011.²⁷³

The rise in şukūk activity may be fueled primarily by government and quasi-government offerings,²⁷⁴ reflective of the demand for this particular investment vehicle from both Muslim and non-Islamic buyers.²⁷⁵ While primary issuances are increasing, Islamic capital markets are not developing like secondary trading, and the Middle East and North Africa remain largely untapped.²⁷⁶

COM (Nov. 2014), <http://www.euromoney.com/Article/3394391/Mexico-eyes-sovereign-sukuk.html>; MOODY’S INVESTORS SERVICE, *supra* note 266 (Moody’s forecasts a continued expansion in the number of şukūk-issuing governments into 2015. Several other governments including Morocco, Tunisia, Egypt, Jordan, Oman, Bangladesh and Kenya, have expressed firm intentions to issue şukūk in the short to medium term. According to Moody’s, countries such as Australia, the Philippines, Russia, Azerbaijan, and South Korea have shown moderate interest in the sector, but are unlikely to issue in the near term). Mexico’s state-owned petroleum company has also announced that it may consider issuing şukūk in the future. Isabella Cota, *Mexico’s Pemex Considers Bond Sale to Attract Muslim Investors*, BLOOMBERG.COM (Nov. 14, 2014 5:51 PM), <http://www.bloomberg.com/news/2014-11-14/mexico-s-pemex-considers-bond-sale-to-attract-muslim-investors.html>.

268. GE Capital, the finance arm of General Electric, listed a \$500 million şukūk on NASDAQ Dubai. The şukūk was the first to be issued by a major U.S. company and was sold to investors across the Middle East, Asia, and Europe on November 27, 2009. *See GE Capital Lists Recently Completed \$500 Million Sukuk on NASDAQ Dubai*, NASDAQ DUBAI (Dec. 13, 2009), <http://www.nasdaqdubai.com/press/ge-capital-lists-recently-completed-500-million-sukuk-on-nasdaq-dubai>. On September 16, 2014, Goldman Sachs issued a \$500 million şukūk, attracting order books of up to \$1.5 billion. *See UPDATE 1-Goldman Sachs Gets Strong Demand for Landmark Sukuk Issue*, REUTERS (Sept. 16, 2014, 12:58 PM), <http://www.reuters.com/article/2014/09/16/goldman-sukuk-launch-idUSL6N0RH2RH20140916>.

269. McMillen, *supra* note 207 at 3.

270. *Id.*

271. *See* RASAMEEL STRUC. FIN., *supra* note 263, at 3.

272. AL-BASHIR AL-AMINE, *supra* note 16, at 62.

273. Babu Das Augustine, *Global Sukuk Issuance Poised for a Big Leap*, GULF NEWS (Dec. 1, 2013), <http://gulfnews.com/business/banking/global-sukuk-issuance-poised-for-a-big-leap-1.1261790>.

274. McMillen, *supra* note 208, at 3-4.

275. *Id.*

276. AL-BASHIR AL-AMINE, *supra* note 16, at 29-45.

This and other factors pose important challenges to the further growth of *ṣukūk* and Islamic capital markets generally.²⁷⁷

IV. COLORING FINANCE GREEN

The coming years will likely witness significant growth in the role of bonds and other investment vehicles to fund green projects. As of July 2014, climate-themed bonds were estimated to total approximately \$502.6 billion globally (an exponential jump from \$174 billion in 2012).²⁷⁸ In its report, *Sizing the Climate Economy*, HSBC estimates that nearly \$10 trillion in cumulative capital investments will be moved toward low-carbon energy alone between 2010 and 2020.²⁷⁹ Over thirteen hundred signatories to the U.N. Principles for Responsible Investment—formed to stimulate investors to embed environmental, social, and corporate governance goals in equity and fixed income products—represent over \$45 trillion in managed assets, which has increased from \$4 trillion at the launch in 2006.²⁸⁰ The green investment market grows significantly.

These factors, taken together with the needs and opportunities for financing in the Muslim world—including for infrastructure and energy, and the liquidity of the Middle East and North Africa investors likely to be interested²⁸¹—create a strong impetus to utilize a “green *ṣukūk*.” Various current initiatives to bring environmental concerns into the realm of finance are underway, and each has its own merits and conceptions of environmental sustainability and social responsibility. Under these broad frameworks, financiers, investors and project sponsors may work together to establish compliance machinery, including standards that define and effect the overall goals of environmental sustainability and social responsibility.

277. *Id.* at 29-44.

278. See CLIMATE BONDS INITIATIVE REPORT, BONDS AND CLIMATE CHANGE: THE STATE OF THE MARKET IN 2014, at 3, 5 (July 2014), available at <http://www.climatebonds.net/files/files/-CB-HSBC-15July2014-A4-final.pdf> (primarily in the transport, energy, and finance sectors); CLIMATE BONDS INITIATIVE REPORT, BONDS AND CLIMATE CHANGE: THE STATE OF THE MARKET IN 2012, at 4-5 (June 2012), available at http://www.climatebonds.net/files/uploads/2012/05/CB-HSBC_Final_30May12-A3.pdf.

279. HSBC GLOBAL RESEARCH, SIZING THE CLIMATE ECONOMY 4 (2010), available at http://www.ens.dk/sites/ens.dk/files/politik/groen-vaekst-danmark/stort-globale-groenne-marked/sizing_the_climate_economy.pdf.

280. *PRI Fact Sheet*, UNITED NATIONS PRINCIPLES OF RESPONSIBLE INVESTMENT, <http://www.unpri.org/news/pri-fact-sheet/> (last visited Feb. 20, 2015); *Signatories to the Principles for Responsible Investment*, UNITED NATIONS PRINCIPLES OF RESPONSIBLE INVESTMENT, <http://www.unpri.org/signatories/signatories/> (last visited 10 Jan., 2015). See generally RICHARDSON, *supra* note 181, at 257 (stating “The UNPRI do not require a signatory to demonstrate any specific SRI performance standards with regard to human rights or environmental protection. They also lack compliance machinery and signatories are not obliged to report publicly on their performance.”). For more information on the UNPRI, see PRI ANNUAL REPORT 2013 (2013) available at <http://d2m27378y09r06.cloudfront.net/viewer/?file=wp-content/uploads/AnnualReport20131.pdf>.

281. We do not limit this interest to Islamic investors for there may very well be conventional investors, such as sovereign wealth funds, that will invest in given instances in an Islamic manner.

A. SKETCHING A FRAMEWORK

In November 2011, the Climate Bonds Initiative (“CBI”), an investor-focused non-profit organization dedicated to addressing ways in which bond markets can prevent, stop, or mitigate climate change, launched the Climate Bond Standards and Certification Scheme.²⁸² This initiative is particularly interesting because of the certification framework and enforcement mechanism it constructs. By ensuring that proceeds flow to eligible projects and are backed by eligible assets, the Scheme intends to provide confidence to funds that further a low-carbon and climate-resilient economy.²⁸³ Supported projects must fit within a working definition of a low-carbon economy, which includes “[d]eveloping low-carbon industries, technologies and practices that achieve resource efficiency consistent with avoiding dangerous climate change.”²⁸⁴ These expressly include wind and solar energy initiatives, for which CBI provides technical standards.²⁸⁵ The CBI certification process requires a bond issuer to engage an approved third-party verifier to review compliance with the Climate Bond Standards and applicable environmental laws.²⁸⁶ The CBI issues a certification mark to compliant bonds, which may be marketed to investors as “Climate Bonds.” Issuers must then annually certify compliance to the CBI Board and provide bondholders with details of the connection between the project and funds generated by the Climate Bond. A bond issuer is obliged to cease using the certification mark and disclose to the CBI Board and bondholders if it discovers that the CBI Standards have been breached. Furthermore, interested parties can allege a breach of CBI Standards to the CBI Board, which may require a new report by a second verifier for the issuer to maintain the certification mark.²⁸⁷

282. Climate Bond Certified, *Standard Launch*, <http://www.climatebonds.net/standards/about/history/launch> (last visited Feb. 20, 2015). Its members include institutional investors and leading environmental NGOs such as the California State Teachers’ Retirement System (CalSTRS), the Natural Resources Defense Council, the California State Treasurers’ Office, the Investor Group on Climate Change (IGCC), the Carbon Disclosure Project, and the Ceres Investor Network on Climate Risk (INCR).

283. The Scheme is applicable to project, portfolio, corporate (in which proceeds are subjected to “ring-fencing” rules), and sovereign bonds.

284. CLIMATE BOND INITIATIVE, *Climate Bond Standard Version 1.0 Prototype*, (Nov. 2011) at 2, available at http://standards.climatebonds.net/wp-content/uploads/2011/11/ClimateBondStandard_Text_24Nov11.pdf.

