

Alternative Trading Systems and the Viability of an Islamic Electronic Communications Network

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ABSTRACT

This paper studies current dynamics in the U.S. financial markets that affect the viability of an Islamic ECN (Electronic Communications Network). Foremost are recent regulatory developments that have given rise to an environment favorable to the establishment of such an ECN. However, this study also admits that the profitable continuance of the Islamic ECN is based much less on regulatory than on economic and business considerations. The regulatory history of ATSS (alternative trading systems) is discussed, focusing on the introduction of Reg. ATS and the new display rules. Following that, a brief analysis of the operating experience of ATSS/ECNs ensues, including some of the issues raised between their structure and the structure of traditional exchanges. Finally, the paper proposes an approach to building and maintaining a successful Islamic ECN.

I. INTRODUCTION

This paper studies the current dynamics in U.S. financial markets that affect the viability of an Islamic Electronic Communications Network, or ECN. First and foremost are the recent regulatory developments that have given rise to an environment favorable to the establishment of just such an ECN. However, this study also admits that the profitable continuance of the Islamic ECN is based much less on regulatory considerations and much more on economic and business considerations. As this paper attempts to point out, the “build it and they will come” mentality followed by so many Internet ventures is grievously flawed. The paper is organized as follows: First, the regulatory history of ATSS will be discussed, up to the most recent changes of interest. Then a review of the 1996 Order Handling Rules will occur. Following that, a brief study of the operating experience of ATSS/ECNs will ensue, including some of the issues raised by the differences between their structure and the structure of traditional exchanges. It is at this point that the reader must bear in mind that the term ATS is broader than that of ECN—ECNs being a sub-class of ATSS. Lastly, building on the knowledge accumulated in the first two sections, the paper will propose an approach to building and maintaining a successful Islamic ECN. The Islamic financial industry has a golden opportunity in what both the new regulatory environment and its resultant flexibility offer it.

II. REGULATORY HISTORY OF ALTERNATIVE TRADING SYSTEMS (ATSS)

A. Background

Since, from a regulatory perspective, an Islamic ECN would be a type of ATS, it is important that a brief survey of the regulatory history of ATSS be first undertaken. ATSS mirror the changes that have swept through the United States’ securities markets in the past three decades. In 1976, the United States Congress, prompted by the rapidly increasing pace of technological development and the simultaneous growth of the stock market, amended the Securities Exchange of 1934. The purpose of these amendments was two-fold. In the first instance, Congress mandated that a National Market System (NMS) be developed, leveraging the advantages of the developing technology and forestalling further disruptions in an orderly evolution of a stable market. The second purpose of the amendments was to ensure fair and equal access to markets and market information. In the early 1970s, automated systems were arising that began to fulfill roles beyond those of simply automating what would be called traditional brokerage house operations. “Pseudo-markets” began to arise, Instinet being the most notable example, where bids and offers were transmitted and orders executed based on these bids and offers. These systems were proprietary and often available to only the

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brokerage houses or institutions that developed them, their clients, and other subscribers. This led to some undesirable developments, according to the Securities and Exchange Commission (SEC):

Over time, as these subscribers posted prices in ECNs that were better than the prices they were posting in NASDAQ, the public quote became less reliable and the market became fragmented. This led to artificially wide spreads in the public markets. As a result, many investors, particularly retail investors, were receiving executions at prices inferior to those displayed by market makers and other subscribers on ECNs. This essentially created a two-tiered market—the traditional public market, and the new ECN market with better prices and limited access.ⁱ

Fragmentation in the securities market occurred because these private trading systems were not integrated in the traditional market as a whole. A National Market System (NMS) was proposed as the first step in remedying this increasing fragmentation. In theory, the NMS would be a centralized location for the publication of quotes against which trades could be executed at what is called the national best bid and offer (NBBO). Hence, if several different trading venues were posting different prices at which retail investors could buy or sell a security, those prices were compiled and the lowest price at which one could buy and the highest price at which one could sell would become the two sides of a quote. Prices at which trades were actually executed would be recorded as well, allowing for comparison between the NBBO and execution price to ensure the quality of executions in practice. However, this was at first only theory, since the SEC was charged in overseeing the establishment and maintenance of such a system. The SEC was then left to tackle the practical problems of establishing the system.

Congress, in amending the 1934 Act, left the SEC a great deal of room in which to maneuver in achieving the goals expressed in the 1976 legislation. For the two decades following 1976, the SEC and the self-regulatory organizations (SROs) worked together to realize the efficient operation of the NMS.

Our national market system, as it has evolved since 1975, has sought the benefits of both market centralization—deep, liquid markets—and competition. To achieve these benefits, the national market system has maintained equally regulated, individual markets, which are linked together to make their best prices publicly known and accessible. Alternative trading systems have remained largely outside the national market system.ⁱⁱ

ATs remained so despite the extensive regulatory treatment given the NMS. In 1996, the Order Handling Rulesⁱⁱⁱ were promulgated by the SEC, in which market makers and specialists employing ATs were required to disseminate their quotes in accordance with the new rules. However, the ATs themselves were not necessarily required to do so. Furthermore, if they did operate in accordance to the new rules, it was on a voluntary basis. The 1996 Order Handling Rules were indicative of increasing regulatory gap into which the quickly evolving ATs were falling, despite the fact that their impact upon the markets was growing as well. In short, while regulations did treat the activities of ATs, no regulations treated their regulatory status, so to speak, opting instead to promulgate rules within a regulatory framework that had been in place for over six decades.

