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THE POSSIBLE ADVANTAGES OF ISLAMIC FINANCIAL JURISPRUDENCE: AN EMPIRICAL STUDY OF THE DOW JONES ISLAMIC MARKET INDEX

*Russell Powell and Arthur DeLong**

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INTRODUCTION

Over the last five years, as the global economy suffered one of the worst economic crises since the Great Depression, the fascination with Islamic finance has grown considerably.¹ At the end of 2011, the global market for Islamic finance was worth approximately £1.3 trillion.² By 2012, the total value of *sharia*³-compliant assets principles grew by 150% since 2006, which is considerable given the global recession over the same time period.⁴ As bank failures ground the world's economy to a halt during 2008 and 2009, Islamic banks remained relatively unharmed.⁵

This Article posits that the Islamic financial system experienced a disproportionately smaller economic hardship because adherence to *sharia* principles tends to encourage a conservative investment approach. *Sharia* prohibits the investment of Islamic mutual funds in

1. See, e.g., Nigel Morris, *Islamic Investment: David Cameron Moves to Make London a Mecca for Middle East Wealth*, THE INDEPENDENT (Oct. 29, 2013), <http://www.independent.co.uk/news/uk/politics/islamic-investment-david-cameron-moves-to-make-london-a-mecca-for-middle-east-wealth-8909570.html>; *Focus: Islamic Finance*, THE ECONOMIST (Apr. 10, 2012, 6:40 PM), www.economist.com/blogs/graphicdetail/2012/04/focus-2; Abdulmonem Alzalabani & Reji D. Nair, *Financial Recession, Credit Crunch And Islamic Banks: A Case Study of Al Rajhi Bank in the Kingdom Of Saudi Arabia*, 16 EAST-WEST J. OF ECON. & BUS. 15 (2013).

2. Morris, *supra* note 1.

3. *Sharia*, often translated as Islamic law, refers to the ideal of God's law as understood within Islam. See, e.g., CLARK B. LOMBARDI, STATE LAW AS ISLAMIC LAW IN MODERN EGYPT: THE INCORPORATION OF THE SHARIA INTO EGYPTIAN CONSTITUTIONAL LAW 12 (Ruud Peters & Benard Weiss eds., 2006). Since *sharia* is not knowable with certainty, human attempts to comprehend it are subject to error. See *id.* at 13–17 (discussing the historical disagreements within the Muslim community as to how to best understand *sharia*). Within Islamic jurisprudence, there are many approaches to understanding *sharia*. *Id.* The human exercise to ascertain *sharia* is referred to as *fiqh*, or Islamic jurisprudence. *Id.* at 16; see also IMRAN AHSAN KHAN NYAZEE, ISLAMIC JURISPRUDENCE 24 (2000); Russell Powell, *Evolving Views of Islamic Law in Turkey*, 28 J. L. & RELIGION 467, 474–75 (2012). As opposed to the Islamic law translation, this Article uses “*sharia*” to reflect the term's common usage in Islamic finance, which, although it might be misleading, assumes a fixed and knowable set of rules. Because “*sharia*” is a transliterated word, some quoted sources in this Article spell the word slightly differently, but the word's meaning is the same.

4. *Focus: Islamic Finance*, THE ECONOMIST (Apr. 10, 2012, 6:40 PM), www.economist.com/blogs/graphicdetail/2012/04/focus-2.

5. Frederick Perry, *The Corporate Governance of Islamic Banks: A Better Way of Doing Business?*, 19 MICH. ST. J. INT'L L. 251, 251–52 (2011).

the secular capitalist financial sector, highly leveraged companies, and various derivative instruments.⁶ Ultimately, this conservative investment approach might have been an effective strategy for mitigating downside risk.

Part I of this Article discusses the fundamental, classical *sharia* legal requirements that pertain to modern Islamic finance. Part II compares the modern view of Islamic equity investing to its secular capitalist counterpart. Part III evaluates whether adherence to *sharia* principles, as defined by the Dow Jones Islamic Market Index,⁷ has positively impacted the risk and return of the index as benchmarked against comparable indices (the Dow Jones Sustainability World Index⁸ and the Dow Jones Global Index⁹) over the last decade. Part IV compares the performance of the Dow Jones Islamic Market Index

6. See *infra* Section I.B.

7. See *Dow Jones Islamic Market Indices*, S&P DOW JONES INDICES, <http://www.djindexes.com/islamicmarket/> (last visited Nov. 5, 2013) (“The Dow Jones Islamic Market™ Index family includes thousands of broad-market, blue-chip, fixed-income and strategy and thematic indices that have passed rules-based screens for Shari’ah compliance. The indices are the most visible and widely used set of Shari’ah-compliant benchmarks in the world. To determine their eligibility for the indices, stocks are screened to ensure that they meet the standards set out in the published methodology. Companies must meet Shari’ah requirements for acceptable products, business activities, debt levels, and interest income and expenses. The screening methodology is subject to input from an independent Shari’ah supervisory board. By screening stocks for consistency with Shari’ah law, the indices help to reduce research costs and compliance concerns Muslim investors would otherwise face in constructing Islamic investment portfolios.”).

8. See *Dow Jones Sustainability Indices*, S&P DOW JONES INDICES, <http://www.djindexes.com/sustainability/> (last visited Nov. 5, 2013) (“[T]he indices measure the performance of the world’s sustainability leaders. Companies are selected for the indices based on a comprehensive assessment of long-term economic, environmental and social criteria that account for general as well as industry-specific sustainability trends. Only firms that lead their industries based on this assessment are included in the indices. . . . The family includes global and regional broad market indices, subindices excluding alcohol, gambling, tobacco, armaments and firearms and/or adult entertainment, and global and regional blue-chip indices.”).

9. See *Dow Jones Global Indices*, S&P DOW JONES INDICES, <http://www.djindexes.com/globalfamily/> (last visited Nov. 5, 2013) (“The Dow Jones Global Index® is a broad yet investable measure of the global stock market. It targets 95% coverage of markets open to foreign investment. The index currently tracks 47 countries, including 26 developed markets and 21 emerging markets. Included in the Dow Jones Global Indices® family are a wide range of regional, country, size-segment and sector indices.”).

against the performances of the Dow Jones Industrial Average¹⁰ and the Standard & Poor's 500¹¹ ("S&P 500") over the past ten years, paying particular attention to results over the last year. Part V explores the more speculative claim that a *sharia*-compliant investment approach does not penalize investors and could be used as a hedge against financial downturns.

I. ISLAMIC FINANCIAL JURISPRUDENCE

From a traditional theological perspective, Islam governs all aspects of a Muslim's life, including financial transactions and investments, by defining socially, ethically, and legally permissible behavior.¹² Islamic jurisprudence is based on four sources of authority, from which Islamic financial law is theoretically derived.¹³

The two primary sources of Islamic jurisprudence are the *Quran* and the *Sunnah* (literally, the "tradition" of the Prophet Muhammad).¹⁴ For Muslims, the *Quran* and the *Sunnah* provide the principal sources of guidance by which to live one's life.¹⁵ The *Quran* is considered divine

10. See *Dow Jones Averages*, S&P DOW JONES INDICES, <http://www.djaverages.com/?go=industrial-overview> (last visited Nov. 5, 2013) ("Roughly two-thirds of the DJIA's 30 component companies are manufacturers of industrial and consumer goods. The others represent industries as diverse as financial services, entertainment and information technology. Even so, the DJIA today serves the same purpose for which it was created – to provide a clear, straightforward view of the stock market and, by extension, the U.S. economy.").

11. See *S&P 500*, S&P DOW JONES INDICES, <http://us.spindices.com/indices/equity/sp-500> (last visited Nov. 5, 2013) ("The S&P 500® is widely regarded as the best single gauge of large cap U.S. equities. There is over USD 5.14 trillion benchmarked to the index, with index assets comprising approximately USD 1.6 trillion of this total. The index includes 500 leading companies and captures approximately 80% coverage of available market capitalization.").