285. *Id.*; see also CLIMATE BOND INITIATIVE, *Climate Bond Standard and Certification Scheme: Solar Technical Working Group, Solar Eligibility Criteria and Guidelines, Proposed Criteria—Part One* (June 2013), available at http://standards.climatebonds.net/wp-content/uploads/2013/08/SolarTWG_CriteriaPart1_8Jul13_final.pdf. For further background on the CBI Solar Criteria, see CLIMATE BOND INITIATIVE, *Solar Energy and the Climate Bond Standard: Background Paper to Eligibility Criteria, Solar Technical Working Group* (July 2013), available at http://standards.climatebonds.net/wpcontent/uploads/2013/08/SolarTWG_BackgroundPaper_8July13_final.pdf (last visited Jan. 29, 2015). The CBI has announced that technical standards for (i) low-carbon transport; (ii) water; (iii) bioenergy; and (iv) sustainable agriculture & forestry, are in the process of being completed, with technical criteria for (v) green buildings soon to be announced. CLIMATE BOND INITIATIVE, *Standard*, available at <http://www.climatebonds.net/standards/standard>.

286. CLIMATE BOND INITIATIVE, *supra* note 284, at 6.

287. *Id.*; CLIMATE BOND INITIATIVE, *supra* note 284.

In relation to the Climate Bond framework, it is worth noting that in 2012, the CBI came together with the Clean Energy Business Council of the Middle East and North Africa²⁸⁸ and Dubai-based Gulf Bond & Sukuk Association, to establish the Green Sukuk Working Group to promote the idea of a green *ṣukūk* which, in addition to being backed by a fatwā, would meet a low-carbon criterion. However, there are other suitable frameworks, mentioned below, which ought not to be discounted when considering how a green *ṣukūk* should be created.

In January 2014, thirteen major banks²⁸⁹ came together to launch the Green Bond Principles (“GB Principles”),²⁹⁰ which serve as voluntary guidelines for issuing what is referred to as a green bond.²⁹¹ Although the organization recognizes a diversity of opinion on the definition of green projects,²⁹² the GB Principles broadly apply to “projects and activities that promote climate or other environmental sustainability purposes.”²⁹³ The GB Principles explicitly leave it to the bonds’ issuer to “establish a well-defined process for determining how the investments fit within the eligible Green Project categories,” but provide general guidelines for: (1) use of proceeds; (2) the process for project evaluation and selection; (3) management of proceeds; and (4) a system of reporting containing quantitative and/or qualitative performance indicators.²⁹⁴ Having said this, the GB Principles do present various methods for signatories to go about formulating their assurance methodology when issuing “Green Bonds,” such as: (1) second party expert consultation; (2) publicly available reviews and audits; and/or (3) third party independent verification and or certification.²⁹⁵

One of the more established, and arguably the most robust, environmental financial frameworks is The Equator Principles. The Equator Principles offer another framework to acknowledge the significant role finance has upon the

288. This is an Abu Dhabi-based group with members such as General Electric Co. and GDF Suez SA.

289. Reportedly, this includes Bank of America Corporation, Citigroup, Crédit Agricole CIB, J.P. Morgan Chase, BNP Paribas, Daiwa, Deutsche Bank, Goldman Sachs, HSBC, Mizuho, Morgan Stanley, Rabobank, and SEB. Sean Kidney, *1/2: Thirteen major banks issue “Green Bond Principles” to guide development of Green Bonds market. This is Big! Read media statement & full text here; Climate Bond Standards Board comment in next email*, CLIMATE BOND INITIATIVE, (Jan. 14, 2014), available at <http://www.climatebonds.net/2014/05/12-thirteen-major-banks-issue-%E2%80%9Cgreen-bond-principles%E2%80%9D-guide-development-green-bonds#sthash.IZBaApjm.dpuf>.

290. CERES, GREEN BOND PRINCIPLES 2014 (2014), available at <http://www.ceres.org/resources/reports/green-bond-principles-2014-voluntary-process-guidelines-for-issuing-green-bond>.

291. *Id.* at 2 (the GB Principles provide for four types of “Green Bonds”: (i) a Green Use of Proceeds Bond; (ii) a Green Use of Proceeds Revenue Bond; (iii) a Green Project Bond; and (iv) a Green Securitized Bond).

292. *Id.* at 1.

293. *Id.* at 2. However, at page 3, the *GB Principles* state that it recognizes several broad categories of potential eligible Green Projects for the use of proceeds including, but not limited to: (i) renewable energy; (ii) energy efficiency (including efficient buildings); (iii) sustainable waste management; (iv) sustainable land use (including sustainable forestry and agriculture); (v) biodiversity conservation; (vi) clean transportation; and (vii) clean water and/or drinking water.

294. *Id.* at 3-6.

295. *Id.* at 5.

Earth and its communities. These principles aim to make financial institutions responsible by establishing benchmarks for assessing and managing environmental and social risk in projects.²⁹⁶ Currently, eighty financial institutions in thirty-four countries signed onto the Equator Principles, covering over seventy percent of international project finance debt in emerging markets.²⁹⁷

To propose financing a project, signatories must undertake environmental and social due diligence “commensurate with the nature, scale and stage of the Project.”²⁹⁸ The Equator Principles offer three categories: “A” indicates high risk projects, “B” medium, and “C” low risk based on the type, location, sensitivity and scale of the project, as well as the nature and magnitude of its potential environmental and social impacts. Principle 2 requires borrowers or other clients to address issues identified during categorization by preparing Environmental Social Impact Assessments for category A or B projects. Principle 3 requires assessment documentation to include the project’s overall compliance with local law, the World Bank Group’s Environmental, Health, and Safety (“EHS”) Guideline,²⁹⁹ and applicable IFC Performance Standards,³⁰⁰ the latter two providing detailed technical criteria, specific rules, and implementation guide-

296. We are focused in this Article on environmental issues. Unfortunately, the social impact (also highly relevant and equally important under classical Islamic law) is beyond our purview.

297. EQUATOR PRINCIPLES ASS’N, *About the Equator Principles*, available at <http://www.equator-principles.com/index.php/about-ep> (last visited Feb. 20, 2015). Following the release of the draft Equator Principles III (“EP III”) on August 13, 2012 a final version of EP III was approved by the signatory financial institutions to the EP (EPFIs) on April 26, 2013. EP III came into force on June 4, 2013. EP III has further extended the range of projects, which are subject to the Principles (which now covers consideration over human rights, in addition to environmental and social impact concerns). The EP framework now also apply to project-related corporate loans which meet the criteria that: (a) the loan is related to a single project; (b) the total aggregate loan amount is at least \$100 million; (c) the EPFI’s individual initial exposure is at least \$50 million; (d) the loan tenor is at least two years; and (e) the borrower has “effective operational control” (either direct or indirect) over the relevant project, and bridge loans with a tenor of less than two years that are intended to be refinanced by project finance or project-related corporate loan. There is an express exclusion of export finance in the form of supplier credit (because the borrower has no effective operational control) and other financial instruments that do not finance an underlying project. This change marks a major development in the EP framework and attempts to address the issue of projects being disguised as corporate loans to avoid compliance with the EP framework. Once these threshold levels are satisfied, the EP framework lays down specific criteria, which a project should satisfy as a condition to obtaining financing; See EQUATOR PRINCIPLES ASSOCIATION, *The Equator Principles 3-4*, (June 2013), available at http://www.equator-principles.com/resources/equator_principles_III.pdf. On July 21, 2014, The Equator Principles Association (EPA) launched an Implementation Note on the EPs; EQUATOR PRINCIPLES ASSOCIATION, *The Equator Principles Implementation Note* (July 2014), available at http://www.equator-principles.com/resources/equator_principles_implementation_note_july_2014.pdf.

298. EQUATOR PRINCIPLES ASSOCIATION, *supra* note 297, at 5 (Principle 1).

299. Principle 3 states that during the environmental assessment, for Projects located in “Non-Designated Countries” the assessment shall evaluate “compliance with the then applicable IFC [International Finance Corporation] Performance Standards on Environmental and Social Sustainability (Performance Standards) and the World Bank Group EHS Guidelines. *Id.* at 6. Exhibit III of the EPs states that the EHS Guidelines are “technical reference documents containing examples of Good International Industry Practice (GIIP) as described in the IFC Performance Standards.” *Id.* at 21-23. They contain the performance levels and measures that are normally considered acceptable for Projects in Non-Designated Countries, as well as being achievable in new facilities at reasonable costs by existing technology.” For clarity, “Non-Designated Countries” are

lines for many industries. Principle 2 requires “less Greenhouse Gas (GHG) intensive alternatives” analysis for all projects whose carbon emissions are expected to be more than one hundred thousand tons of CO₂-equivalent annually.³⁰¹ Principle 4 calls for signatories’ clients to prepare or commission action plans to respond to assessment conclusions for category A or B projects. Under Principle 9, signatories must ensure “ongoing monitoring” and reporting after financial close and throughout the financing term.³⁰²

To improve compliance, Principle 7 requires an independent review of the assessment, plan and stakeholder engagement efforts. This independent review will propose a suitable action plan to bring the project into compliance with the Equator Principles. Independent reviews as well as certain reporting obligations survive the close of project financing.³⁰³ The Equator Principles reinforce

defined as “those countries not found on the list of Designated Countries on the Equator Principles Association website.” *Id.* at 18. The World Bank Group’s EHS Guidelines 2007 framework is made up of two guideline categories: (i) The General EHS Guidelines contain information on cross-cutting environmental health, and safety issues applicable to all industry sectors, sub-divided into (a) environmental, (b) occupational health and safety, (c) community health and safety and (d) construction and decommissioning guidelines; and (ii) detailed industry specific guidelines addressing 62 different sectors falling under the following general category headings: (a) forestry, (b) agribusiness/food production, (c) chemicals, (d) oil and gas, (e) infrastructure, (f) general manufacturing, (g) mining, and (h) power (which does address certain renewable energy sectors). INT’L FIN. CORP., *Environmental, Health, and Safety (EHS) Guidelines*, at 1 (Apr. 30, 2007), <http://www.ifc.org/wps/wcm/connect/554e8d80488658e4b76af76a6515bb18/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES> (last visited Jan. 13, 2015). *See generally* INT’L FIN. CORP., *IFC Sustainability Framework* (Jan. 1, 2013), available at http://www.ifc.org/wps/wcm/connect/b9dadb004a73e7a8a273ff998895a12/IFC_Sustainability_Framework.pdf?MOD=AJPERES (last visited Jan. 13, 2015).