In 1996, the same year as the Order Handling Rules became effective, Congress took another vital step forward in allowing the evolution of the nation's securities markets. As in 1976, Congress recognized the need for flexibility in the regulation of the markets required by the pace of technological development. Congress once again turned to the Exchange Act of 1934, amending it in order to allow the SEC far-reaching exemptive powers. As the SEC explains:

In 1996, Congress provided the Commission with greater flexibility to regulate new trading systems by giving the Commission broad authority to exempt any person from any of the provisions of the Securities Exchange Act of 1934 ("Exchange Act") and impose appropriate conditions on their operation. This new exemptive authority, combined with the ability to facilitate a national market system, provides the Commission with the tools it needs to adopt a regulatory framework that addresses its concerns about alternative trading systems without jeopardizing the commercial viability of these markets.^{iv}

The SEC always had the power to "except" a person, keeping in mind that the SEC defines "person" broadly, including legal entities other than individual people, without changing the responsibilities of that person according to the regulations. Hence, as we shall see, when an entity fits the definition of "exchange," the SEC has two alternatives in dealing with that entity. Previously, the SEC could only categorize or define and then "except" certain entities from that definition. Thus, a framework developed that at times proved itself too rigid. An entity was either an "exchange" or it was not an "exchange." If not an "exchange," then it was either a "broker-dealer" or it was not. Problems developed when ATs arose that seemed to be some of

both. After the 1996 amendments, the SEC was able to fine-tune its regulation of market institutions with the use of “exemptions.” Now, regardless of the definition that an institution fit, the SEC could exempt that institution from certain sets of rules. If an institution fit the definition of an “exchange,” the SEC could exempt that institution from a specific portion or all of the rules governing “exchanges,” given that other requirements were met. This was less circuitous than finding a way in which the institution could avoid the rules by taking the possibly absurd position that it was not what it was defined as by the SEC despite all logical evidence otherwise.

B. Regulation of Exchanges and Alternative Trading Systems

From 1996 to December of 1998, the SEC formulated a new set of rules that would deal with the changes occurring in the securities markets with as little impact as possible and imbue these rules with a certain amount of flexibility to handle future innovations in the types of institutions that might arise. This release was Exchange Act Release 40760, “Regulation of Exchanges and Alternative Trading Systems.” The new regulatory framework was built on three, distinct pillars:

- A new definition of “exchange”
- Exemptions for the new definition of “exchange”
- Regulation ATS

The new definition of “exchange” made the term broader, thereby netting more of the existing trading systems operating at that time and in the future. An “exchange” was henceforth defined in CFR 17 240.3b-16 (Rule 3b-16) as “any organization, association, or group of persons” that meets a two-prong test. Both of these two tests must be met in order to be considered an “exchange.” Rule 3b-16 defines these tests as being met if “any organization, association, or group of persons:

- Brings together the orders for securities of multiple buyers and sellers; and
- Uses established, non-discretionary methods (whether by providing a trading facility or by setting rules) under which such orders interact with each other, and the buyers and sellers entering such orders agree to the terms of the trade.”^v

Thus, ATSS fall within the rubric of an “exchange” since they certainly bring together the orders of multiple buyers and sellers as well as using a set trading solution, or algorithm, which handles these orders as they are received. Delving into the details of this definition and its implications is beyond the scope of this article. Suffice it to say for the moment, that this definition alone would require ATSS to register as exchanges. Such registration, however, would then place a much larger number of regulatory requirements upon the ATSS, greatly increasing the costs and burdens of operating such a system.

In order to avoid these prohibitive requirements and to encourage innovation in the establishment and operation of these trading systems, the SEC formulated the second pillar using its new exemptive authority. CFR 17 240.3a1-1 (Rule 3a1-1) exempts ATSS from the definition of an “exchange” given that certain conditions are met. For our purposes at present we are concerned with only the portion of this rule that states that an ATS is exempt if it “(2) Is in compliance with Regulation ATS, CFR 242.300 through 242.303.”^{vi} Hence, while ATSS were still considered exchanges by virtue of the definition of Rule 3b-16, they were exempt from having to register as exchanges given that they were complying with CFR 17 242.300 through 242.303, also known as “Reg. ATS.” In short, ATSS now had a choice: either register as an exchange and comply with the more prohibitive regulations applicable to exchanges or register under Reg. ATS and comply with the regulations applicable to broker-dealers. The second alternative was widely seen as much less costly and burdensome.

The third pillar, Reg. ATS, is the set of regulations covered by CFR 17 242.300 (Rule 242.300) through 242.303 (Rule 242.303), first mentioned above in the exemption provided by Rule 3a1-1. These rules do not cover the regulation of broker-dealers entirely, but are an addition to a larger set of regulations applicable to registered broker-dealers. For the discussion at hand, emphasis will be put on an even smaller portion of those regulations. Specifically, this discussion will focus on the definition of an ATS under CFR 17 242.300 (Rule 242.300). Under Rule 242.300, an ATS is defined as “any organization, association, person, group of persons, or system [that]:

- That constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange within the meaning of [Rule] 240.3b-16 of this chapter; and

- That does not:
- Set rules governing the conduct of subscribers other than the conduct of such subscribers' trading on such organization, association, person, group of persons, or system; or
- Disciplines subscribers other than by exclusion from trading.^{vii}

C. Issues of Concern for the Islamic ECN

It is the definition of an ATS under Rule 242.300 that raises the most serious questions as to the viability of establishing an Islamic pseudo-exchange in the guise of an Islamic ECN. The questions that will have to be asked and the interpretations that will have to be made revolve around what is exactly meant by "governing the conduct of subscribers." Furthermore, once these activities have been identified, what is the difference between them and similar activities reserved for exchanges? Specifically, as a broker-dealer, the firm that establishes an ECN is subject to the rules of the self-regulatory authority (SRO) of which it is a member. All broker-dealers are required to be a member of an SRO, such as the New York Stock Exchange or NASD, which have their own listing requirements. Accordingly, any member broker-dealers follow these listing requirements by trading only those securities that meet the set criteria. Would then an Islamic ECN be overstepping its authority by limiting trading to Islamically-acceptable stocks, and thereby qualify as an exchange?