12. Said Elfakhani, M Kabir Hassan & Yusuf Sidani, *Comparative Performance of Islamic Versus Secular Mutual Funds* 2 (Nov. 2005) (unpublished manuscript), available at <http://www.middle-east-studies.net/wp-content/uploads/2010/09/sidani-IslamicMutualFunds.pdf>; see generally MUHAMMAD AYUB, UNDERSTANDING ISLAMIC FINANCE (2007).

13. Bilal Khan & Emir Aly Crowne-Mohammed, *The Value of Islamic Banking in the Current Financial Crisis*, 29 REV. BANKING & FIN. L. 441, 448 (2010).

14. *Id.*

15. Holly E. Robbins, Note, *Soul Searching and Profit Seeking: Reconciling the Competing Goals of Islamic Finance*, 88 TEX. L. REV. 1125, 1126 (2010).

revelation directly from Allah¹⁶ while the *Sunnah* is comprised of *hadith*,¹⁷ collected sayings of accounts from the life of the Muhammad.¹⁸

Islamic jurisprudence is also based on two secondary legal sources: *ijma* and *qiyas*.¹⁹ *Ijma* is the consensus of Muslim jurists on a particular legal issue that is considered to be part of *sharia*.²⁰ *Qiyas* is a form of analysis used by Islamic jurists that applies logical reasoning to interpret the *Quran* and the *Sunnah* when presented with a new legal issue.²¹ Direct interpretation of the sources was replaced by deference to established rules within particular schools of jurisprudence by the twelfth century, but some modern scholars consider ongoing interpretation of the canonical sources (the *Quran* and the *Sunnah*) a legitimate approach to contemporary legal problems.²² Only those financial transactions and investments that adhere to the scholarly view of *sharia* are permissible investment options for observant Muslims.²³

Islamic mutual funds are similar to conventional mutual funds except that the Islamic fund must conform to Islamic investment precepts (which ideally, reflect *sharia*).²⁴ In order to remain *sharia*-compliant, an Islamic fund may not invest in assets that violate the basic tenets of Islamic finance, which proscribe: (1) *riba* (literally defined as “an increase” but commonly translated as “interest”); (2) transactions that are *gharar* (an excessive uncertainty or speculation); and (3) certain morally reprehensible industries according to Islam (such as those engaging in gambling or pork products).²⁵

16. Kimberly J. Tracy, Note, *Islamic Finance: A Growing Industry in the United States*, 10 N.C. BANKING INST. 355, 356 (2006).

17. In English, *hadith* commonly refers to a specific saying or to the collective body of sayings (in place of the Arabic “*ahadith*”).

18. Robbins, *supra* note 15, at 1126.

19. Khan & Crowne-Mohammed, *supra* note 13, at 448.

20. *Id.*

21. *Id.*

22. See, e.g., LOMBARDI, *supra* note 3, at 41–45.

23. See, e.g., ISLAMIC FINANCE: LAW AND PRACTICE (Craig R. Nethercott & David M. Eisenberg eds., 2012); FRANK E. VOGEL & SAMUEL L. HAYES III, ISLAMIC LAW AND FINANCE 23–47 (1998).

24. Elfakhani, Hassan & Sidani, *supra* note 12, at 4.

25. ABED AWAD, LECTURE AT COLUMBIA RESEARCH CENTER ON ISLAMIC FINANCE, Amman, Jordan (July 7, 2011) (notes on file with authors).

A. RIBA

Many jurists would argue that the prohibition of *riba*—the concept of making money from money—is at the heart of Islamic finance.²⁶ Islamic finance does not view money as a commodity or recognize a time value of money.²⁷ Rather, money is solely viewed as a means to engage in trade.²⁸ In stark contrast to the conception of money in the secular capitalist financial system, Islam views conventional debt as a “recipe for exploitation.”²⁹ Instead of depositing money with banks to earn a specified return over time, the Islamic financial system encourages a business to engage in trading rather than holding large quantities of cash.³⁰

The *riba* prohibition is one of the most debated aspects of Islamic financial jurisprudence.³¹ While it is undisputed that the *Quran*

26. Robbins, *supra* note 15, at 1127–28.

27. Basher Malkawi, *Financial Derivatives in the West and in Islamic Finance: A Comparative Approach*, 128 BANKING L.J. 50, 61 (2011); see ERIC CHIAPINELLI, CASES AND MATERIALS ON BUSINESS ENTITIES 51–53 (2010) (“This pervasive human preference for current consumption means that those who want to borrow money need to offer an interest rate sufficiently high so that people with money will lend it rather than spend it on their own current consumption. This inducement to postpone consumption means that each unit of money in the present is . . . worth the same unit and interest in the future. This phenomenon is known as the time value of money.”).

28. See Malkawi, *supra* note 27, at 61–62.

29. Bjorn Sorenson, *Ethical Money: Financial Growth in the Muslim World*, 23 AM. U. INT’L L. REV. 647, 650 (2008).

30. Malkawi, *supra* note 27, at 61–62.

31. A complete discussion of the differing views on *riba* is beyond the scope of this paper. The *hadith* that discuss *riba* transactions define six commodities (gold, silver, wheat, barley, dates, and salt) that are *ribawi* goods, or goods that must be traded in equal amounts with no time delay in the transaction. VOGEL & HAYES, *supra* note 23, at 73. Thus, if traders wanted to exchange wheat, they were restricted to exchanging equal amounts in a simultaneous transaction, irrespective of quality. See generally *id.* at 73–87. The majority of classical schools of Islamic jurisprudence reasoned by analogy to deduce an “efficient cause” underlying the *riba* prohibition based on each of these six *ribawi* commodities. *Id.* at 75. This efficient cause is then used to determine whether goods within a specific genus may be traded for a different quantity of goods in same genera. *Id.* However, the schools are split on how to interpret the efficient cause behind the *hadith* addressing *Riba*. For example, the Hanafi and Hanbali schools see one principal determination in defining the genera of goods: whether the goods are measured by weight or volume. *Id.* The Shafi’is, conversely, view the determination of *ribawi* as whether the commodity in question is one of currency or food. *Id.* The

condemns *riba*, the precise definition of what qualifies as *riba* is neither universally agreed upon nor defined in the *Quran*:³²

O you who believe, devour not usury [*riba*], doubling and redoubling, and keep your duty to Allah, that you may be successful; And guard yourselves against the fire which has been prepared for the disbelievers.³³

Those who swallow usury cannot arise except as he arises whom the devil prostrates by (his) touch . . . Allah will blot out usury, and He causes charity to prosper . . . O you who believe, keep your duty to Allah and relinquish what remains (due) from usury . . . But if you do not, then be apprised of war from Allah and His Messenger.³⁴

The *Quran* directly contrasts *riba* with charity and mentions the pre-Islamic practice of “doubling.” Sources external to the *Quran* describe “doubling” as “extending delay to debtors in return for an increase in the principal,” a practice that was prevalent in the Arabian peninsula before and during the life of Prophet Muhammad.³⁵ Therefore, Ibn Hanbal, the founder of the Hanbali School of Islamic jurisprudence, has stated that only this practice of “pay or increase” is prohibited beyond a doubt.³⁶

The *hadith* on this topic, however, dramatically expand the scope of the *riba* prohibition for the majority of scholars. As it pertains to this Article, the majority of classical scholars would disallow the charging of interest on loans.³⁷ The following *hadith*, although its authenticity is in dispute, accurately describes this expanded view: “[e]very loan that attracts a benefit is *Riba*.”³⁸

Accordingly, any increased payment that is above the originally negotiated amount is viewed as prohibited.³⁹ Thus, one model of business lending in Islamic finance requires that the lender take part in the business of the loan recipient, thereby becoming a partner in the

Malikis embrace the Shafi'i approach but qualify that the food determination applies only to basic, preservable foodstuffs. *Id.*

32. *Id.* at 73.