300. The IFC’s Performance Standards on Environmental and Social Sustainability were updated in 2012. They are referred to, with the World Bank Group’s EHS Guidelines, in Principle 3 at 6 and Exhibit III at 21-23. These Standards “are directed towards clients, providing guidance on how to identify risks and impacts, and are designed to help avoid, mitigate, and manage risks and impacts as a way of doing business in a sustainable way, including stakeholder engagement and disclosure obligations of the client in relation to project-level activities.” There are currently eight performance standards addressing: (i) assessment and management of environmental and social impacts, (ii) labor and working conditions, (iii) resource efficiency and pollution prevention, (iv) community health, safety, and security, (v) land acquisition and involuntary resettlement, (vi) biodiversity conservation and sustainable management of living natural resources, (vii) indigenous peoples, and (viii) cultural heritage. INT’L FIN. CORP., *Performance Standards on Environmental and Social Sustainability*, at 1 (Jan. 1, 2012), available at http://www.ifc.org/wps/wcm/connect/115482804a0255db96fbffd1a5d13d27/PS_English_2012_Full-Documents.pdf?MOD=AJPERES. For each standard, the IFC have provided Guidance Notes that provide further detail. *See* INT’L FIN. CORP., *International Finance Corporation’s Guidance Notes: Performance Standards on Environmental and Social Sustainability* (Jan. 1, 2012), available at http://www.ifc.org/wps/wcm/connect/e280ef804a0256609709ffd1a5d13d27/GN_English_2012_Full-Documents.pdf?MOD=AJPERES (last visited Jan. 13, 2015).

301. EQUATOR PRINCIPLES ASS’N, *EPs*, *supra* note 297, Principle 2 at 5-6 and Principle 10 at 10-11 (explaining that in calculating this amount, reference is made to Scope 1 and Scope 2 Emissions. These are defined in Exhibit I of the *EPs*, at page 19, as “direct GHG emissions from the facilities owned or controlled within the physical Project boundary” and “indirect GHG emissions associated with the off-site production of energy used by the Project” respectively. Annex A of the *EPs*, at page 12, goes into further detail on the “alternative analysis,” making specific reference to the EHS Guidelines).

302. *Id.* at 10 (Principle 9).

303. *Id.* at 8 (Principle 7).

compliance by requiring the inclusion of covenants in the underlying contractual documentation.³⁰⁴

The Equator Principles obligate the borrower or client to establish an “understandable and transparent” and “culturally appropriate” grievance mechanism that affected communities may utilize “at no cost, and without retribution to the party that originated the issue or concern.”³⁰⁵ Affected communities “are local communities, within the Project’s area of influence, directly affected by the Project,”³⁰⁶ that must be informed of the grievance mechanism in the stakeholder engagement process under Principle 5.³⁰⁷

Although signing the Equator Principles is voluntary, even non-signatories need to consider a number of relatively new standards that have recently been introduced, including the U.N. “Protect, Respect, Remedy” framework and guidance,³⁰⁸ the Organization for Economic Co-operation and Development Guidelines on Multinational Enterprises,³⁰⁹ the ISO 26000 Guidance on Social

304. *Id.* at 10 (Principle 10).

305. *Id.* at 8 (Principle 6).

306. *Id.* at 15. (Exhibit I). Note that:

A Project is a development in any sector at an identified location. It includes an expansion or upgrade of an existing operation that results in a material change in output or function. Examples of Projects that trigger the Equator Principles include, but are not limited to; a power plant, mine, oil and gas Projects, chemical plant, infrastructure development, manufacturing plant, large scale real estate development, real estate development in a Sensitive Area, or any other Project that creates significant environmental and/or social risks and impacts. In the case of Export Credit Agency supported transactions, the new commercial, infrastructure or industrial undertaking to which the export is intended will be considered the Project.

Id. at 18.

307. *Id.* at 7 (Principle 5). For Category A and Category B projects, EPs require that the EPFI satisfy itself that the borrower has consulted in a meaningful way with affected groups, including indigenous peoples, disadvantaged or vulnerable groups, and local NGOs (non-governmental organizations):

For all Category A and Category B Projects, the EPFI will require the client to demonstrate effective Stakeholder Engagement as an ongoing process in a structured and culturally appropriate manner with Affected Communities and, where relevant, Other Stakeholders. For Projects with potentially significant adverse impacts on Affected Communities, the client will conduct an Informed Consultation and Participation process. The client will tailor its consultation process to: the risks and impacts of the Project; the Project’s phase of development; the language preferences of the Affected Communities; their decision-making processes; and the needs of disadvantaged and vulnerable groups. This process should be free from external manipulation, interference, coercion and intimidation.

Id.

308. U.N. *Guiding Principles*, BUS. & HUMAN RIGHTS RESOURCE CTR., <http://www.business-humanrights.org/SpecialRepPortal/Home/Protect-Respect-Remedy-Framework/GuidingPrinciples> (last visited Jan. 13, 2015) (showing the full text of the Guiding Principles developed by Professor John Ruggie, U.N. Special Representative on Business and Human Rights).

309. The Organization for Economic Co-operation and Development Guidelines for Multinational Enterprises are far-reaching recommendations for responsible business conduct that 43 adhering governments—representing all regions of the world and accounting for 85% of foreign direct investment—encourage their enterprises to observe wherever they operate. ORG. FOR ECON. CO-OP. AND DEV., *GUIDELINES FOR MULTINATIONAL ENTERPRISES*, (May 25, 2011), available at <http://www.oecd.org/corporate/mne/48004323.pdf> (last visited Jan.

Responsibility,³¹⁰ and the Natural Capital Declaration Commitments launched at the Rio 20+ Conference in June 2012.³¹¹ The last of these initiatives tackles the broader financial sector beyond project finance, and is intended to be complementary to: (1) the Equator Principles; (2) the U.N. Principles for Responsible Investment;³¹² and (3) the U.N. Environment Programme Finance Initiative Principles for Sustainable Insurance³¹³—and is intended to accomplish a similar transformation in the insurance and reinsurance sectors as the U.N. Principles for Responsible Investment.

B. FILLING IN THE DETAILS

In this Section, we present selected standards of the International Finance Corporation (“IFC”) Green Bonds program with which a participating financier must comply to be deemed sufficiently considerate of the environment.³¹⁴ This

13, 2015). These guidelines were updated in 2011 for the fifth time since they were first adopted in 1976. *Id.*

310. INT'L ORG. FOR STAND., *Guidance on Social Responsibility*, ISO 26000:2010(E) (Nov. 1, 2010), available at http://www.iso.org/iso/iso_catalogue/management_and_leadership_standards/social_responsibility/iso26000 (the standard provides harmonized, globally-relevant guidance for private and public sector organizations of all types based on international consensus among expert representatives of the main stakeholder groups, and so encourages the implementation of best practice in social responsibility worldwide).

311. The Natural Capital Declaration is a statement by and for the financial sector demonstrating its leadership and commitment at the Rio 20+ Earth Summit to work towards integrating natural capital considerations to lending, investment, and insurance products and services. It is also a call by financial institutions to governments to develop the regulatory frameworks to stimulate businesses, including in financial institutions, to integrate, value, and account for natural capital in a company's business operations by means of disclosure, reporting, and fiscal measures. See *The Natural Capital Declaration*, NATURAL CAPITAL DECLARATION, available at <http://www.naturalcapitaldeclaration.org/wp-content/uploads/2012/04/NaturalCapitalDeclaration.pdf> (last visited Feb. 20, 2015).

312. See *The Six Principles*, PRINCIPLES FOR RESPONSIBLE INVESTMENT, <http://www.unpri.org/about-pri/the-six-principles/> (last visited Feb. 20, 2015).

313. See U.N. ENV'T PROGRAMME FIN. INITIATIVE, PRINCIPLES FOR SUSTAINABLE INSURANCE, (June 2012), available at <http://www.unepfi.org/psi/wp-content/uploads/2012/06/PSI-document1.pdf>.