There are several indications that this would not be the case, though this conclusion is reached only after brief interpretation rather than official declaration or legal opinion. First, there is the principal that any such Islamic ECN would be setting forth qualifications more restrictive than the applicable SRO as opposed to qualifications less restrictive. In other words, the Islamic ECN would be trading securities "more qualified" rather than "less qualified" to be traded on its system. The Islamic ECN would not necessarily be increasing risk to the investor in doing so. Nevertheless, it would be impossible to tell without the actual establishment of such an Islamic ECN whether or not the SRO would consider such restrictions a usurpation of its powers. In addition, this issue does not revolve around the SEC's interpretation of an "exchange" since the SEC has defined the two key elements of an "exchange" as being the bringing together of multiple buyers and sellers as well as the use of a non-discretionary system by which their orders are handled. Rather, the issue lies with the SRO's interpretation of this activity. Different SROs might view this in different ways.

In addition, in the SEC's "Regulation of Exchanges and Alternative Trading System" release, there are several references to such activity on the part of ATSS. The SEC mentions:

The Commission would consider a trading system to be "governing the conduct of subscribers" outside the trading system if it imposed on subscribers, as conditions of participating in trading, any requirements for which the trading system had to examine subscribers for compliance. In addition, if a trading system imposed as conditions of participation, directly or indirectly, restrictions on subscribers' activities outside of the trading system, the Commission believes that such a trading system should be a registered exchange or operated by a national securities association.^{viii}

So, the prospective Islamic ECN must realize that the SEC considers it as an exchange. However, the exemptive authority of the SEC paves the way for these ATSS to register as broker-dealers under Reg. ATS. This much is evident. As far as the SEC is concerned, the question becomes one of whether or not limiting trading on the system to Islamically acceptable stocks is "governing the conduct of subscribers" to such a point that it is an activity qualifying it necessarily as an exchange beyond the limits allowed to institutions eligible for registration under Reg. ATS. Also, is a trading system's refusal to execute an order on a stock that is not in its database considered a way that it would "examine subscribers for compliance"? A case might be made that this is not so. The Islamic ECN is setting forth guidelines as to the securities traded, and hence, only indirectly as to the subscriber's conduct. Is not the Islamic ECN limiting the securities traded rather than the subscribers' conduct?

If the answer to this question were in the affirmative and this were the correct interpretation, the question then becomes one of whether such guidelines being imposed upon the securities traded is considered "listing." Listing standards are the privilege of registered exchanges, not broker-dealers.

An alternative trading system wishing to register as a national securities exchange may choose to set listing standards for its system. If an applicant chooses to set listing standards, it must have written listing and maintenance standards, as well as an adequate regulatory staff to apply those standards. The applicant must also have rules restricting the listing of securities issued in a limited partnership rollup transaction.^{ix}

There are several points contained in this selection. First, it says that an exchange, "may choose to set listing standards." Is this to imply that listing standards are not a necessary element of an exchange or SRO, since it employs the use of the term "may"? Otherwise, other points are problematic. The Islamic ECN

is sure to have established criteria as to what qualifies a security as an Islamically acceptable stock as well as a staff to apply those standards, regardless of the degree of automation used to periodically evaluate individual companies for compliance to *shari'a* standards. However, this structure must be in place in the case that, “an applicant chooses to set listing standards.” Does having these standards automatically define the Islamic ECN as an exchange or SRO? Once again, the additional question is whether trading a more restrictive universe of stocks from the larger set approved for listing by the applicable SRO is permissible. This is, in fact, what an Islamic ECN would be doing.

When the SEC formulated this new regulatory framework, it obviously did not have the unique characteristics of an Islamic ECN in mind. As a result, these specific issues must be addressed from an official regulatory position before an attempt to establish an Islamic ECN progresses too far. The fact that these issues are not addressed specifically—and it is only natural that they would not be—does not imply that they are complex or beyond simple resolution. It simply means that participants in the Islamic financial industry must raise these questions before the appropriate regulatory bodies in order to have them settled definitively. This is the task that awaits the prospective Islamic ECN.

III. THE ORDER HANDLING RULES

A. Background

While Reg. ATS makes it easier to establish an Islamic ECN, the rules to which focus will now turn assist in the viability of such an ECN once established. In the foregoing section, brief mention was made of the 1996 Order Handling Rules. This set of rules was comprised of several other SEC Rules that were either promulgated anew or amended in 1996 in order to further the goals Congress had set forth in the 1976 amendments to the Act of 1934 pertaining to the establishment of the National Market System (NMS). The goals of the 1976 amendments to the 1934 Act have already been discussed, but it is worthwhile to repeat them here since they are of great importance to the discussion to follow. Specifically, Congress determined that it was in the interest of the investing public to construct the NMS such that it provided:

- economically efficient executions;
- fair competition among broker and dealers, among exchange markets, and between exchange markets and markets other than exchange markets;
- public availability of quotation and transaction information;
- an opportunity to obtain best execution; and
- an opportunity to obtain execution without dealer intervention to the extent consistent with economically efficient executions and the opportunity to obtain best execution.^x

The NMS would achieve these goals by making all quotes and trades on securities publicly available by consolidating the reporting of quotes and executions and disseminating that information to all participants. This transparency would then theoretically allow the individual investors to be more aware of the quality of their executions and make informed decisions based on the more accurate picture painted by the information being presented.