33. THE HOLY QURAN 3:130–31.

34. THE HOLY QURAN 2:275–79.

35. VOGEL & HAYES, *supra* note 23, at 72–73.

36. *Id.*

37. Tracy, *supra* note 16, at 356.

38. VOGEL & HAYES, *supra* note 23, at 73.

39. Tracy, *supra* note 16, at 356–58.

business.⁴⁰ Such a system encourages profit and loss sharing as opposed to a conventional banking system in which borrowers must pay even if their business incurred a loss.⁴¹

Under this view, Islamic law deems it fundamentally unjust to expose a borrower to the entire risk of a loan (i.e., that (s)he alone remains liable in the event of a business failure), thus creating a preference for equity investments.⁴² This reasoning implies that when a lender is forced to share not only in the profit but also in the loss of a potential financial transaction, (s)he is more likely to lend conservatively and pay close attention to the transaction, thereby lowering the overall risk of the transaction.⁴³ Applying this to all such transactions would lead to a less risky financial sector overall.⁴⁴

However, whether this actually occurs in practice is questionable at best. Haider Hamoudi argues that the *riba* prohibition, at least as it applies to Islamic banks, does not actually result in a different lending structure.⁴⁵ In fact, Hamoudi points out that Islamic loans—which are benchmarked against prevailing interest rates—are “the same thing” as interest-bearing loans but structured to maintain technical compliance with *sharia*.⁴⁶ Regardless of the debate over whether the modern application of the *riba* prohibition is true to its classical roots, the fact remains that the *riba* prohibition does have a large impact on *sharia*-compliant investments. This Article argues that although the *riba* prohibition is not applied according to classical principles, its impact on investing seems to result in a conservative investment strategy that lowers the overall risk of an Islamic portfolio.⁴⁷

40. Khan & Crowne-Mohammed, *supra* note 13, at 452.

41. *Id.*

42. The notions of social justice in modern Islamic economics are deeply rooted in the ideas of Sayed Kotb, one of the founders of modern Islamic economics. *See generally* SAYED KOTB, SOCIAL JUSTICE IN ISLAM 121–23 (John B. Hardie trans., 1980).

43. *See generally* AYUB, *supra* note 12.

44. *See id.*

45. Haider Hamoudi, *Subprime Mortgages and Shari'a*, ISLAMIC LAW IN OUR TIMES (Jun. 22, 2012, 3:27 PM), <http://muslimlawprof.org/2012/06/22/the-trading-of-subprime-mortgages-is-against-Shari'a—how-when-why.aspx>.

46. *Id.*

47. *See infra* Parts III–V and sources cited therein.

B. GHARAR

The prohibition of *gharar*, an excessively uncertain transaction, forms the second central tenet of Islamic finance.⁴⁸ The word *gharar* can be translated as “risk,” “danger of loss,” or “uncertainty.”⁴⁹ Professor Mustafa Al-Zarqa defines *gharar* as “the sale of probable items whose existence or characteristics are not certain, due to the risky nature which make the trade similar to gambling.”⁵⁰

The *gharar* prohibition essentially creates a ban on “trading in risk.”⁵¹ Specifically, *gharar* pertains directly to the uncertainty in any of the basic elements of a contractual agreement, such as the subject matter, consideration, or liabilities.⁵² The prohibition of *gharar* serves to eliminate elements of a contract that could be left unidentified or unknown, as expressed in the following *hadith*:

The Prophet has forbidden the purchase of the unborn animal in its mother’s womb, the sale of the milk in the udder without measurement, the purchase of spoils of war prior to their distribution, the purchase of charities prior to their receipt, and the purchase of the catch of a diver.⁵³

The final prohibition under this *hadith*, “the purchase of the catch of a diver,” does not forbid the hiring of a diver, but rather forbids the advanced bidding on a specific catch because the haul that a diver would bring in on any given catch is unquantifiable prior to the dive.⁵⁴ Conversely, an employer could hire the diver as a laborer for a fixed period of time, and the catches during that time would belong to the employer.⁵⁵

Gharar, like *riba*, relates directly to the Islamic view of fairness in a transaction such that any ambiguity or uncertainty about the end result

48. Khan & Crowne-Mohammed, *supra* note 13, at 451.

49. MAHMOUD AMIN EL-GAMAL, A BASIC GUIDE TO CONTEMPORARY ISLAMIC BANKING AND FINANCE 6 (2000), available at www.ruf.rice.edu/~elgamal/files/primer.pdf.

50. *Id.* at 6–7.

51. Khan & Crowne-Mohammed, *supra* note 13, at 451.

52. AYUB, *supra* note 12, at 58.

53. EL-GAMAL, *supra* note 49, at 7.

54. *Id.*

55. *Id.*

of a contract invalidates the contract.⁵⁶ None of the parties may be ignorant about “the nature and/or quality and specifications of the subject matter of the contract . . . [,] the rights and obligations of the parties, [or] possession and/or delivery of the item of exchange.”⁵⁷ More specifically, if the subject matter of the contract were intangible, if the quality of the subject could not be assessed, or if the parties did not know what they bought or sold, then the contract is *gharar*, and hence invalid under *sharia*.⁵⁸

Thus, *gharar* can be conceptualized as consisting of two general principles: (1) a ban on transactions involving items that do not currently exist; and (2) a prohibition on the existence of uncertain elements in the performance of a contract, such as duration, price, or delivery.⁵⁹ Many modern *sharia* scholars have extrapolated from these principles that an Islamic portfolio must exclude derivatives and hedging activities.⁶⁰ Generally, forward contracts, futures, options, and other derivatives are prohibited on the basis that they are *gharar* because there is uncertainty as to the qualities of the basic subject matter of the contract (the underlying security) when the trade is executed.⁶¹

C. PROHIBITED INDUSTRIES

Sharia also places a number of restrictions on certain industries and types of activities. Gambling or games of chance are expressly prohibited, and investing in casinos or entities that derive income from

56. AYUB, *supra* note 12, at 58.

57. *Id.* at 58.

58. *Id.*

59. Haider Ala Hamoudi, *The Muezzin's Call and the Dow Jones Bell: On the Necessity of Realism in the Study of Islamic Law*, 56 AM. J. COMP. L. 423, 441 (2008).

60. Elfakhani, Hassan & Sidani, *supra* note 12, at 5–6.

61. EL-GAMAL, *supra* note 49, at 8. However, there are a few exceptions to the *gharar* rule, specifically, as it pertains to futures contracts. Two types of contracts, *Salam* and *Istisna'a*, existed at the time of the Prophet and were specifically excluded from the *gharar* prohibition. AYUB, *supra* note 12, at 241. *Salam*, or an agricultural forward contract, exists to permit the buyer to purchase agricultural crops that have not yet been grown because farmers often need to be paid in advance in order to use the funds to grow the contracted-for crops. *Id.* at 242. Similarly, *Istisna'a* is to provide funds for manufacturing goods that technically do not exist when the contract is finalized. *Id.* at 264. However, both *Salam* and *Istisna'a* contracts require specificity as to all other contractual elements, such as quantity, time of delivery, and price. *See generally id.* at 241–77 (discussing in depth both *Salam* and *Istisna'a* contracts).

gambling is forbidden.⁶² Additionally, industries that deal in pornography, alcohol, pork products, tobacco, or entertainment might be considered immoral, and thus are prohibited in an otherwise *sharia*-compliant investment today.⁶³

II. *SHARIA*-COMPLIANT EQUITY INVESTMENTS

The prohibitions described above would make it nearly impossible for an investor concerned with *sharia* compliance to invest in the equity of any U.S. company. All of the companies included in the Dow Jones Industrial Average maintain sizeable cash balances, on which they earn at least some interest.⁶⁴ Although modern Islamic finance is still in its infancy, much debate has centered on how to permit Muslim investors to participate in the global equity system.⁶⁵ Scholars of Islamic jurisprudence have varying opinions on what should be considered legal according to *sharia*.⁶⁶ This Part will briefly: (1) discuss the prevailing opinions of scholars in Islamic jurisprudence on equity investments; (2) explore how those opinions are incorporated into the Dow Jones Islamic Market Index; and (3) compare Islamic investment objectives with the secular capitalist concept of investment.