314. See INT'L FIN. CORP., GREEN BONDS (2014), available at <http://www.ifc.org/wps/wcm/connect/70affa804325e550a46ecc384c61d9f77/Green+Bonds+March+2014+final.pdf?MOD=AJPERES>. There are certainly others we could discuss as well, such as the Carbon Disclosure Project and World Bank's Green Bond program. The Carbon Disclosure Project is an organization currently backed by more than 767 institutional investors representing an excess of \$92 trillion in assets committed to both the disclosure and reduction of greenhouse gas emissions. See CDP Signatories and Members, CARBON DISCLOSURE PROJECT, <https://www.cdp.net/en-US/Programmes/Pages/Members-List.aspx> (last visited Jan. 6, 2015). More directly, the World Bank's Green Bond enables investors to support World Bank lending for energy-efficient real property, waste management, mass transit, food security, and flood protection systems. See Implementation Guidelines—Five Key Elements of the World Bank Green Bond Process, WORLD BANK, <http://treasury.worldbank.org/cmd/htm/WorldBankGreenBonds.html> (last visited Feb. 20, 2015). Since product inception in 2008, the World Bank has issued approximately \$7 billion in green bonds across 17 currencies and 77 transactions. *Green Bond Issuances to Date*, WORLD BANK, <http://treasury.worldbank.org/cmd/htm/GreenBondIssuancesToDate.html> (last visited Jan. 10, 2015). Eligible projects are selected by the World Bank's environmental specialists and meet defined World Bank criteria for low-carbon and climate resilient development. These criteria are subject to review by the Center for International Climate and Environmental Research at the University of Oslo. According to the Center's opinion, “The criteria combined with the proposed governance structure from the World Bank, provides a sound basis for

program corresponds with Islamic norms and Islamic investors and financial institutions can adopt similar standards to support Islam's green principles.

Since 2010, the IFC has raised almost \$3.7 billion in green bonds, and in February 2013, it issued perhaps the largest green bond issuance to date at nearly \$1 billion, along with another \$1 billion in November 2013, while applying the IFC Performance Standards.³¹⁵ In June 2014, the IFC launched \$500 million Renminbi-denominated "green" "dim-sum" bonds supporting China's capital markets.³¹⁶ Areas addressed within these standards include resource efficiency, greenhouse gases, water consumption, and wastes.³¹⁷ The IFC issues guidance to help explain and delineate these standards.³¹⁸ These specifics aim to define and assist the broader policy goals of environmental sustainability.

C. FINDING CONGRUENCE WITH ISLAMIC ETHICS

Contemporary Islamic finance can use or adapt the general frameworks of the CBI, the GB Principles, and the Equator Principles as mechanisms to support projects seeking to fulfill Islam's environmental ethics and laws. The CBI framework provides for a means of verification, audit, certification, and redress of stakeholder grievances. The GB Principles establish a broad and flexible set of guidelines for institutions seeking to support "green" projects. The Equator Principles urge participating financial institutions and projects toward a common goal requiring diligence, reporting, and independent review and assessment.

The Equator Principles framework seems technically robust because it incorporates the extensive IFC Performance Standards and the EHS Guidelines. Furthermore, it requires stakeholder consideration, engagement, and binding contractual commitments. The requirements of independent review, disclosure, and grievance proceedings enforce Islamic principles because they formalize an ethical

selecting climate-friendly projects." *The World Bank Green Bond Process Implementation Guide*, WORLD BANK, 1, <http://treasury.worldbank.org/cmd/pdf/ImplementationGuidelines.pdf> (last visited Feb. 20, 2015). Although the Center's website references criteria, they are not publicly available. Email from the Center to the authors (Mar. 24, 2014) (on file with author).

315. See CERES, *supra* note 291; *Green Bonds Attract Private Sector Climate Finance*, WORLD BANK (Jan. 5, 2015), <http://www.worldbank.org/en/topic/climatechange/brief/green-bonds-climate-finance>.

316. Alan Klöpfer, *IFC Issues First Renminbi-Denominated Green Bonds, Supporting China's Capital Markets and Climate-Friendly Investments*, INT'L FIN. CORP. (June 17, 2014), <http://ifcext.ifc.org/ifcext/pressroom/IFCPressRoom.nsf/0/FC77F4FC8451405685257CFA004C56D3>.

317. IFC Performance Standard 3: Resource Efficiency and Pollution Prevention, INT'L FIN. CORP. 2-3 (Jan. 1, 2012), http://www.ifc.org/wps/wcm/connect/25356f8049a78eeb804faa8c6a8312a/PS3_English_2012.pdf?MOD=AJPERES.

318. INT'L FIN. CORP., *Guidance Note 3: Resource Efficiency and Pollution Prevention*, INT'L FIN. CORP. 6 (Jan. 1, 2012), available at http://www.ifc.org/wps/wcm/connect/9187330049800a6baa9cfa336b93d75f/Udated_GN3-2012.pdf?MOD=AJPERES (options include "changes to reduce material use, . . . sustainable agricultural practices . . . , material recycling[,] . . . use of low-carbon fuels, GHG leakage avoidance or minimization[,] . . . reduction of gas flaring, landfill gas collection and combustion, and multiple energy efficiency and renewable energy measures.").

commitment in a legal manner that provides information and engenders accountability.³¹⁹ These requirements can effectively determine and sustain compliance with norms aimed at supporting foundational texts of the Shari'ah. The Equator Principles put regulation in the hands of lenders and financiers, although independent third party involvement is still required in (1) conducting the environmental and social impact assessment, (2) the environmental and social plan, and (3) regular on the project to ensure that construction and operations adequately adhere to the plan.³²⁰ The CBI framework, on the other hand, provides for an independent third party certification mechanism through the Certification Mark. Although the CBI model now contains compliance guidelines for only solar and wind power,³²¹ CBI is working on standards for other projects.³²² The Islamic finance industry may consider what role newly formed bodies comprised of Shari'ah *advisors* and other technical experts may serve in compliance review and grievance complaints.

It is worth noting that in one of the largest *ṣukūk* markets, Malaysia, the financial regulator (*Suruhan Sekuriti*—Securities Commission Malaysia) recently took the lead in issuing guidelines for “SRI Sukuk,” which have been incorporated into the existing general Malaysian *ṣukūk* framework.³²³ Although the guidelines cover a broad range of eligible projects, they do specifically include projects that (1) preserve and protect the environment and natural resources; (2) conserve the use of energy; (3) promote the use of renewable energy; (4) reduce greenhouse gas emission; or (5) improve the quality of life for the society.³²⁴ The Malaysian SRI *ṣukūk* guidelines provide a list of specific examples for projects falling under the aforementioned categories, which includes investment within trusts and endowments created under Islamic law (*waqf*).³²⁵ The Malaysian SRI *ṣukūk* guidelines impose a disclosure requirement

319. The commitment of an Islamic investor to the Equator Principles could be cemented by linking such a commitment to the Shari'ah, as could be evidenced by decision and appropriate action of its Shari'ah advisor.

320. Douglas Sarro, *Do Lenders Make Effective Regulators? An Assessment of the Equator Principles on Project Finance*, 13 German L.J. 1522, 1524, 1535 (Dec. 1, 2012) (According to Sarro, regulation consists of standard setting, monitoring, and enforcement, and generally a regulator is effective if it is independent, possesses relevant expertise, and follows procedures perceived as fair). *See supra* notes 303-07.

321. CLIMATE BONDS INITIATIVE, *Climate Bond Standard*, available at http://www.climatebonds.net/files/page/files/climatebondstandard_text.pdf (last visited Feb. 20, 2015).

322. CLIMATE BONDS INITIATIVE, *Standards*, <http://www.climatebonds.net/standards/standard> (last visited Jan. 13, 2015). *See supra* note 285.

323. SECURITIES COMMISSION MALAYSIA, *SC Introduces Sustainable and Responsible Investment Sukuk framework* (Aug. 28, 2014), http://www.sc.com.my/post_archive/sc-introduces-sustainable-and-responsible-investment-sukuk-framework/.

324. SEC. COMM'N MALAYSIA, *GUIDELINES ON SUKUK 40 (2014)*, available at http://www.sc.com.my/wp-content/uploads/eng/html/resources/guidelines/bondmkt/sukukGuidelines_140828.pdf.

325. *Id.* at 40-41. Examples include, amongst other things, (i) sustainable land use; (ii) sustainable forestry and agriculture; (iii) biodiversity conservation; (iv) remediation and redevelopment of polluted or contaminated sites; (v) water infrastructure, treatment and recycling; (vi) sustainable waste management projects; (vii) new or

detailing the eligible SRI project if a prospectus is issued, complete with a statement that the project has “complied with the relevant environmental, social and governance standards or recognized best practices relating to the Eligible SRI project.”³²⁶ However, there does not appear to be further guidance on what these best practices may be, or whether (and if so which) international standards may be applicable. As with the Equator Principles and the CBI framework, an independent party must be appointed to undertake an assessment, which may be included in full within the prospectus/offering document.³²⁷ Although a şukūk has yet to be issued under the Malaysian SRI şukūk guidelines, Khazanah Nasional Bhd (Malaysia’s state-owned sovereign wealth fund) has recently announced that it is considering issuing a benchmark sized Ringgit-denominated şukūk under the new SRI guidelines to finance education or renewable energy businesses.³²⁸ The Malaysian SRI şukūk framework is a pioneering example that, according to Nik Ramlah Mahmood, deputy chief executive officer at Securities Commission Malaysia, was a response to the rising trend in green bonds.³²⁹

The IFC’s broader policy goals of environmental care and consciousness and the related goals of CBI and the Equator Principles parallel those of Islam. Islam may very well be more detailed in its ethical coverage of natural resources and ecosystems, but that coverage requires further study to be applied to contemporary contexts. The Islamic finance industry may use the IFC’s standards and detailed implementing guidance to support realization of Islam’s environmental legal-ethics and may take inspiration from the Malaysian SRI şukūk guidelines.³³⁰

D. MARKET OPPORTUNITIES

Muslim communities across the globe have already begun to take environmentally friendly steps through the development of “eco-mosques” and carbon-conscious local communities.³³¹ In addition to local activism in various Muslim

existing renewable energy (solar, wind, hydro, biomass, geothermal and tidal); (viii) efficient power generation and transmission systems; and (ix) energy efficient which results in the reduction of greenhouse gas emissions or energy consumption per unit output. For further information on *waqf*, see *supra* note 88.