The fifth point above sets forth what was for that time a relatively novel concept. In short, it states that all of the points that precede it—that is one through four—should be available to all participants alike. This meant that the efficiency and quality of trading established via the NMS should be directly accessible to the individual investor and not just the institutions. Congress was not satisfied with the individual investors benefiting from their brokers getting them better executions which would have to be verified by the investors using the more accurate information provided by the apparatus that comprised the NMS. The NMS was to eventually provide the individual investors the opportunity to act without the assistance of a broker or a dealer. This concept of disintermediation was one at which ECNs would later prove they could excel.

However, before such an environment could exist, the SEC had to set forth guidelines for the handling of orders and quotes by broker-dealers—an activity it was found that was fraught with irregularities usually not in the best interest of the public. Before the technological explosion of the 1980's and 1990's, investors had to rely on the information provided them by their respective broker-dealers. As has already been mentioned, a fragmented market system was developing, and the information provided to investors was more or less accurate depending upon which “source” the broker-dealer used. While the NMS alleviated this problem somewhat by exposing all market information to the public and disseminating the best bids and offers (NBBO) as well as accurate execution information, the recent rise of ECNs and other ATSs has created the problems once again. In addition, there has always been a regulatory distinction between “orders” and “quotes.” Orders represent for the most part agency transactions executed on behalf of a retail account. As a result, they contain one side of the market—either a buy or a sell. Quotes on the other hand represent

proprietary trades for the accounts of broker-dealers. Dealers post quotes to the public to indicate prices at which they are willing to buy and sell, making it necessary to post two sides to each quote. When a dealer can also enter an order to buy or sell only on an ECN for their accounts, they effectively take the role of “investor” instead of dealer since they are technically not executing transactions based upon their obligatory two-sided quotes. That is, they execute transactions by posting prices using only one side of the market. Until the 1996 Order Handling Rules, the dealers’ orders fell under a different set of guidelines than their quotes. The SEC found:

...brokers today may quote one price publicly to retail customers, while showing a better price privately to other investors and dealers on an ECN. In addition, the quotes displayed to public investors may not accurately reflect the best price for a security because limit orders, which specify the price at which customers will buy or sell a security, are not uniformly required to be included in the quote.^{xi}

The distinction between orders and quotes, as well as the differences in that manner in which they are handled, holds greater significance than mere best execution considerations. When an investor places a “market” order, that investor simply requests the transaction be completed at the best price possible. In this way, the investor is a “price taker.” When an investor places a “limit” order, that investor is setting a ceiling or a floor at which they wish the transaction to be completed. At the same time, they are in effect setting a price at which they are willing to buy or sell much like a dealer. In this way, the investor is a “price setter.” However, price setting was considered the privilege of specialists and dealers, not investors—though this was more of a perception rather than a legal fact.

Unfortunately, as evidenced by the practices described by the SEC above, even limit orders were being executed at small array of available prices if more than one price at all. Limit orders were also not being exposed to the markets as a whole, since they were orders rather than quotes, thereby blocking the chance for other participants to execute the order at improved prices. In short, investors placing limit orders were for all intents and purposes being treated as “price takers” and not “price setters.” Events began to transpire to change this. First, ECNs were established which by virtue of their order-matching structure allowed individual investors to place limit orders into the system which were reflected in the public order book. This display of limit orders allowed the individual to participate directly in the price discovery process since their limit orders were being treated as “price setters.” In addition, the ECNs excelled at disintermediation since the subscribers did not rely on the information and order handling of a broker-dealer. The remaining drawback was that ECNs were not integrated into the NMS.

In 1996, the SEC promulgated the Order Handling Rules that would begin the move toward integrating ECNs into the NMS. This new set of regulations first blurred the distinction between “orders” and “quotes” for the purposes set forth therein. In doing so, the SEC was then able to set forth uniform minimum standards for the handling of orders and quotes that leveled the proverbial playing field between the institutions and investors. Market makers and specialists would now be more likely to compete with customer limit orders than merely attempt to execute them or hold them for later execution. The Order Handling Rules had to treat this from two different perspectives, making the Order Handling Rules comprised of two different rules. One was the creation of a new rule that would be called the “Display Rule”^{xii} covering the display of limit orders to the public and other markets. The other method the SEC used was to amend the already established “Quote Rule.”^{xiii} The details of each shall be discussed separately below as well as their importance to the viability of an Islamic ECN.

B. The Quote Rule

As already noted, the SEC amended the existing Rule 240.11Ac1-1, popularly known as the Quote Rule and hereafter referred to as such, in order to establish these new guidelines for order handling. This rule, before being amended,

...require[d] the collection and public dissemination of the best bid, best offer, and size for each market quoting any security covered by the Quote Rule, as well as the consolidation of those markets’ quotations and public dissemination of the national “consolidated” best bid and offer (“NBBO”). These quotations must be firm, and a market maker or specialist generally is obligated to execute an order at a price at least as favorable as its published bid or offer up to the size of its published bid or offer.^{xiv}

The SEC found that some specialists and market makers were in the habit of quoting bids and offers to the public while entering different prices on ECNs. This was creating a two-tiered market, since the ECN orders placed by market makers and specialists were not being treated as quotes and disseminated to the

overall market. The SEC stated that this practice ran counter to the spirit of the 1976 amendments to the 1934 Act, as well as the Quote Rule, and sought a way to integrate these quotes into the NMS.

The solution the SEC created was the “ECN amendment”^{xv} to the Quote Rule, which begins by stating that any bid or offer entered into an ECN shall be intended for inclusion into the Consolidated Quotation System (CQS) that is part of the NMS universe. In addition, it is expected that if the bid or offer improves the quote that that market maker or specialist reports directly to the CQS, then that market maker or specialist will change its quote to reflect the bid or offer entered into the ECN. Functionally, the market maker or specialist would enter a price into an ECN. If this price bettered that market maker’s or specialists published price, then that market maker or specialist would then have to update their published price as well. Taken as is, this requirement would actually dissuade market makers and specialists from continuing to enter bids and offers into ECNs. The primary enticement to market makers and specialists was the anonymity that the ECNs offered to those participants who placed bids and offers into the respective ECNs. However, if a market maker or specialist entered a specific bid or offer into an ECN and then changed their public quote for the same size and amount, it would become obvious to observers who had just entered the order into the ECN.