In 1992, the Islamic Fiqh Council of the Organisation of Islamic Cooperation resolved that, with respect to the shares of joint stock companies, investors could not maintain compliance with *sharia* by investing in companies whose main source of revenue was derived from

62. Robbins, *supra* note 15, at 1127.

63. *Id.* at 1127–28.

64. A complete list of all of the companies included in the Dow Jones Industrial Average can be found at <http://money.cnn.com/data/dow30/>, along with a searchable index of each company's balance sheet. All of these companies hold sizeable cash and short-term securities as an asset.

65. See generally AYUB, *supra* note 12.

66. This topic is still debated. Some modern *sharia* scholars, such as Haider Hamoudi, would advocate that the application of classical rules, which were developed and employed in a system that embraced “structural pluralism,” cannot be (and are not) applied in the modern paradigm of demanding legal “uniformity.” Hamoudi, *supra* note 59, at 435–36. Rather, the classical doctrine as applied in this manner is “largely useless to the modern world,” as it is prone to too much manipulation to serve as the basis for modern rules. *Id.* The crux of Hamoudi's argument is that modern Islamic Finance scholars pick and choose from a variety of classical rules and ideologies to develop a system that is disingenuous to its historical roots and serves to benefit the economic desires of the modern reformers. See generally *id.*

a prohibited activity.⁶⁷ However, trading in the stocks of companies that deal in prohibited activities at times is permissible so long as their main business revenues are not based on any proscribed activity.⁶⁸ Although no universal consensus exists, many contemporary *sharia* scholars have determined that as long as the proscribed activity does not exceed five percent of a company's revenue, investing in that company is permissible.⁶⁹ Additionally, where returns are derived from a forbidden activity,⁷⁰ the Islamic investor must "purify" his/her returns from that company by donating to a charity the percentage of the return that equals the percentage of the company's total revenue that the forbidden activity generated.⁷¹

In practice, an individual mutual fund manager may select companies that have been determined to meet the above requirements.⁷² However, fund managers must benchmark their returns against the larger market to accurately gauge the fund's performance.⁷³ The most popular benchmark for Islamic funds is the Dow Jones Islamic Market ("DJIM") Index.⁷⁴ The DJIM Index measures the investable equities that pass screening for *sharia* compliance as defined by the DJIM Index Shari'ah Supervisory Board.⁷⁵ The DJIM includes "the components of fifty-seven country-level benchmark indices, each of which covers approximately 95% of the float-adjusted market capitalization of the underlying market."⁷⁶ Each component is filtered to include screens for

67. AYUB, *supra* note 12, at 203.

68. *Id.*

69. Robbins, *supra* note 15, at 1128.

70. *Id.* at 1126.

71. AYUB, *supra* note 12, at 202–03.

72. See generally Monem Salam, *Shari'a-Compliant Mutual Funds*, in CONTEMPORARY ISLAMIC FINANCE 189, 193 (Karen Hunt-Ahmed ed., 2013) (discussing the various screening processes Muslim investors might use to guide their selection of companies in which they will invest).

73. *Id.* at 191.

74. See generally Sam Hakim & Manochehr Rashidian, *How Costly is Investors' Compliance to Shari'a?* (Economic Research Forum, Working Paper No. 414, 2004), available at http://www.erf.org.eg/CMS/uploads/pdf/1184658590_Sam_Hakim.pdf (using the DJIM as a benchmark).

75. S&P DOW JONES INDICES, GUIDE TO THE DOW JONES ISLAMIC MARKET INDICES 3 (2012), available at http://www.djindexes.com/mdsidx/downloads/rulebooks/Dow_Jones_Islamic_Market_Indices_Rulebook.pdf [hereinafter "GUIDE TO DJIM"].

76. *Id.* at 4.

sharia compliance.⁷⁷ No company that derives more than five percent of its revenue from alcohol, tobacco, pork products, conventional financial services (excluding Islamic financial institutions), weapons and defense, or entertainment (hotels, casinos, pornography, cinema, music, etc.) is included in the DJIM.⁷⁸ The DJIM screens any company that is listed under any of a variety of industries.⁷⁹

Although all of these screens are technically necessary to ensure *sharia* compliance, the financial requirements arguably have the greatest impact on investment returns because they prohibit investments in highly leveraged companies.⁸⁰ In addition to filtering industries prohibited by *sharia* from the index, the DJIM Index Shari'ah Supervisory Board also eliminates "companies with unacceptable levels of debt or impure interest income."⁸¹ If a company's total debt, total cash and interest-bearing securities, or total accounts receivable are greater than one-third⁸² of the company's trailing twenty-four-month average market capitalization, then the company is screened from the DJIM Index as an investment that is noncompliant with *sharia*.⁸³

The principle difference between the capitalistic and Islamic financial systems is that the Islamic system accounts for an additional moral imperative: Islamic investors must balance the competing goals of profit maximization and religious piety.⁸⁴ While capitalism rewards

77. *Id.*

78. *Id.* at 4–5.

79. *Id.* (noting the following industries: defense, brewers, distillers and vintners, food products, recreational products, tobacco, food retailers and wholesalers, broadcasting and entertainment, media agencies, gambling, hotels, recreational services, restaurants and bars, banks, full line insurance, insurance brokers, property and casualty insurance, reinsurance, life insurance, consumer finance, specialty finance, investment services, and mortgage finance).

80. *Id.*

81. *Id.* at 5.

82. The one-third rule on financial investments derives from a *hadith* where a dying man asked the Prophet Muhammad how he should distribute his wealth upon his death. See Salam, *supra* note 72, at 192. The dying friend explained that he was very wealthy and was survived by only one daughter, and he asked if he could leave all of his money to charity. *Id.* The Prophet responded, "No." Then, the friend asked if he could leave half of his money to charity instead and was again told, "No." *Id.* The prophet then informed his dying friend that the latter could leave one-third of his wealth to charity. *Id.*

83. GUIDE TO DJIM, *supra* note 75, at 5.

84. Robbins, *supra* note 15, at 1126.

those who take risks, *sharia* places limits on risk-taking for the public good.⁸⁵ As Sheikh Muhammad Taqi Usmani, one of the world's foremost scholars of Islamic finance, described: "[t]he basic difference between [a] capitalist and Islamic economy is that in secular capitalism, the profit motive or private ownership are given unbridled power to make economic decisions."⁸⁶ Islam, however, places limits on profit maximization to promote social harmony by avoiding transactions that are characterized by cheating, fraud, or deception.⁸⁷

Within secular capitalist financial systems, for-profit corporations are often considered to exist solely for the purpose of generating profit and increasing shareholder wealth.⁸⁸ The prevailing (though increasingly disputed) economic theory, known as "value maximization," dictates that the sole objective of a firm should be to maximize the long-term value of the company in order to maximize shareholder wealth.⁸⁹ Under this paradigm, only maximizing shareholder value is considered.⁹⁰ From a firm's perspective, the concern is that if those shareholders do not feel that returns are sufficiently high to warrant their capital in a given firm, they would shift their capital to other corporations, thus diminishing the prospects of that initial firm.⁹¹ Such a system inherently leads shareholders to push corporate management to embrace the familiar idiom, "the more the risk, the more the reward," in order to increase shareholder returns, often by aligning manager compensation with shareholder interests.⁹² Risk, however, is a double-edged sword because although higher risk could generate greater returns, it also could generate greater losses that could have a devastating effect on the corporation.⁹³ This starkly contrasts to

85. Sorenson, *supra* note 29, at 649.

86. MUHAMMAD TAQI USMANI, AN INTRODUCTION TO ISLAMIC FINANCE 10–11 (2002).

87. AWAD, *supra* note 25.

88. Perry, *supra* note 5, at 256.

89. Michael Jensen, *Value Maximization, Stakeholder Theory and the Corporate Objective Function*, 14 J. OF APPLIED CORP. FIN. 8 (2001).

90. Perry, *supra* note 5, at 256.

91. *See generally* Jensen, *supra* note 89.