326. *Id.* at 41.

327. *Id.* at 42. Under the Malaysian SRI şukūk guidelines, the obligation for an independent assessor is only imposed in the case of an offering to retail clients. In the case of professional client offerings, this is optional.

328. Elffie Chew, *Malaysia Green Sukuk Gets Kazanah Debut Boost: Islamic Finance*, BLOOMBERG (Nov. 25, 2014), available at <http://www.bloomberg.com/news/articles/2014-11-25/malaysia-green-sukuk-gets-khazanah-debut-boost-islamic-finance>.

329. *Id.*

330. Some aspects of Islamic law cannot be implemented on an individual project or investment basis. For instance, collective water rights under Islam cannot be enforced widely in a particular jurisdiction by oversight over one particular transaction or project. However, a Shari’ah-compliant investor may choose to respect this law when they utilize and share water resources within the jurisdiction where a project is located.

331. See IBRAHIM ABDUL-MATIN, GREEN DEEN: WHAT ISLAM TEACHES ABOUT PROTECTING THE PLANET 70 (2010) (exploring developments in the United States, such as the All Dulles Area Muslim Society Center

communities around the world, Muslim-majority countries have started to improve renewable or “green” energy projects. In late 2012, Australian solar companies Solar Guys International and Mitabu raised \$100 million (the first tranche of \$500 million) for a 50-megawatt photovoltaic project in Indonesia by way of *ṣukūk*. The project, which was fully funded under a Power Purchase Agreement (PPA) model, is the first phase of the Indonesian “One Solar Watt Per Person” program.³³² This renewable energy project was reported to be funded by green *ṣukūk*,³³³ and likely was environmentally friendly. However, no reporter established that the project adhered to definite green criteria.³³⁴

Market opportunities in traditional geographies of the *ṣukūk* investor base, particularly in renewable energy, are also starting to develop. Large-scale renewable energy projects span the wider Middle East and North Africa, particularly Morocco, Egypt, and Jordan.³³⁵ Three initiatives that could benefit from green *ṣukūk* funding include the King Abdullah City for Atomic and Renewable Energy, the Abu Dhabi Vision 2030, and the Dubai Integrated Energy 2030 Strategy.

mosque just outside Washington, D.C., which released a Guide for Propagation of a Green Muslim Identity); *id.* at 38 (Indonesia’s eco-mosques and clean energy funding); *U.S. Pledges \$136M in Climate Aid to Indonesia*, SUSTAINABLEBUSINESS.COM (June 29, 2010, 11:59 AM), <http://www.sustainablebusiness.com/index.cfm/go/news.display/id/20585> (last visited Jan. 13, 2015); Sophie Gilliat-Ray & Mark Bryant, *Are British Muslims ‘Green’? An Overview of Environmental Activism among Muslims in Britain*, 5(3) J. FOR THE STUDY OF RELIGION, NATURE & CULTURE 284 (2011); *Europe’s First Eco-Mosque*, CAMBRIDGE MOSQUE PROJECT, <http://www.cambridgemosqueproject.org/about-2/eco-mosque/> (last visited Feb. 20, 2015) (“‘We are using the latest conservation technology and green roofs so that we’ll have an almost zero carbon footprint,’ remarks [chairman of the Muslim Academic Trust, Tim] Winter.”); see Ahmed Shaaban, *Dh20-Million Green Mosque Opens in Dubai* (July 19, 2014), http://www.khaleejtimes.com/kt-article-display1.asp?xfile=data/ramadannews/2014/july/ramadannews_july130.xml§ion=ramadannews (the Emirate of Dubai in the U.A.E. recently opened its first eco-friendly mosque). See generally Dr. Abou Bakr Ahmed Ba Kader, et al., *Basic Paper on the Islamic Principles for the Conservation of the Natural Environment*, 20 INT’L UNION FOR CONSERVATION OF NATURE ENVTL. POL’Y & L. PAPER (1983) (Switz.), available at <https://portals.iucn.org/library/efiles/documents/EPLP-020.pdf>.

332. Sean Kidney, *Innovative Australians Use \$100m Green Sukuk to Fund 50MW of Indonesian PV Plants*, CLIMATE BONDS INITIATIVE (Nov. 27, 2012), <http://www.climatebonds.net/2014/05/innovative-australians-use-100m-green-sukuk-fund-50mw-indonesian-pv-plants> (last visited Jan. 6, 2015).

333. *Id.*

334. See *Solar Guys Tap Islamic Finance for 50MW Indonesia Project*, GULFBASE (Oct. 15, 2012), <http://www.gulfbase.com/news/solar-guys-tap-islamic-finance-for-50mw-indonesia-project/219094>; Sean Drummond, *Solar Guys Shine Light on Islamic Debt Structures*, FINANCIAL REVIEW (Dec. 31, 2012), http://www.afr.com/free/markets/capital/cfo/solar_guys_shine_light_on_islamic_kFQq3nDZV9DFdEnSWXBAYJ (both sources only mention *ṣukūk* as opposed to ‘green’ *ṣukūk*, and do not cite any applicable environmental framework).

335. See e.g. Saadallah Al Fathi, *Morocco Turns Up the Heat on Renewable Energy*, GULFNEWS.COM (Oct. 13, 2013), <http://gulfnews.com/business/opinion/morocco-turns-up-the-heat-on-renewable-energy-1.1242632>; Christopher Coats, *Egypt Moves to Kick-Start Renewable Revolution*, FORBES (Oct. 22, 2012), <http://www.forbes.com/sites/christophercoats/2012/10/22/egypt-moves-to-kick-start-renewable-revolution/>; *Jordan’s Future Energy*, GREENPEACE (2013), available at http://www.greenpeace.org/arabic/PageFiles/481146/Jordan_Report_2013.pdf.

In 2010, Saudi Arabia established the King Abdullah City for Atomic and Renewable Energy. With a population of over twenty-eight million,³³⁶ Saudi Arabia contains the market with the biggest impact and potential in the GCC. In February 2013 the government released a white paper outlining its ambitious plans to produce and invite interest in 54,000 megawatts (MW) of renewable energy by 2032—worth more than \$60 billion.³³⁷

The Abu Dhabi Vision 2030 would have non-oil sectors of the economy (including petrochemicals) make up 64% of the emirate's Gross Domestic Product ("GDP") by 2030.³³⁸ At the World Future Energy Summit in 2009, Abu Dhabi also announced a target of generating 7% of its energy capacity with renewable sources by 2020.³³⁹ In addition to its ambitious nuclear energy program,³⁴⁰ Abu Dhabi's energy mix is being met with a combination of solar and wind projects.³⁴¹ International authorities such as the IMF, the World Bank and the U.N. Development Project have recommended the issuance of government bonds to effectuate these fiscal policies,³⁴² an opportunity for sovereign green şukūk. Masdar, a subsidiary of Abu Dhabi's government-owned Mubadala Development Company (a catalyst for the economic diversification of Abu Dhabi), has commissioned renewable wind and solar energy projects and signed a Memorandum of Understanding with the U.K. Green Investment Bank.³⁴³

336. *World Development Indicators: Population Dynamics*, WORLD BANK, <http://wdi.worldbank.org/table/2.1> (last visited Feb. 20, 2015).

337. KING ABDULLAH CITY FOR ATOMIC AND RENEWABLE ENERGY, PROPOSED COMPETITIVE PROCUREMENT PROCESS FOR THE RENEWABLE ENERGY PROGRAM 15-17 (2013), available at <http://kacare.gov.sa/en/wp-content/uploads/K.A.CARE-Proposed-Competitive-Procurement-Process-for-the-Renewable-Energy-Program-2013.pdf> (last visited Feb. 20, 2015).

338. THE GOV'T OF ABU DHABI, ABU DHABI ECONOMIC VISION 2030 30 (2008), available at <http://www.adced.ae/en/PDF/English%20Economic%20Vision%202030-Final.pdf>.

339. Vesela Todorova, *Abu Dhabi's renewable energy target can be reached*, THE NATIONAL (Jan. 13, 2011), <http://www.thenational.ae/news/uae-news/environment/abu-dhabis-renewable-energy-target-can-be-reached>.

340. See generally Emirates Nuclear Energy Corp., Policy of the United Arab Emirates on the Evaluation and Potential Dev. of Peaceful Nuclear Energy (2008), available at <http://www.enec.gov.ae/uploads/media/uae-peaceful-nuclear-energy-policy.pdf>.