To alleviate this concern, the SEC also formulated the “ECN display alternative.”^{xvi} The SEC declared that if a market maker or specialist entered a bid or offer into an ECN, and that ECN was able to disseminate that bid or offer to the entire market, that market maker or specialist would be in compliance with the ECN amendment to the Quote Rule. Therefore, if an ECN could disseminate the limit order as well as the dealer who sent it and allow equivalent access to that order for other brokers or dealers regardless of the fact that those brokers or dealers were subscribers to the system, the ECN could then benefit from order flow from dealers seeking to comply with the Quote Rule as amended.

C. Display Rule

Given the importance of disintermediation and its contributions toward fair and equal access to markets, as well the sudden opening of the markets to individuals due to technological advances, it is unlikely that the SEC could have achieved the stated goals of both the amended Quote Rule and the new Display Rule pertaining to the handling of orders without blurring this distinction. However, it is not the novelty of the approach that the SEC chose to take that is of main concern. Rather the importance to ECNs is found in the manner by which participants can satisfy these new obligations.

The SEC describes the obligations imposed by Rule 11Ac1-4, hereafter referred to as the Display Rule, as follows:

Specifically, the rule allows an OTC market maker or specialist, immediately upon receipt of a limit order, to: (1) change its quote and size to reflect the limit order; (2) execute the limit order; (3) deliver the limit order in an exchange- or association-sponsored system that complies with the requirements of the rule; or (4) send the limit order to another market maker or specialist who complies with the requirements of the rule. The rule would require the specialist or OTC market maker to display a customer limit order when the order was “held” by the specialist or OTC market maker. If the specialist or OTC market maker immediately sends the order to a system or to another specialist or OTC market maker that complies with the rule, the specialist or OTC market maker that routed the order would have satisfied its obligation to display the order. These alternatives are intended to allow market makers, specialists, and market centers an opportunity to continue to provide their valuable services while offering customers the best available execution opportunities.^{xvii}

As part of the third alternative above—the delivery of the limit order to a sponsored system that complies with the rule—the SEC included ECNs. Hence, ECNs were now allowed as alternative channels by which a specialist or OTC market maker could satisfy its obligations to the new rule.

In other words, the new rule required that dealers (either specialists or market makers) to post customer limit orders as part of the public quote—usually within 30 seconds of receiving the order. This would put the dealers’ bids and offers in direct competition with those established by the limit orders entered by customers. Dealers could also simply execute the limit order within the obligations of best execution. Lastly, the dealer could deliver the order to other participants to handle, given that in doing so, the order would be either executed by the recipient or that recipient would update their quote to reflect the limit order. By referencing the “ECN display alternative” in the amended Quote Rule within the text of the Display Rule, the SEC had once more allowed a market maker or specialist to satisfy the rule with the assistance of an ECN. Again, if an ECN could disseminate the limit order as well as the dealer who sent it and allow equivalent access to that order for other brokers or dealers regardless of the fact that those brokers or dealers were subscribers to the system, the ECN could then benefit from order flow from dealers seeking to comply with the new Display Rule.

D. ECN Requirements

ECNs, like all market participants, are thought to benefit from the implementation of this rule through increased executions. With the increased competition from limit orders being included in quotes, there is a better chance that these limit orders will be executed due to the greater transparency they receive. As limit orders increase the competition, spreads should theoretically grow smaller, possibly attracting more market orders for execution as well. The revenue that could be derived from this extra activity is a function of rather straightforward mathematics. Yet, as spreads grow smaller, so too will dealer profits from these spreads. If the quote and order traffic increase significantly, then significant upgrades to the systems employed by these dealers must be made. In an environment of diminishing revenues from market maker activities, it might not be a worthwhile investment to upgrade these systems. Several commentators in the SEC Order Handling Rules release predicted this very situation. The SEC noted in response, “The Display Rule also allows a specialist or market maker several ways to comply with the rule by routing the order elsewhere without displaying the limit order in its own quote by transmitting a customer limit order to...a qualifying ECN.”^{xviii} In this light, ECNs were placed in a position to market themselves as low-cost alternatives to systems upgrades. Dealers could “outsource” compliance with the Display Rule per the alternative to “lay-off” some of the limit orders to qualifying ECNs.

Before the ECNs could profit from this potential order flow influx, they had to meet certain requirements, some to which this discussion has already eluded. The SEC classifies these as two separate requirements:

First, the ECN into which the market maker or specialist enters its order must ensure that the best prices market makers and specialists have entered therein are communicated to the public quotation system. Second, the ECN must provide brokers and dealers access to orders entered by market makers and specialists into the ECN, so brokers and dealers that do not subscribe to the ECN can trade with those orders.^{xix}

The ECN also has several options before them here as well. To attract the order flow from market makers and specialists, the ECN can identify the price entered as originating from the ECN itself rather than any certain market maker or specialist. By choosing to market itself as an alternative form of compliance with these rules, the ECN must also provide access to brokers and dealers that are not subscribers to the system. Here, once more, is an opportunity to attract more order flow.