92. Perry, *supra* note 5, at 256.

93. Here, risk is measured by a firm's financial leverage (the proportion of its debt to equity) ratio and returns are measured by a firm's return on equity (ROE). A high financial leverage ratio indicates that there is more volatility in a firm's ROE when compared against a firm that is identical in all of its other financial information. For a detailed explanation including equations demonstrating that this is empirically true, see

the idealized economic philosophy of Islamic finance, which prioritizes “risk sharing and the promotion of social and economic welfare”⁹⁴ over the goals of the “value maximization” theory: capital accumulation and growth in the total value of a firm.⁹⁵ It is the opinion of the authors that in contrast to the view of profit in Islam, the value maximization concept encourages managers to increase the leverage of their corporations for the sole purpose of boosting short-term profits, which tends to disregard the long-term societal consequences that increasing leverage can have during times of austerity (especially when all firms engage in the same behavior throughout the market).

The emerging concept of ethical investing is relevant here. As noted above, economics in the United States is generally based on the corporate objective of maximizing shareholder value,⁹⁶ while Islamic finance is directly concerned with a moral framework based on societal values of economic justice.⁹⁷ This does not mean, however, that non-Muslim investors are not concerned with socially responsible investing.⁹⁸ In fact, many of the basic concepts in Islamic finance have a similar conceptual counterpart in Socially Responsible Investing (“SRI”) theory, at least in terms of societal welfare.⁹⁹ SRI focuses on investments in corporations that are not involved with environmental, social, or governance abuses,¹⁰⁰ and the concept is popular with a growing number of investors.¹⁰¹

SRI-conscious investors can measure performance using an index similar to the DJIM: the Dow Jones Sustainability (“DJS”) World Index.¹⁰² Like the DJIM, the DJS provides investors with a method to

ZVI BODIE, ALEX KANE, AND ALAN J. MARCUS, INVESTMENTS 633–35 (2011); Sorenson, *supra* note 29, at 649.

94. Ali Adnan Ibrahim, *The Rise of Customary business in International Financial Markets: An Introduction to Islamic Finance and the Challenges of International Integration*, 23 AM. U. INT’L L. REV. 661, 664 (2008).

95. Jensen, *supra* note 89, at 8.

96. *See generally id.*

97. *See* Sorenson, *supra* note 29, at 649.

98. *See generally* Thomas C. Berry and Joan C. Junkus, *Socially Responsible Investing: An Investor Perspective*, 112 J. OF BUS. ETHICS 707 (2013) (examining the role of socially responsible investment in a capitalist economy).

99. Sorenson, *supra* note 29, at 651.

100. *Id.*

101. Hakim, *supra* note 74, at 2.

102. *See Dow Jones Sustainability World Index Fact Sheet*, DOW JONES, http://www.djindexes.com/mdsidx/downloads/fact_info/Dow_Jones_Sustainability_Wo

engage in ethical investing, albeit by a different moral strategy—SRI.¹⁰³ The DJS does not exclude any specific industries, but rather employs a methodology to include only those companies based on criteria such as “climate change strategies, energy consumption, human resources development, knowledge management, stakeholder relations[,] and corporate governance.”¹⁰⁴ These criteria are in accordance with environmental and humanist ethics, which to some extent align with the value of promoting societal welfare that underlies *sharia*.

III. GENERAL PERFORMANCE OF THE ISLAMIC MARKET

Throughout the Great Recession, headlines claiming that the Islamic equity market had outperformed the global equity market abounded. For example, in November 2008, the *Chicago Crescent* published an article noting that although the Dow Jones was down 35% for the year, the DJIM Index had only fallen by 24%.¹⁰⁵ However, this temporary disparity is not very useful to an investor concerned with long-term investing; rather, it is the correlation between the indices over a long period of time that strongly bears on an investor’s evaluation of risk and return because this correlation indicates the expected degree to which an investment into the DJIM Index would track a corresponding investment into the overall market.¹⁰⁶ Similarly, investors who prefer “ethical investing” are likely to be concerned with the different returns of various ethical investing criteria. This Part analyzes (1) the correlation of the DJIM Index and the DJS Index to the Dow Jones Global (“DJG”) Index; and (2) the risk-adjusted return of each index as compared to DJG.¹⁰⁷

rld_Index_Fact_Sheet.pdf (last visited May 9, 2013) [hereinafter *Dow Jones Sustainability World Index Fact Sheet*].

103. *Id.*

104. *Id.*

105. *Dow Jones Islamic Index Fell 24% as Dow Average Is Down 35%*, CHICAGO CRESCENT, Nov. 2008, at 1.

106. Eugene F. Fama & Kenneth R. French, *The Capital Asset Pricing Model: Theory and Evidence*, 18 J. OF ECON. PERSPECTIVES 25, 29 (2004).

107. All of the calculations in this section are based on the observations of 522 weekly returns for each index from 4/28/2003 to 4/22/2013 and are searchable online at finance.google.com.

A. MARKET CORRELATION

In order to quantify the correlation between the DJIM and the DJG, it is necessary to develop the “Beta” between the two indices. Beta may be understood as the correlation between a stock and the market.¹⁰⁸ Specifically, it is a measure of the volatility, or systematic risk, of a security or portfolio compared to the market as a whole.¹⁰⁹ In the case of the DJIM Index, the market is compared to the DJG Index in order to develop an “Islamic Beta”¹¹⁰ that will measure the overall performance of all *sharia*-compliant companies to a very broad index.¹¹¹ The DJG Index includes country-level indices for forty-five developed and developing markets and covers approximately ninety-five percent of the market capitalization for each represented market.¹¹² As such, it is appropriate to compare the DJIM Index to the DJG Index to develop the Beta correlation. An identical methodology to calculate the Beta of the DJS is also used in order to compare the performance of DJIM and DJS.¹¹³

Beta is calculated as a factor in the Capital Asset Pricing Model (“CAPM”), which states that the expected return of an asset is a function of the risk-free rate, the correlation of the asset to the market, as represented by Beta (β), and the expected risk premium.¹¹⁴ Accordingly, the CAPM is represented algebraically as:

$$E(R_i) = R_f + \beta [E(R_m) - (R_f)],^{115}$$

108. Fama & French, *supra* note 106, at 29.

109. See WILLIAM A. KLEIN, JOHN C. COFFEE, JR., AND FRANK PORTNOY, BUSINESS ORGANIZATION AND FINANCE: LEGAL AND ECONOMIC PRINCIPLES 335 (2010).

110. To the authors’ knowledge, the idea of an “Islamic Beta” was first proposed and calculated by Hakim and Rashidian in 2004. See generally, Hakim, *supra* note 74. However, when Hakim and Rashidian conducted their study, they were limited to only four years of available data. *Id.* The study in this Article attempts to build upon their analysis by using the past decade of data to compare the indices.

111. *Id.*

112. See Dow Jones Global Indexes Fact Sheet, DOW JONES, http://www.djindexes.com/mdsidx/downloads/fact_info/Dow_Jones_Global_Indexes_Fact_Sheet.pdf (last visited May 7, 2013) [hereinafter *Dow Jones Global Indexes Fact Sheet*].