341. Such projects include the Shams 1 Solar plant, which is one of the world's largest parabolic-trough Concentrated Solar Power (CSP) plants with 100 MW of capacity. See *Factsheets*, SHAMS POWER CO, <http://www.shampower.ae/en/the-project/factsheets/overview/> (last visited Feb. 20, 2015). Other initiatives include: "Masdar City's 10 MW solar PV array in Abu Dhabi, as well as Masdar City's 1MW rooftop installations. In addition, plans for a 100 MW photovoltaic plant in Al Ain are at an advanced stage, as is the development of a 30 MW onshore wind farm on Sir Bani Yas island." *About Masdar Clean Energy*, MASDAR ENERGY, available at <http://www.masdar.ae/en/energy/detail/masdar-clean-energy-who-we-are> (last visited Nov. 2, 2014).

342. THE GOV'T OF ABU DHABI, *supra* note 338, at 60 (especially considering the traditional independence of GCC countries from government debt, "[t]he [growing] [g]overnment bond market will be an important fiscal policy tool, diversifying revenues toward more stable sources. It will also increase investor confidence in the local financial markets, and provide a risk-free benchmark and yield curve. Moreover, the experience of Ireland, Singapore and Norway demonstrates that governments need not turn to debt only in times of crisis.").

343. See GREEN INV. BANK, <http://www.greeninvestmentbank.com> (last visited Feb. 20, 2015); *Green Investment Bank and Masdar to Form a New Investment Alliance*, GREEN INV. BANK (Apr. 30, 2013),

Masdar has a 20% stake in Phase One of the London Array, one of the largest offshore wind farms in the world—planned to generate up to one gigawatt of electricity.³⁴⁴ This link between the U.A.E. and the U.K. may be a platform for a potential U.K.-listed green *ṣukūk* issuance, especially considering that the U.K. government raised £200 million (approximately \$332 million) in sovereign *ṣukūk* in June 2014.³⁴⁵ Furthermore, the Masdar Institute of Science and Technology recently developed the U.A.E. Wind Atlas, which, to attract investors, offers data on the U.A.E.'s wind patterns between 2003-13.³⁴⁶ The U.A.E. Wind Atlas will complement the award-winning U.A.E. Solar Atlas, which was similarly created to attract investments.³⁴⁷ Capital for such projects may be raised through a green *ṣukūk* issuance.

Formed by the Dubai Supreme Energy Council, the Dubai Integrated Energy 2030 Strategy (“DIES”) plans for solar energy to account for five percent and clean coal for twelve percent of Dubai's total energy mix by 2030. The 1,000-megawatt Mohammed bin Rashid Al Maktoum solar park has already begun construction.³⁴⁸ The Dubai Electricity and Water Authority's Sustainability Report 2013, which was released at the Dubai Clean Energy Forum established in September 2014, states that the solar park will provide “global financial investment opportunities in green finance.”³⁴⁹ The Dubai Carbon Centre of Excellence, established in 2011, is working alongside the Dubai Supreme Energy Council to develop green projects, and it is planning to launch a green investment

<http://www.greeninvestmentbank.com/media-centre/gib-news/green-investment-bank-and-masdar-to-form-new-investment-alliance.html> (the U.K. Green Investment Bank is the first bank of its kind in the world, with £3.8 billion of funding from the U.K. Government to invest in sustainable projects, wind energy, and clean technologies).

344. *The Project*, THE LONDON ARRAY, <http://www.londonarray.com/the-project/> (last visited Feb. 20, 2015); see Sally Bakewell, *Masdar Secures \$424 Million for Largest Offshore Wind Farm*, BLOOMBERG, Oct. 10, 2013, <http://www.bloomberg.com/news/2013-10-10/masdar-obtains-266-million-pound-loan-for-london-wind-farm.html>.

345. U.K. Press Release, *supra* note 265.

346. Samihah Zaman, *UAE Wind Atlas to showcase energy potential*, GULF NEWS (Jan. 19, 2015, 5:57 PM), available at <http://gulfnews.com/news/gulf/uae/environment/uae-wind-atlas-to-showcase-energy-potential-1.1443616>.

347. *Masdar Institute Receives MESA 2013 'Technology' Award for UAE Solar Atlas*, MASDAR (Nov. 21, 2013), <https://www.masdar.ac.ae/component/k2/item/6247-masdar-institute-receives-mesa-2013-technology-award-for-uae-solar-atlas>.

348. UNITED NATIONS DEV. PROGRAMME, STATE OF ENERGY REPORT: DUBAI 2014 (2014), at 35, available at <http://www.undp.org/content/dam/rbas/doc/Energy%20and%20Environment/The%20State%20of%20Dubai's%20Energy%20and%20Its%20Path%20to%20Green%20Economy.pdf>; see Sajila Saseendran, *Shaikh Mohammed Inaugurates Solar Power Park Phase-1*, KHALEEJ TIMES, Oct. 23, 2013, http://www.khaleejtimes.com/kt-article-display-1.asp?xfile=data/nationgeneral/2013/October/nationgeneral_October299.xml§ion=nationgeneral.

349. DUBAI ELECTRICITY & WATER AUTHORITY, SUSTAINABILITY REPORT 2013 82 (2013), available at http://www.dewa.gov.ae/images/DEWA_Sustainability_report.pdf.

program in partnership with the World Bank (as part of the DIES strategy).³⁵⁰ In addition to these plans, the Demand Side Management Strategy will retrofit 30,000 buildings to meet the highest energy efficiency standards.³⁵¹ Plans for clean coal have gone ahead, including an announcement by the Dubai Electricity and Water Authority for a 1,200-megawatt clean coal power station.³⁵² Like The Abu Dhabi Vision 2030, these projects could be financed by şukūk—or green şukūk—with governmental support. These developments and strategies have been fuelled by the Green Economy Initiative for Sustainable Development (launched by the Sheikh of Dubai, H. H. Sheikh Mohammed bin Rashid Al Maktoum), which has six tracks covering (i) renewable energy, clean fuels and energy efficiency; (ii) investments and job creation in green technologies; (iii) green transportation, including sustainable urban planning, transportation and clean air initiatives; (iv) reducing carbon emissions, encouraging organic agriculture and preserving biodiversity; (v) recycling and environmental awareness; and (vi) carbon capture and storage technologies as well as energy from waste projects.³⁵³

In Southeast Asia, Malaysian Amanah Raya Investment Bank worked in 2007 with the Asian Finance Bank to launch an Islamic green fund for the development of environmentally friendly projects in Asia and the Middle East.³⁵⁴ RAM Rating Services Berhad, a leading credit rating services for the Malaysian capital market,³⁵⁵ has announced that it perceives great potential for the green şukūk concept in both Shari’ah-compliant and ethical investment.³⁵⁶

V. ANALYSIS AND RECOMMENDATIONS

To date, Islamic finance has been self-regulating, having methodically adopted standard-setting bodies, certification, and educational mechanisms. This article

350. Press Release, World Bank, Dubai Supreme Council of Energy and World Bank Partner to Design a Funding Strategy for Dubai’s Green Investment Program (Apr. 15, 2014), available at http://treasury.worldbank.org/cmd/htm/IBRD_Dubai_Avisory_Services_Agreement.html.

351. *Id.*

352. Andy Sambidge, *Dubai’s DEWA Shortlists 8 for Clean-Coal Power Project*, ARABIANBUSINESS.COM (Sept. 6, 2014), <http://www.arabianbusiness.com/dubai-s-dewa-shortlists-8-for-clean-coal-power-project-563639.html#.VAtcuF6H2Dk> (last visited Feb. 20, 2015); EBR STAFF WRITER, *DEWA Awards Hassyan Plant Phase 1 IPP Advisory Service Contract*, ENERGY BUS. REVIEW, (Feb. 10, 2014), <http://www.energy-business-review.com/news/dewa-awards-hassyan-plant-phase-1-ipp-advisory-service-contract-100214-4174410>.

353. *Mohammed launches green economy strategy*, HIS HIGHNESS SHEIKH MOHAMMED BIN RASHID AL MAKTOUM, (Jan. 15, 2013), available at <http://www.sheikhmohammed.co.ae/vgn-ext-templating/v/index.jsp?vgnextoid=4d4c8609f31e4310VgnVCM1000004d64a8c0RCRD&vgnextchannel=063e4c8631cb4110VgnVCM100000b0140a0aRCRD&vgnextfmt=default&date=1326649357850&type=sheikh>.

354. *Islamic and ‘Green’ Fund to Be Issued in Malaysia*, THE BRUNEI TIMES, Oct. 4, 2007, http://www.bt.com.bn/business/2007/10/04/islamic_and_green_fund_to_be_issued_in_malaysia.

355. *About RAM Ratings*, RAM RATINGS, http://www.ram.com.my/about_ram_ratings.aspx (last visited Feb. 20, 2015).

356. *RAM Ratings Sees More Upside for Green Sukuk*, THE STAR ONLINE (Sept. 3, 2014), available at <http://www.thestar.com.my/Business/Business-News/2014/09/03/Green-Sukuk-key-to-fund-low-carbon-renewable-energy-economies/>.

asks whether and how the environmental ethics of Islam may be introduced into the contemporary Islamic finance's ethical-legal review process. By the term "ethical-legal review process," we refer to: (1) the study and application of Islamic ethics to a business or financial transaction by a Shari'ah review body; and (2) the creation of broader industry policy goals.