Also, the issue of “access” allowed non-subscriber brokers and dealers is an important issue. An easy way to conceptualize the term “access” as the SEC uses it in this instance is that other brokers and dealers must be able to trade against the order as easily as if the order had not been entered into the ECN and remained with the market maker in the first place. So, the ECN must have additional technologies to assist in trade execution, even if this technology is as simple as phone lines and traders to staff them. This becomes an extra consideration for the ECN, which might be accustomed to fully automated executions on the part of its subscribers. Exchange-traded securities are also available for execution of automated systems as well. If the brokers or dealers could normally trade against other orders on the NASDAQ’s Small Order Execution System (SOES), SelectNet, or against Inter-Market Trading Plan/Computer Assisted Execution System (ITS/CAES) securities—also known as Rule 19c-3 securities, then the ECN must establish linkages to the systems and exchanges allowing for similar access. Access and participation in these various systems involves incurring fees for that access and participation. On the other hand, if ECNs in turn charge non-subscriber brokers or dealers for access to the orders, it is not considered an impediment, so the ECN could establish a schedule of charges to offset the cost of this extra burden.

IV. SURVEY OF CURRENT MARKET STRUCTURES

At this point, given that this paper has now treated the external environmental factors influencing the viability of an Islamic ECN, it is appropriate to turn the focus to more internal factors that must be considered. Primarily, this paper now will focus on certain structural considerations the potential Islamic ECN must take into account in order to become and remain viable. First, this paper will quickly review the key characteristics of the different market structures being employed by exchanges and ATSS currently. Following this, the discussion will move to raising possible alternatives the Islamic ECN can choose from as it decides upon the most advantageous structure it will assume, given the advantages and disadvantages discovered in the discussion of the particular market structures.

A. Electronic Communications Networks (ECNs)

ECNs are primarily “order-matching” systems. Order flow, to use the term loosely, is managed by computer-based algorithms that bring together similar buy and sell orders. For orders not immediately

matched, there is the “order book” which is displayed to the public for each individual stock. Hence, an order to buy ABC Inc. at \$10 would match with any similar sell order at that price or lower and vice versa. However, should our imaginary buyer’s order be below the current market—say the lowest sell order was at \$11, with higher bids at say \$10.75—then the buyer’s order would be reflected in a publicly displayed limit order “book.” Orders are usually prioritized on a price-time basis. Theoretically, the combination of order matching without the presence of intermediaries and the publicly displayed order book results in trading at lower cost due mainly to the absence of a spread and an increased level of transparency due to the publicly displayed limit order book.

Lower costs and increased transparency are the two major advantages of ECNs. However, there are additional advantages as well. For example, the high degree—almost complete—of automation results in faster executions and confirmations. This is important to players more concerned with execution at the expense of any particular, exact price. In addition, ECNs allow for simpler expansion into newer markets, especially the international scene. ECNs continue the advantages of traditional markets as well. These include anonymous trading as well as customized trading preferences, such as special instructions on orders. Lastly, ECNs are automated entities that allow for the expansion of trading sessions into after-hours trading and even into the realm of twenty-four hour trading sessions.

ECNs do have certain disadvantages as well, from both practical and structural points of view. Structurally, ECNs provide limited opportunity for price improvement. While the order-matching algorithm may match the lowest prices to buys and highest prices to sells, it normally does so only for that platform and not other venues where better prices may exist. In this sense, ECNs are semi-closed systems suffering from the disabilities of market fragmentation. Fragmentation, due to the undeveloped linkages between systems and venues is in itself another disadvantage of ECNs. While the linkages are being improved, some in response to regulatory requirements, the information being reported can reflect activity substantially different enough from the larger market to skew reporting. Other players relying on this choppy information may draw incorrect conclusions and trading volatility may ensue.

Practically, ECNs have experienced a lack of interest from players other than individual traders. Larger institutional traders have stayed away, preferring the more traditional venues such as the NYSE with all its inherent drawbacks to ECNs. The most obvious reasons are that ECNs lack liquidity to absorb the large orders handled by institutions and the lack of trading volume on any particular system. Again, this is a result of “fragmentation” occurring in the markets especially with the rise of ECNs. Without the ability to absorb an entire institutional order or find the liquidity elsewhere, ECNs will find it difficult to attract institutional interest. The irony of this situation is that the very liquidity the institutions seek would come from other institutions.

As previously mentioned, the SEC characterizes ECNs as a form of ATSS and hence the ECNs choose the regulatory framework under which they will operate—either as exchanges regulated by the SEC or as a broker-dealer regulated by a designated SRO. Currently none of the ECNs have become exchanges, though a select few have begun the registration process as such. As a result, ECNs are still for the most part regulated by the NASD as broker-dealers. In addition, there are no codified rules governing the conduct of ECNs and their members since this would not occur until the ECNs actually attain approval as exchanges. There are no codified rules detailing the roles of the various players as there exist for exchanges such as the NYSE and NASDAQ. Hence, any discussion of the governing rules for ECNs has already been covered by the previous discussion concerning the regulatory environment revolving around the SEC’s Reg. ATS. The situation will prove somewhat different for the other market structures.

B. The Open Outcry Market or Agency-Auction Market (NYSE)

The open outcry market is probably the first image one would bring to mind when mention is made of the stock market. The NYSE is the most famous market using this structure. The NYSE had evolved over the past 200 years from collections of men dealing in various securities in informal crowds, to crowds divided into dealers and auctioneers and then progressively to the arrangement used today. Currently, the NYSE designates certain persons (usually members of partnerships or larger firms) to act as specialists for certain securities. These specialists keep watch on the market activity and “manage” the order flow and liquidity, assisting in the process of finding buyers for sellers and sellers for buyers. Specialists also oversee the activities of the floor brokers who meet around the specialist’s post. This meeting of brokers is still referred to as “the crowd.” The brokers in the crowd execute orders for their clients and firms by conducting trading activities between one another. If a contra-side trade is not to be found in the crowd, the specialist can step in to take the other side of the trade to or from his own inventory. In doing so, the specialist is ensuring the continuance of an orderly market by adding to the liquidity available in the crowd. The inventory accumulated by the specialist, as well as the public limit orders routed through various systems to that specialist’s post, is then used to create an “order book” like displayed by the ECNs. In this way, the specialist also fulfills another duty: to maintain a continuous two-sided quote.