113. See *infra* Table 1.

114. Fama & French, *supra* note 106, at 29.

115. *Id.*

where $E(R_i)$ represents the expected return of the index (either DJIM or DJS), R_f represents the risk-free rate as measured by the rate on the one-year U.S. Treasury Bill (as of April 27, 2013),¹¹⁶ and $E(R_m)$ is the expected return on the market measured by the performance of DJG. The Beta of each index (β_i) is defined as:

$$\beta_i = \text{Covariance } [R_i, R_m] / \text{Variance } [R_m].^{117}$$

Normally, in a CAPM equation, the subscript i represents the return on an individual stock.¹¹⁸ Here, however, the individual stocks have been replaced by the DJIM and DJS in order to generate the Beta of each index and calculate how closely each index tracks the global equity market. A Beta of 1 represents a perfect correlation with the Dow Jones Global Market and demonstrates an equivalent volatility with the overall market.¹¹⁹ Therefore, at a Beta of 1, a 10% rise in the overall market would be reflected as an equivalent 10% rise in the index/asset being measured. A Beta of 0 demonstrates that the index has no correlation with the overall market, and a Beta of 2 represents that the index is twice as volatile as the global index.¹²⁰ A negative Beta indicates an inverse relationship with the market and could be used to hedge against market downturns.¹²¹

116. The rates for all U.S. Treasury Bills are available online at www.treasury.gov and searchable by date.

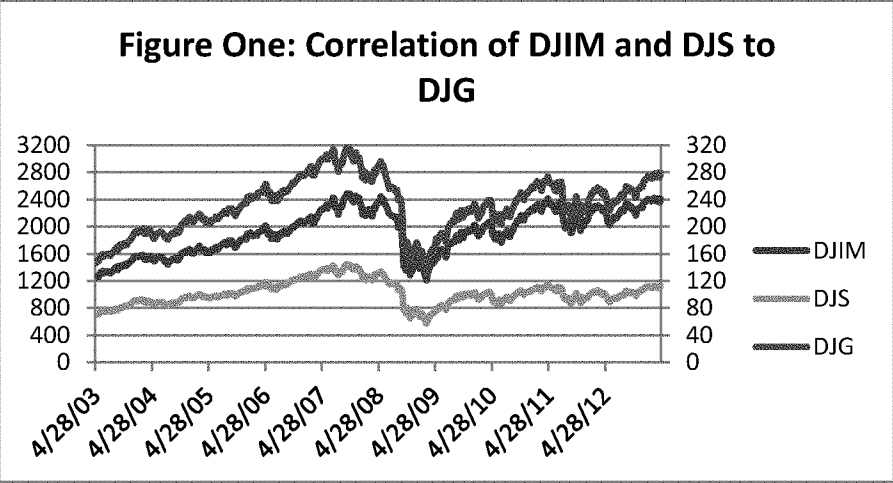
117. Fama & French, *supra* note 106, at 28.

118. *Id.*

119. Hakim, *supra* note 74, at 4.

120. *Id.*

121. *Id.*



As noted in Figure One, the analyzed data shows a very close correlation among the DJIM, DJS, and DJG. Both the DJIM Index and the DJS Index closely followed the overall market with a Beta of .957 and 1.066, respectively.¹²² Because Beta represents the correlation between the index and the global market, it also represents the systemic risk of investing in each index.¹²³ Here, the Beta demonstrates that the systemic risk is nearly identical to the overall equity market.¹²⁴ The fact that both ethical investment strategies closely tracked the market seems to indicate that investors who are concerned with making *sharia*-compliant investments are not penalized in the long-term for making such decisions (so long as their portfolios track the index). This is a noteworthy observation, because the decision to invest in *sharia* compliant assets is essentially involuntary from the perspective of a pious Islamic investor, and therefore those investors do not have the option to change their investment strategy should their returns incur a penalty for avoiding non-*sharia* compliant assets.

B. RISK ADJUSTED RETURNS

While the Beta calculation for each index is important to show the overall correlation to the market, it does not account for the risk

122. See *infra* Table 1.
123. Fama & French, *supra* note 106, at 29.
124. *Id.*

associated with a portfolio that invests in the index. This Section analyzes two traditional performance measures to calculate risk-adjusted returns, the Sharpe and Treynor ratios, as they relate to each index.

1. Sharpe Ratio

The Sharpe ratio represents the excess return of the index per total unit of risk.¹²⁵ A higher ratio represents a greater return per unit of total risk.¹²⁶ The Sharpe ratio is expressed as:

$$\text{Sharpe} = (R_i - R_f) / \sigma_i,$$

where R_i represents the return of the index, R_f is the risk-free rate based on the one-year U.S. Treasury Bill, and σ is the standard deviation of the index's returns.¹²⁷ Over the past decade, the Islamic index (Sharpe ratio of 0.209) has not only experienced greater returns than the DJS Index (Sharpe ratio of 0.091) but also performed better than the DJG Index (Sharpe ratio of 0.102).¹²⁸ This is likely because the DJIM screened out the secular capitalist financial sector, which, unlike the other two indices, has been mired in financial problems throughout the global recession.¹²⁹ Additionally, the screen for a thirty-three percent debt-to-market capitalization excluded highly leveraged companies from potential investable securities, thereby avoiding investments into many companies with strong likelihoods financial distress.¹³⁰ Simultaneously, the *gharar* prohibition theoretically required Muslim investors to shun intangible assets, such as credit-default swaps and other volatile derivatives.¹³¹ Because of this, *sharia*-compliant portfolios that closely

125. Kevin Dowd, *Adjusting for Risk: An Improved Sharpe Ratio*, INT'L REV. OF ECON. & FIN. 9, 211 (2000).

126. *Id.*

127. *Id.*

128. *See infra* Table II.

129. *See generally* Dow Jones Global Indexes Fact Sheet, *supra* note 112; Dow Jones Sustainability World Index Fact Sheet, *supra* note 102; GUIDE TO DJIM, *supra* note 75.

130. Michael S. Knoll, *Taxing Prometheus: How The Corporate Interest Deduction Discourages Innovation and Risk-Taking*, 38 VILL. L. REV. 1461, 1481 (1993).

131. Elfakhani, Hassan & Sidani, *supra* note 12, at 5–6.

tracked the DJIM were likely to outperform their conventional rivals as they exposed themselves to less risk.¹³²

2. Treynor Ratio

The Treynor ratio, like the Sharpe ratio, measures excess return of the index per unit of risk.¹³³ However, the Treynor ratio focuses on the systemic risk of the index as opposed to the total risk of the index.¹³⁴ The Treynor ratio is expressed as:

$$\text{Treynor} = (R_i - R_f) / \beta_i,$$

where R_i represents the return of the index, R_f is the risk-free rate as determined by the one-year U.S. Treasury bill,¹³⁵ and β_i equals the Beta of the index.¹³⁶ The Treynor ratio provides a ranking criterion for portfolios/indices whereby the larger the Treynor ratio is, the greater the performance of the index is relative to the other indices.¹³⁷

Under the Treynor ranking method, the DJIM again outperformed both the DJS and DJG.¹³⁸ Over the ten-year period, the DJIM had a Treynor ratio of 0.0822 compared to 0.0333 for the DJS and 0.0412 for the DJG.¹³⁹ The performance of the DJIM is attributable to higher annualized returns of 7.99% (compared to 3.67% for the DJS and 4.24% for the DJG) and a lower systemic risk (Beta of 0.957) for the index.¹⁴⁰

IV. COMPARING THE DJIM TO THE DOW JONES INDUSTRIAL AVERAGE AND S&P 500

Although the Islamic market has outperformed the general market over the last decade with consistently higher returns, many investors watch the Dow Jones Industrial Average (“DJIA”) and S&P 500 as

132. See *infra* Tables II-III.

133. Hakim, *supra* note 74, at 12–13.

134. *Id.*

135. See Table III.

136. *Id.*

137. Hakim, *supra* note 74, at 12–13.

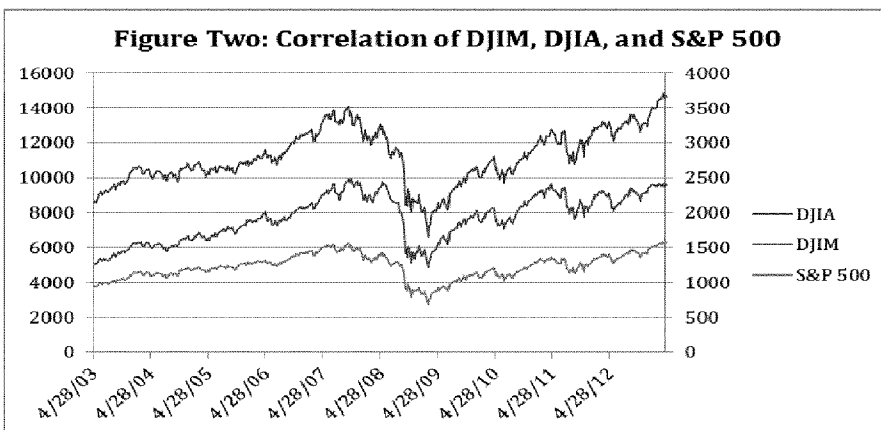
138. See Table III.