As this article has presented, the Qur'an and Sunnah teach care of the environment. From these sources, Muslim jurists and scholars have constructed a number of ethical-legal determinations that promote sustainable human interactions with the Earth and its diverse inhabitants. These texts and determinations impel the contemporary Islamic finance industry to discuss how best to implement these tenets of the Shari'ah.

In the face of a significant global economic crisis, and given current and future market projections, the world of Islamic finance has an opportunity. Contemporary Islamic finance can expand its scope and protect the natural environment, encourage the proper use of natural resources, and help ensure the well-being of human, plant, and animal life. When it issues *ṣukūk* that meet green standards, the Islamic finance industry can speak to more of the Shari'ah and avail itself of a significant market opportunity. It may also rebut certain critiques of the industry and improve its public image.³⁵⁷ Green *ṣukūk* would convincingly demonstrate the commitment of Islamic finance to welfare and expand common ground with SRI markets.³⁵⁸ Commenting on the recent Malaysian SRI *ṣukūk* guidelines issued by the Securities Commission Malaysia, Zakariya Otham, head of Islamic ratings at RAM Ratings stated that such a financial product would fit well with the social responsible theme because "Islam emphasizes the need to preserve the environment."³⁵⁹

Contemporary Islamic finance has three tools to bring green principles into its legal sphere: (A) standards and structures for transactions and products; (B) criteria for a *fatwā*; and (C) enhanced compliance auditing.³⁶⁰ It is to these we now turn.

357. Sairally, *supra* note 176, at 280-81 (noting that Islamic banks have "[c]laimed to (i) mirror conventional finance by adopting interest-like fixed return instruments; (ii) choose financial products so that they are closest as possible to the efficiency level of conventional financial products while they neglect the equity criteria of concern to Islamic jurists; (iii) direct financial resources into consumption channels rather than into production; (iv) direct the contribution of Islamic finance towards the growth of money rather than the growth of the economy.").

358. *Id.* at 293 (financial practitioners were surveyed, and "those who strongly agreed or [simply] agreed to assign a social responsibility function also favoured the broad definition of Islamic finance incorporating the prohibition of *ribā*, trade without interest, socially acceptable just financial system, and human-oriented, environmentally friendly financial system . . . 63% of Islamic financial practitioners agreed that IFIs [Islamic Financial Institutions] should adopt . . . objectives of SRI funds in their quest for sustainable development.").

359. See Elffie Chew, *supra* note 328.

360. See Malkawi, *supra* note 182, at 560-62 (regarding the audit responsibilities and practices of Shari'ah Boards).

A. STANDARDS AND STRUCTURES

The Shari'ah instructs preservation of all forms of life and property as key goals of Islamic law. To further these policy goals, contemporary Islamic finance must develop or integrate existing detailed standards of environmental care. If new standards are not developed, they could be modeled after those of the IFC and the World Bank's EHS Guidelines, so long as they are deemed consistent (or not inconsistent) with the Shari'ah and Islamic law after proper reflection by those qualified. Such adopted standards may possibly be considered akin to law aimed to implement Islam's ethical-legal principles. It will be critical for this endeavor that experts in Islamic law and ethics combine their expertise with experts of environmental science, renewable energy, and related fields.

Detailed standards are more effective when placed within a framework with compliance audit and verification, certification, ongoing transparency, and a grievance mechanism, like the Equator Principles, the Malaysian SRI şukūk model or the CBI. Next, a body of compliance personnel should be tasked with reviewing compliance and informing the relevant Shari'ah advisors of its findings for scholars to incorporate and rely upon in their fatwās and compliance audits.³⁶¹

A green şukūk may be uniquely established through existing AAOIFI-approved legal structures and the creation of a specific "green" framework, corresponding detailed standards, and an interpretive body of relevant expertise to apply those standards and liaise with Shari'ah advisors. Certain structures where financiers have some property rights may raise concerns of compliance and liability with green criteria because the financed party is typically responsible for asset operations. Financing could be structured so that the financed party holds this responsibility and indemnifies the financier. The financier, in turn, would retain oversight and an ability to enforce through contractual covenants while independently subject to environmental standards.

B. FATWĀ CRITERIA

A fatwā of approval indicates that a particular transaction or product is not proscribed by Islamic law,³⁶² although the fatwā may also express the subject disliked. The fatwā provides comfort to the financial sponsor, investors or customers, and sometimes regulators that a given structure and/or transaction is Shari'ah-compliant.³⁶³

361. MASUD, *supra* note 58, at 296 ("The modest tone of a religious expert who himself seeks the advice of experts in other fields can only strengthen the moral authority of the mufti.").

362. Readers are reminded of the definition of *makrūh*: the commission of such an act does not itself generally lead to punishment. HASAN, *supra* note 47, at 125.

363. See ISLAMIC FIN. COUNCIL, ENHANCING SHARI'AH ASSURANCE 10 (2012), available at <http://www.ukifc.com/wp-content/uploads/Enhancing-Shariah-Assurance-IFC-REPORT.pdf> (last visited Jan. 7, 2015). This

Islam's principles of environmental care and a transaction's projected environmental impact ought to be elements of the ethical-legal review process underlying a fatwā. Consistent with the legal maxims that (1) "there shall be no harm and no reciprocation of harm," and (2) "the law places higher priority on the prevention of harm than it does the achievement of benefit,"³⁶⁴ such consideration could begin with a project's potential negative environmental impact (further to an impact assessment report conducted by environmental experts, as in the case of the Equator Principles). "The avoidance of that which is prohibited is treated by Islamic Law with greater urgency and seriousness than is the performance of that which is commanded."³⁶⁵ Depending on the nature and extent of the demonstrable negative impact, the impact may itself be assessed as "disapproved" (*makrūh*) or prohibited (*ḥarām*) under Islamic law. Evaluation will be case-by-case, and any negative impact must be considered among the totality of relevant factors before a fatwā expresses dislike or prohibition. There may be instances in which a lesser harm is tolerated to avoid a greater harm, and other instances in which harm is tolerated to achieve a greater good, again depending on the facts of a given situation.³⁶⁶ As a particularized legal instrument, a fatwā should not set broader policy goals, but operate within explicit factual and evaluative parameters.³⁶⁷

It may be difficult to require a positive impact upon the environment in order to obtain a fatwā stipulating that the transaction may proceed forward, but positive environmental impact must be established by the industry as a policy goal.³⁶⁸ Contemporary Islamic finance ought to respond to the myriad constitutional texts of the Shari'ah that communicate the intent of God to protect the environment

significant report states, "the role of the Shari'ah scholar as part of the SSB [Shari'ah Supervisory Board] typically includes advising on the design of Islamic financial products (ex-ante) and attesting on the ongoing compliance and execution of the products (ex-post)." *Id.* Further, "SSB members are involved in the design of financial products and frequently will perform the subsequent compliance activity in relation to these same products The likelihood of self-review (i.e., evaluating one's own work) contains an inherent risk of the Shari'ah scholar's independence being impaired in practice or in perception. . . . Potential solutions could explore requiring segregation between those Shari'ah scholars that are involved in the compliance activity for the product." *Id.* at 12-13.

364. AL-RAYSUNĪ, *supra* note 21, at 319.

365. *Id.*

366. *Id.* at 320 ("An action, which has more beneficial effects than harmful effects, then it is this benefit which is taken into consideration by the Law, and it is for the sake of its attainment that human beings are urged or commanded to engage in said action. And conversely, an action which has more harmful effects than beneficial ones, it is this harm which is taken into consideration by the Law, and it is for the sake of its elimination that the Law prohibits the action concerned.")

367. *But see* DJIMI Fatwa, *supra* note 205, at 4 (encouraging "Muslims to seek out and examine the merits of companies that have pro environmental and pro-animal policies, that support their communities, that give voice to the disenfranchised, provide humanitarian services, and the like.").

368. It would be interesting for instance to see an Islamic real estate development transaction in which traditional Islamic principles relating to residential architecture were taken into account, such as close access by foot to basic needs and social privacy within a floor plan. *See generally* HISHAM MORTADA, TRADITIONAL ISLAMIC PRINCIPLES OF BUILT ENVIRONMENT 47-126 (1st ed. 2003).

and support human and non-human life. Some may contend that seeking a positive impact (or even screening out negative impacts) may reduce availability of investment opportunities, lessen the return earned, and introduce inefficiencies.³⁶⁹ In our view, these considerations are not without merit as they speak to the practical success of Islamic finance.³⁷⁰ Such arguments are outweighed by the foundational texts of Islamic law and jurists' rulings on environmental concerns. Global business risk management also encourages including broader stakeholder considerations and social and environmental impact.³⁷¹

C. EXPANDED AUDIT POLICY

Shari'ah Supervisory Boards audit institutions (often annually) to review compliance with Islamic norms,³⁷² which may be brief.³⁷³ We encourage an expanded audit report including a section devoted to environmental concerns. This section should summarize efforts undertaken to avoid and ameliorate negative environmental impact that is known *ex ante* and any that may have arisen *ex post*. It should also set forth any positive impact the institution has affected. A transparent and detailed review would likely have a number of positive long-term consequences.³⁷⁴

369. *But see* Ahmed, *supra* note 180, at 52 (noting that a study applying Islamic equity investment principles to certain SRI indices in the U.S. and U.K. found: "no additional cost to the investor in adding an additional layer of screening to Islamic investing. It would certainly be possible to create an Islamic and socially responsible portfolio that generates higher returns. This can be achieved by choosing stocks globally to increase diversification.").