It is useful to note that how the order is actually executed makes a difference to total transaction cost. If a floor broker finds a contra-trade in the crowd with another broker, then the process is actually quite like the order-matching systems of ECNs. Two matching orders are executed between two brokers at the same price, with no spread involved. However, if the specialist must add liquidity to the market and either buy or sell in order to do so using his own inventory—and capital—then he does so in hopes of capturing the spread by later reversing his position by again buying or selling. The agency-auction market therefore does have some distant similarities with the order-matching systems used by ECNs. However, the agency-auction market is believed by some to be superior to order-matching because in the case of thin liquidity on a security, the ECNs have no mechanism like specialists to step in and smooth the disparities that have arisen.

In addition to the system described above, the NYSE and other regional exchanges have increasingly automated their order management systems to take some of the flow load off of the floor. The most well known of these systems is the NYSE's SuperDOT. SuperDOT "provides automated order routing and reporting services to facilitate the timely and efficient transmission, execution, and reporting of market and market limit orders on the Exchange."^{xx} SuperDOT handles market orders up to 39,999 shares and limit orders up to 99,999 shares. This system also has some of the cost advantages of order-matching systems in that, "The specialist shall not charge floor brokerage for the execution of a market or marketable limit order which he receives by the system."^{xxi} Furthermore, if a specialist must intervene to facilitate the execution of a SuperDOT order, if the order is executed with his assistance in less than five minutes, no commission is charged. The similarities end there, however. SuperDOT is not an order-matching system. All orders received via the system must be displayed to the crowd in order to allow for price improvement. In doing so, orders presented via SuperDOT are often executed at better prices than the NBBO.

The advantages of the agency-auction system have indirectly been mentioned in the immediately preceding discussion on the characteristics of this particular market structure. The agency-auction system, to operate as described above in an efficient manner, has additional characteristics that have drawn criticism recently. For example, while the intervention of a specialist in instances of market disruptions is seen as an advantage over ECN order-matching systems, this advantage comes at a price. The specialist intervenes from his own inventory of stock, which he has accumulated by committing his own capital. In exchange for taking on this risk, the specialist is allowed to see the order book on each security. He can see the amounts of buys and sells and therefore had intimate knowledge of buying and selling pressures on a stock—a privilege a regular trader would pay dearly for as well. This is the exact opposite to the transparency involved in the publicly displayed order books on ECNs. The specialist's powerful position in relation to the rest of the market has continually raised concerns.

The specialist stands to gain considerably as well given market appreciation. Specialists can often make subjective decisions about how and when they execute trades, sometimes trading out their own accounts at a profit. Given their intimate knowledge of the depth of a market for a given security, this raises some conflict of interest concerns. In addition, the recent move to decimalization has allowed specialists to "penny jump" public and institutional orders. Specialists can simply step ahead of existing orders if they feel that a different price is more indicative of the market for a stock. Whereas when stocks traded in larger, more noticeable increments of fractions, decimal trading has made it far harder to tell when "jumping" has occurred let alone if it were warranted. Such activity is in fact within the rules of the existing exchanges, though most other participants see it as an abuse.

C. The Dealer Model (NASDAQ)

The third and final market structure to be reviewed is the dealer model, represented best by the NASDAQ market in the United States. NASDAQ is a system of approved market makers who post competing bids and offers on securities—the highest bid and lowest offer becoming part of the NBBO. Once involving negotiated dealings, NASDAQ is now more order-driven due to developments such as the Order Handling Rules and new technologies. Hence, the use of the term "competing" is somewhat more accurate. These market makers, like specialists on the floors of the exchanges, keep inventories of each security in which they make a market. The system, like ECNs, is almost completely automated. However, unlike ECNs and the agency-auction system used by the NYSE, the dealer model continually subjects trades to a spread since trades are executed to and from each dealer's inventory—though some crossing may occur on orders a dealer receives that can be matched. Again, this is not an automatic order-matching system. When a dealer receives an order to buy or sell, he consults the possible contra-orders posted on the NASDAQ system by other dealers. The consulting dealer will find a matching or better price and then send a message to the contra-dealer in order to execute the transaction. This is done until the consulting dealer's request to trade is accepted and the transaction is executed.

The market makers, like the specialists on the exchanges, are allowed to hold inventories of the stocks they make markets in. As a result, they are hoping to profit from dealing in these securities. While the specialist alone can see the order book of limit orders, all market makers can see the parallel "book"

comprised of bids and offers entered by competing market makers. This creates a higher degree of transparency than available in the agency-auction system, but still a lesser degree than that present with ECNs. Systems are now also available to the public, at a subscription price, which allows individuals access to this “book” created by the activity of NASDAQ market makers. Whereas most investors can only see the NBBO—comprising two prices—these newer subscription systems shows the prices present in the book. This is called “Level II” quote systems.

While the specialists on the exchanges are explicitly charged with maintaining an orderly market, the dealers approved for making a market on the NASDAQ fulfill the same function via a more indirect requirement. Specialists are charged with, “The maintenance of a fair and orderly market [which] implies the maintenance of price continuity with reasonable depth, and the minimizing of the effects of temporary disparity between supply and demand.”^{xxii} Beyond this, NYSE members are left to interpret this rule and take actions they feel appropriate in any given instance. NASDAQ, on the other hand, makes the requirements more explicit. “For each security in which a member is registered as a market maker, the member shall be willing to buy and sell such security for its own account on a continuous basis and shall enter and maintain two-sided quotes in the NASDAQ Stock Market.”^{xxiii} Following this, depending on the NASDAQ system or classification in which trading occurs, there are explicit standards delineated to define “continuous basis” as used in this instance.