139. *Id.*

140. *Id.*

barometers to measure a portfolio's success.¹⁴¹ Both the DJIA and S&P 500 have performed remarkably well over the last year, with the DJIA reaching an all-time high of 15,000 on May 3, 2013, and the S&P 500 exceeding 1,600 for the first time ever.¹⁴² The question remains, however, as to how well the DJIM performed compared to these major indices. This Part analyzes (1) the performance of each index relative to the DJIM and each other over the last decade; and (2) the performance of each index over the prior year as the recession began to wane.¹⁴³

A. PERFORMANCE OVER THE LAST DECADE



Over the past ten years, the DJIM has outperformed both the DJIA and the S&P 500.¹⁴⁴ Both the DJIA and S&P 500 were slightly less correlated with the overall market than the DJIM (Beta of 0.957), with Beta calculations of 0.825 and 0.908, respectively.¹⁴⁵ This is unsurprising since the DJIM is a wider index than the S&P 500, which is

141. XIAOLIAN ZHENG & BEN M. CHEN, STOCK MARKET MODELING AND FORECASTING 44 (2013).

142. Matt Jarzemsky, *S&P Tops 1600 on Jobs Data*, WALL ST. J. (May 3, 2013, 6:11 PM), <http://online.wsj.com/article/SB10001424127887324266904578460573639253306.html>.

143. All of the figures in this section follow the same calculations outlined in the sections above.

144. See *infra* Table II.

145. See Figure Two.

itself wider than the DJIA.¹⁴⁶ While the DJIM excludes certain sectors in order to maintain compliance with *sharia*, the DJIA includes only the thirty “blue chip” companies that the Dow Jones selected due to those companies’ market capitalization, investor interest, and reputations.¹⁴⁷ Similarly, the S&P 500 tracks only 500 leading companies in the leading industries of the U.S. economy, which covers approximately seventy-five percent of U.S. equities.¹⁴⁸ Therefore, the scopes of both the DJIA and S&P 500 are significantly narrower than that of the DJIM when weighed against the overall market.¹⁴⁹

When measured against each index over the last decade, the DJIM outperformed both the DJIA and S&P 500 according to the Sharpe and Treynor ratios.¹⁵⁰ This is largely attributable to the DJIM’s superior annualized returns of 7.99%, contrasted with the returns of the DJIA and S&P 500 of 4.76% and 4.25%, respectively.¹⁵¹ The Sharpe ratio, in evaluating the total risk of each index over the last decade, ranked the DJIM as the highest performer with a Sharpe of 0.208, the DJIA at 0.127, and the S&P 500 at 0.107.¹⁵² Similarly, when measuring systemic risk as expressed in the Treynor ratio, the DJIM, with a Treynor of 0.0822, outperformed both the DJIA (0.0562) and the S&P 500 (0.0455).¹⁵³

B. PERFORMANCE OVER THE LAST YEAR

When the scope of examination is narrowed and only the last year is analyzed, the performances of the DJIA and S&P 500 relative to the DJIM are significantly different. While the annualized returns of the DJIM slightly dipped to 7.51%, the DJIA and S&P 500 skyrocketed to

146. See generally GUIDE TO DJIM, *supra* note 75; *Dow Jones Averages*, S&P DOW JONES INDICES, <http://www.djindexes.com/averages/> (last visited Apr. 4, 2013) [hereinafter *Dow Jones Averages*]; *S&P 500*, S&P DOW JONES INDICES, <http://www.standardandpoors.com/indices/sp-500/en/us/?indexId=spusa-500-usdof—p-us-l—> (last visited May 7, 2013) [hereinafter *S&P 500*].

147. *Dow Jones Averages*, *supra* note 146.

148. *S&P 500*, *supra* note 146.

149. See generally GUIDE TO DJIM, *supra* note 75; *Dow Jones Averages*, *supra* note 148; *S&P 500*, *supra* note 146.

150. See *infra* Tables II-III.

151. See *infra* Table II.

152. See *id.*

153. See *infra* Table III.

11.04% and 12.95%, respectively.¹⁵⁴ The market significantly rebounded in the last year, and because the indices track only the largest companies and market leaders, it is unsurprising that these returns outperformed the DJIM.

Additionally, the Sharpe and Treynor ratios demonstrate that this influx in annualized return significantly changed the risk-adjusted returns throughout the one-year period. The Sharpe ratio of 0.501 for the S&P 500 indicates that the S&P 500 had the highest return per unit of total risk over the last year, with the DJIA coming in second at 0.465.¹⁵⁵ The DJIM improved from the decade-long Sharpe ratio of 0.209 to 0.283, but this was dwarfed by the returns of the S&P 500 and DJIA.¹⁵⁶

The Treynor ratio tells a similar story over the last year, with the S&P 500 and DJIA outperforming the DJIM. The Treynor ratio ranks each index according to their returns relative to their systemic risks, with the S&P 500 in first place at 0.141, the DJIA in second place at 0.134, and the DJIM in last place at 0.076.¹⁵⁷

The drastic changes in annualized returns, Sharpe ratios, and Treynor ratios over the last year markedly depart from the ten-year performance of the DJIA and S&P 500.¹⁵⁸ When viewed in isolation during the bull market of the last year, both indices far outperformed the DJIM.¹⁵⁹ However, the returns over the prior decade as measured by the Sharpe and Treynor ratios of the DJIM indicate that investing in a fund that tracks the DJIM would yield comparable returns to a fund that tracks either the DJIA or S&P 500 over a long period of time.¹⁶⁰ This indicates that, at least during times of crisis in the financial sector, the DJIM may be able to act as a hedge against the DJIA or S&P 500, because the Sharpe and Treynor ratios for the DJIM appear to have an inverse relationship with those of the DJIA and S&P 500.¹⁶¹

154. See *infra* Table IV.

155. See *infra* Table II.

156. See *infra* Table IV.

157. See *infra* Table V.

158. See *infra* Tables IV-V.

159. *Id.*

160. *Id.*

161. See *infra* Tables II-III.

CONCLUSION

The above calculations appear to clearly show that the DJIM has outperformed the comparable indices over the last decade.¹⁶² The significant restrictions placed on *sharia*-compliant investments appear to create a more conservative investment strategy that has aided the performance of the DJIM.¹⁶³ Islamic mutual funds have avoided the extreme volatility of the secular financial sector since the beginning of the global recession, because they were barred from investing in it.¹⁶⁴ However, it is apparent that although Islamic funds did not directly invest in the financial sector, the DJIM as a whole experienced nearly identical volatility to the overall market.¹⁶⁵ Each segment of the market is inextricably linked, and the DJIM was unable to avoid the downturn.¹⁶⁶ Most importantly, over the long term, there does not seem to be a significant penalty for *sharia*-compliant investments when measured against the performance of the global index.¹⁶⁷ The Beta calculation shows that the DJIM and DJS have a relatively similar correlation to the DJG and appear to move relatively consistently with the overall market.¹⁶⁸ Therefore, it does not appear that the limits on hedging and trading in derivatives for *sharia*-compliant funds have contributed to a significant handicap.¹⁶⁹

Perhaps, the most important potential implication of this study might be that a mutual fund that closely tracks the DJIM could be used as a hedge against downturns in the financial sector or in the market in general because of the screens employed by the DJIM.¹⁷⁰ The financial sector is particularly vulnerable in the event of widespread financial failure, which might be avoided by applying the *riba* and *gharar* principles that have been interpreted as an outright prohibition on non-Islamic financial institutions (or any institutions that charge interest or engage in speculative activities).¹⁷¹ Additionally, the DJIM may be able

162. *Id.*163. *Id.*164. *See generally* GUIDE TO DJIM, *supra* note 75.165. *See infra* Tables II-III.166. *Id.*167. *Id.*168. *See infra* Table I.169. *See infra* Tables II-III.170. *See generally* GUIDE TO DJIM, *supra* note 75.171. *See generally* AYUB, *supra* note 12.