370. *See* AL-RAYSUNĪ, *supra* note 21, at 320 ("It is unanimously agreed that the Lawgiver intends for human beings to perform actions which entail a certain degree of effort and hardship. However, He does not intend the hardship for its own sake; rather, what He intends is the benefits which accrue to human beings as a result of performing such actions.").

371. *See e.g.* STEPHAN SCHMIDHEINY ET AL., FINANCING CHANGE: THE FINANCIAL COMMUNITY, EFFICIENCY, AND SUSTAINABLE DEVELOPMENT (1996); MATTHEW J. KIERNAN, INVESTING IN A SUSTAINABLE WORLD: WHY GREEN IS THE NEW COLOR OF MONEY ON WALL STREET (2009).

372. *See* Malkawi, *supra* note 182, at 561 (listing areas of audit coverage to include decrease of product quality, damage to a party in weights and measures, contracts, hoarding, embezzlement, extravagance, fraudulent bidding, and speculation).

373. *See* Ginena, *supra* note 182, at 94 ("[R]eports to shareholders normally lack much needed transparency on some of the most rudimentary facts such as the number of meetings held, resolutions passed, products approved, and so on.").

374. *See* Sairally, *supra* note 176, at 302 (commenting, "in line with modern developments in corporate social reporting, IFIs could opt for greater transparency in their activities—a practice that would certainly enhance confidence and trust among users and the public at large."). We have not discussed the issuance of corporate governance in this Article, but it is beginning to receive attention with the contemporary Islamic finance industry. *See* ISLAMIC FIN. SERVS. BD., GUIDING PRINCIPLES ON CORPORATE GOVERNANCE FOR INSTITUTIONS OFFERING ONLY ISLAMIC FINANCIAL SERVICES (EXCLUDING ISLAMIC INSURANCE (TAKAFUL) INSTITUTIONS AND ISLAMIC MUTUAL FUNDS (2006), available at <http://www.ifsb.org/standard/ifsb3.pdf>; ACCT. & AUDITING ORG. FOR ISLAMIC FIN. INSTS., ACCOUNTING, AUDITING, AND GOVERNANCE STANDARDS FOR ISLAMIC FIN. INSTS. (2010); *see also* Sairally, *supra* note 176, at 296 (finding that "although 84.4% [of respondents] believed that IFIs [Islamic Financial Institutions] should emulate the approach of SRI funds and publicize their ethical

CONCLUSION

In their work, Paul Hawken, Amory Lovins, and L. Hunter Lovins evidence the “critical interdependence between the production and use of human-made capital and the maintenance and supply of natural capital.”³⁷⁵ Natural capital includes not only familiarly recognized natural resources used by humans but also the myriad living systems and their inhabitants.³⁷⁶ The nexus between finance and the environment is well known, as are the massive profits earned by finance capitalism from environmental exploitation.³⁷⁷ Rarely have financial institutions been held accountable for the consequences of the transactions in which they invest and the projects to which they lend support.³⁷⁸ However, given the influence—if not control—exercised by financiers politically, socially, and economically, financiers can and should play a role in promoting sustainable and responsible behavior. As a subset of international markets, contemporary Islamic finance shares this responsibility.

Many environmentalists have provided insight as to where the trend in regards to the sustainability movement is heading. Wolfgang Sachs (former Chairman of the Greenpeace Movement in Germany and currently a Senior Research Fellow at the Wupperfal Institute for Climate in Berlin), for instance, has stated that sustainability “has come to be seen as the therapy for injuries caused by development” and that the sustainability movement takes the concept of “balance” to “the edge of the abyss”³⁷⁹—the outer limits of conduct or allowance as provided under applicable laws and regulations. As mentioned in the introduction, spirituality has helped set the course for sustainability and social responsibility. Both Islamic and non-Islamic thinkers have highlighted the importance of a philosophical “transcendental rationale”³⁸⁰ and an “inner

portfolios, a relatively smaller percentage of 77.8% admitted that their institution publicized these criteria of investment selection.”).

375. PAUL HAWKEN ET AL., *NATURAL CAPITALISM: CREATING THE NEXT INDUSTRIAL REVOLUTION* 3, 4 (1999).

376. *See id.* at 4 (defining natural capital as including not only “all familiar resources used by humankind: water, minerals, oil, trees, fish, soil, air, et cetera” but also “living systems, which include grasslands, savannas, wetlands, estuaries, oceans, coral reefs, riparian corridors, tundras, and rainforests . . .”).

377. *See* Richardson, *supra* note 181, at 243 (stating “[E]nvironmental law must target the financial sector, which sponsors and profits from environmental pillage.”); *see also* Setia, *supra* note 74, at 119 (contending that “[e]thical precepts refer ultimately to human nature . . . and therefore ecological health is ultimately rooted in the psychological health of the human soul. From this deep-ecological perspective environmental degradation is less a resource-problem than an attitude-problem. This attitude-problem results from the general failure of the human ego . . . to forgo short term gratification for long-term prosperity, hence its short sighted inclination for the proximate and the fleeting at the expense of the ultimate and lasting . . .”).

378. *See* Richardson, *supra* note 181, at 245, 271 (noting at 271 “The most noteworthy U.S. case on the legality of SRI is the *Board of Trustees of Employee Retirement System of the City of Baltimore v. City of Baltimore*, relating to a public sector pension plan directed under City ordinances to divest of companies engaged in business in South Africa, in which the court ruled, “if . . . social investment yields economically competitive returns at a comparable level of risk, the investment should not be deemed imprudent.”).

379. WOLFGANG SACHS, *PLANET DIALECTICS: EXPLORATIONS IN ENVIRONMENT AND DEVELOPMENT* 36 (1999).

380. BRYAN APPELYARD, *UNDERSTANDING THE PRESENT: AN ALTERNATIVE HISTORY OF SCIENCE* 137 (2004).

transformation”³⁸¹ in the “spiritual awakening of modern human beings”³⁸² into a regenerative philosophy from one purely based on mitigation. Roger S. Gottlieb, the contemporary environmental philosopher, believes that “[r]eligion has a unique and crucial contribution to make to environmentalism Ultimately environmentalism, including religious environmentalism, challenges society to change profoundly in response to the ecocrisis.”³⁸³

This article has demonstrated that contemporary principles of environmentalism are deeply imbedded within classical Islamic law and ethics. If it attempts to conduct investment and financial activities within the scope of the Shari’ah, the Islamic finance industry has great potential, if not a necessary mandate, to promote a pro-environmental agenda through investment in green projects in addition to the carbon conscious initiatives already taking place globally and within Islamic communities worldwide.

The world of SRI seeks out positive environmental impact—and often requires it—to be deemed an ethically responsible activity. Founded in a tradition with deeply entrenched spiritual and ethical notions of environmental and social responsibility, can Islamic finance remain largely silent in the face of such a precedent from SRI? The benefits to be gained by contemporary Islamic finance by way of a green şukūk are both qualitative and quantifiable. The latter includes improved market reputation by more obviously participating in widely recognized socially responsible behavior³⁸⁴ and earning a perception of greater authenticity from within (and without). But far greater than this “business case” is the virtue of fulfilling these norms.

A green şukūk offering connects Islamic financial markets to SRI markets and presents an instrument to fund numerous important projects sustainably. As we have shown, this would not be the first instance in which the Islamic finance industry, having identified wisdom elsewhere, has adopted ethical standards constructed in other markets. This is a sign of the confidence of its practitioners and the nature of Islamic spiritual and legal traditions.³⁸⁵ Similarly, a green şukūk would also form a bridge between the contemporary and the classical, incorporating further deeply imbedded Islamic considerations on the environment and

381. *See generally* SEYYED HOSSEIN NASR, *THE ENCOUNTER OF MAN AND NATURE: THE SPIRITUAL CRISIS OF MODERN MAN* (1968).

382. SEYYED HOSSEIN NASR, *ISLAM, SCIENCE, MUSLIMS AND TECHNOLOGY: SEYYED HOSSEIN NASR IN CONVERSATION WITH MUZAFFAR IQBAL* 128-29, 131 (2007).

383. ROGER GOTTLIEB, *A GREENER FAITH: RELIGIOUS ENVIRONMENTALISM AND OUR PLANET’S FUTURE* (1st ed. 2006).

384. *See generally* Richardson, *supra* note 181, at 261 (writing “[e]cological ethics . . . stands a stronger chance of eventually securing a broad consensus that even economic actors may embrace because [these actors] are rooted in the reality of a looming planetary crisis.”).

385. Of course and as demonstrated in this Article, not all contemporary Islamic finance professionals are Muslim.

social well-being that are at the core of Islamic law and the Islamic historical tradition, into the modern Islamic finance industry. This presents a great opportunity for the SRI/environmental finance and Islamic finance markets to learn from each other in order to build responsible economies more inclusively and to find common ground in raising capital across markets for environmental projects through a mutually marketable financial instrument—a green *ṣukūk*.