to act as a hedge against general market downturns because it excludes companies that have the highest financial leverage, and therefore, are more likely to be the first companies to experience financial distress or failure during a slump in the market.¹⁷²

The implications of this study may be useful not only for investors seeking safer investment strategies but also for corporations in their business operations and regulators considering investment activities that are likely to result in externalized losses.¹⁷³ If the Islamic index were to perform equally to the overall market, that would imply that the corporations listed in the index would be able to generate returns equal to their non-Islamic counterparts, but they would do so by exposing themselves to less risk.¹⁷⁴

This study does not intend to advocate for the adoption of *sharia* principles in financial investments, but corporations may be able to decrease their risk by learning from a more conservative strategy.¹⁷⁵ *Gharar* limits when parties may enter a contract to buy or sell based on whether the subject matter of the contract is a tangible asset and whether the parties are truly cognizant of what they are buying or selling.¹⁷⁶ These limits would likely invalidate many derivatives contracts, such as credit default swaps or collateralized debt obligations, under Islamic law.¹⁷⁷ In 2002, Warren Buffet categorized derivatives as “weapons of mass financial destruction” because although latent at the time, they had the potential to wreck tremendous devastation.¹⁷⁸ The recent recession may have proven him right. However, had investors engaged in due diligence (which is essentially required by *gharar*) before purchasing these derivatives, they would have known that the underlying assets were problematic.¹⁷⁹

Gharar ensures that all parties to a transaction understand the contract into which they are entering and that the object of the contract is definite in nature.¹⁸⁰ This places a safety check on abuse by

172. Knoll, *supra* note 130, at 1481.

173. *See supra* Parts III-IV.

174. *Id.*

175. Knoll, *supra* note 130, at 1481.

176. AYUB, *supra* note 12, at 58.

177. *Id.*

178. Sorenson, *supra* note 29, at 650.

179. *See generally* Khan & Crowne-Mohammed, *supra* note 13.

180. AYUB, *supra* note 12, at 58.

prohibiting one party from manipulating the other contracting party.¹⁸¹ Although most US financial institutions charge interest, which is generally prohibited under Islam, they might not have incurred such massive financial losses had they not engaged in irresponsible speculation on derivatives.¹⁸² Perhaps, ironically, this practice has not abated.¹⁸³ To illustrate this point, the derivatives market stood at a nominal value of \$648 trillion at the end of 2011.¹⁸⁴ At the same time, the entire goods and services produced by the world for the entire year were valued at just \$70 trillion, nearly an order of magnitude less.¹⁸⁵ U.S. financial institutions may be able to adapt the underlying principle of *gharar* to create a more sustainable long-term business strategy, which might serve to decrease the severity of economic downturns.¹⁸⁶ Additionally, U.S. firms might be able to incorporate some of the risk management principles from the *riba* prohibition, specifically, the profit- and loss-sharing structure of loan transactions.¹⁸⁷ By creating financial products that incorporate a profit- and loss-sharing agreement, financial institutions could reduce their risk exposure.¹⁸⁸

Islamic finance provides one manifestation of the concept of moral investing or a moral economy.¹⁸⁹ Although morality is not always consistent across cultures, conducting business in a transparent and open manner may serve the long-term interests of business and society as a whole.¹⁹⁰ Finance in the U.S. tends to be driven solely by the goal of generating the highest possible returns.¹⁹¹ This often leads to short-term investment decisions and speculation that create bubbles, in which a segment of the market profits at the expense of the economy as a whole.¹⁹² Islam unequivocally condemns such practices, at least in

181. *Id.*

182. *See generally* Khan & Crowne-Mohammed, *supra* note 13.

183. *Global OTC Derivatives*, THE ECONOMIST (May 12, 2012), *available at* <http://www.economist.com/node/21554558>.

184. *Id.*

185. *Focus: World GDP*, THE ECONOMIST ONLINE (Dec. 20, 2011, 21:33), <http://www.economist.com/blogs/graphicdetail/2011/12/focus-0>.

186. *See generally* AYUB, *supra* note 12.

187. *Id.*

188. *Id.*

189. *Id.*

190. *Id.*

191. *See generally* Jensen, *supra* note 89.

192. *Id.*

theory.¹⁹³ In reality, a longer-term focus might lead to lower risk and thus, higher risk-adjusted profits since it has proven true over the last decade.¹⁹⁴ Indeed, even in light of the DJIM underperforming the DJIA and S&P 500 over the last year, this data must be contextualized as a single, isolated year during which the global recession began to wane.¹⁹⁵ The DJIM excludes the entirety of the secular capitalist financial sector, which means that a boon for this sector will be largely missed by the DJIM.¹⁹⁶ However, the effect that non-Islamic financials have on the overall market is likely so enormous that the DJIM will be lifted along with the broader market to some extent, as evidenced by the strong beta correlation between the DJIM and DJG.¹⁹⁷

193. See generally AYUB, *supra* note 12.

194. See *infra* Tables II-II.

195. See *infra* Tables IV-V.

196. See generally GUIDE TO DJIM, *supra* note 75.

197. See *infra* Table I.

TABLE I

	Beta Calculations benchmarked against DJG
DJIM	0.957460
DJS	1.065715
DJIA	0.825240
S&P 500	0.907956

* The Beta for each index was calculated using 522 weekly observations from 4/28/2003 to 4/22/2013 as benchmarked against the Dow Jones Global Index.

TABLE II

Sharpe Ratio Analysis
 $\text{Sharpe} = (R_i - R_f) / \sigma$

	DJIM	DJS	DGW	DJIA	S&P 500
Average Weekly Returns	0.001536	0.000705	0.000816	0.000915	0.000817
Annualized Returns	0.079895	0.036661	0.042422	0.047568	0.042494
Weekly Standard Deviation	0.025125	0.025973	0.026885	0.024212	0.025686
Monthly Standard Deviation	0.108877	0.112550	0.116503	0.104919	0.111307
Annualized Std Dev	0.377159	0.389885	0.403579	0.363451	0.385580
Risk-free rate*	0.0012	0.0012	0.0012	0.0012	0.0012
Sharpe Ratio:	0.208653	0.090954	0.102142	0.127577	0.107095

* The risk-free rate is based on the one-year U.S. Treasury Bill from 4/27/13 according to www.treasury.gov.

TABLE III

Treynor Ratio Analysis
 $Treynor = (R_i - R_f) / \beta$

	DJIM	DJS	DJG	DJIA	S&P 500
Annualized Returns	0.07990	0.03666	0.04242	0.04757	0.04249
Beta of Index	0.95746	1.06572	1.00000	0.82524	0.90796
Risk-Free Rate*	0.0012	0.0012	0.0012	0.0012	0.0012
Treynor Ratio	0.08219	0.03327	0.04122	0.05619	0.04548

* Risk-free rate is based on one-year Treasury Bill from 4/27/13 according to www.treasury.gov.

TABLE IV

Note: Sharpe Ratio Analysis focuses on data only from 4/23/12 to 4/22/13

	DJIM	DJIA	S&P 500
Average Weekly Returns	0.001444338	0.002123846	0.002489496
Annualized Returns	0.075105579	0.110439981	0.12945381
Weekly Standard Deviation	0.017404246	0.015642432	0.017047531
Monthly Standard Deviation	0.0754184	0.067783872	0.073872635
Annualized Std Dev	0.261257002	0.23481022	0.255902314
Risk-free rate*	0.0012	0.0012	0.0012
Sharpe Ratio:	0.282884586	0.465226687	0.501182688

TABLE V

Note: Treynor Ratio Analysis focuses on data only from 4/23/12 to 4/22/13

	DJIM	DJIA	S&P 500
Annualized Returns	0.075105579	0.110439981	0.12945381
Beta of Index**	0.969374021	0.813742136	0.912410086
Risk-Free Rate*	0.0012	0.0012	0.0012
Treynor Ratio	0.076240519	0.134243977	0.140565971

* The risk-free rate is based on the one-year U.S. Treasury Bill from 4/27/13 according to www.treasury.gov.

** The Beta has been calculated only for the period 4/23/12 to 4/22/13.

Notes & Observations