V. ISSUES CONFRONTING THE OPERATIONAL VIABILITY OF ECNS

For present purposes, NASDAQ is sufficiently structured in such a way to make it functionally similar to an ECN. This may explain some of the success at drawing order flow to ECNs has come in the form of NASDAQ securities. The current competition with which ECNs must deal comes from the traditional exchanges, such as the NYSE. The exchanges represent an additional source of liquidity that could push the trading volume of ECNs to a more viable level. Given this, the remainder of this paper will focus on a comparison and contrast between ECNs and the agency-auction market system and the steps the potential Islamic ECN can take to mitigate some of the competitive issues involved, relying on the brief survey of market structures above.

As revealed in a preceding section, ECNs have actually been in existence for nearly 30 years. Instinet is an ECN. However, from a popular standpoint, the last two to three years has been recognized as the “age” or “rise” of ECNs. In this, like the regional exchanges before them, the ECNs arose as competitors to the established exchanges. This competition focused on drawing order flow away from one another. Liquidity is the lifeblood of an exchange or pseudo-exchange, and order flow provides that liquidity. The two are almost synonymous. While existing, floor-based exchanges were heralded as dinosaurs, they soon proved adept at meeting the challenge presented by regional exchanges and ECNs.

Market observers watched the rise of commercial ECNs with concern. Like the developments almost 30 years earlier, the result was predicted to be further market fragmentation and less efficient markets as liquidity was spread thinner among the players vying for order flow. The previous sections also briefly discussed how the SEC and Congress have responded to this threat. In the end, however, the threat seems to have been false. Commercial ECNs being offered to the investing public failed to garner the order flow necessary to remain viable. Currently, this situation has changed little, with order flow to ECNs being anemic at best. Newly established ECNs spent a great deal on the technology required to fulfill their functions, but the revenues that should be produced from order flow are not flowing back to cover the investments already sunk into them and the current investment necessary to keep them running and produce a profit. The order flow has not appeared, especially from the vital institutional sector. While the factors that could explain this situation are numerous, this paper will focus on only one main concern: the differences in market structure between the venues that affect the viability of ECNs.

The competition between the exchanges and ECNs has become one focusing on the differences in their inherent structures, i.e., the differences between a specialist-based (agency-auction) system and an electronic order matching system. Both sides have touted the advantages of trading using their venues, and indeed, it seems that investors—both individual and institutional—have made their choices based on the advantages and disadvantages revealed through the course of this on-going discussion. Both systems achieve the same goal: bringing together buyers and sellers of securities. In most cases, however, that is where the similarities stop. At the risk of over-simplifying matters, exchanges used specialists to maintain an orderly market in assigned securities, balancing the buys and sells entered into their books and presented before them on the floor of the exchange itself. The specialists assist in “price discovery” on each of their securities. ECNs, on the other hand, rely on computer algorithms to match similar orders on opposite sides of the market for securities and to provide price discovery.

ECNs arrived upon the scene as venues that provided a market structure that resolved the issues that many market participants had with the specialist system. ECNs relied upon non-subjective algorithms for

price discovery, while matching orders directly by basically using the computer as a tireless specialist that brings together buyers and sellers. Two to three years ago, these systems were widely believed to be the technological development that would make human specialists obsolete. However, specialists retain their importance role in the capital markets to this very day, while it is the ECNs that have begun to falter, or at the very least be said to be stumbling. The reason for the poor showings on the part of the ECNs is purely economic; the order flow they expected failed to materialize. The question remains, then, as to why, if such systems were expected to be such an improvement over the established specialist system, they have not attracted the requisite order flow?

One obvious explanation is that the ECNs did not attract enough institutional interest and the attendant order flow from them. But, this explanation still begs the question of, why not? The situation in which markets often find themselves, especially ECNs at this point in time, is a classic Catch-22. Institutions will be attracted by liquidity (order flow), but a particular market cannot provide that liquidity without the participation and order flow of the institutions.^{xxiv} Hence, the old specialist-based system must still hold enough draws, despite the alleged disadvantages inherent to it, to keep the ECNs from capturing the institutional business it had hoped to garner. Somewhere within each market's structure was a key difference that allowed the exchanges to hold the loyalty of the large institutions participating in the capital markets at the expense of the ECNs.

Probably the greatest difference between the two venues is the role a specialist play as a "market maker." As already mentioned, he accomplishes this through the often large inventory he holds of his assigned securities. When imbalances occur in either buys or sells on a stock, he can bring the desired balance back to the market on that particular security by buying or selling from his own inventory. Theoretically, he should be doing this regardless of profit and loss considerations this creates in respect to his holdings. The market for each security has a "stand by" pool of liquidity represented by the specialist's inventory of the stock. While the specialist is rewarded for this role in trading by an intimate knowledge of the buying and selling pressure represented in his order books like no other participant trading in the market, such ignorance on the part of the institutions does not seem to warrant forsaking the liquidity the market receives in return in favor of the transparency offered by ECNs. Institutions, it seems, feel that by switching their order flow to the ECNs, they would have a more complete knowledge of buying and selling pressures on a security represented by the easily accessible "books" posted on the electronic systems, but nevertheless have by far less-than-adequate liquidity.

It should be added at this point that NASDAQ, technically an ECN when SelectNet employed a market-wide "broadcast" feature, seems to be an exception to this rule. While the practice of price discovery is carried out by an electronic system that sorts the bids and offers of NASDAQ participants, the market makers are sanctioned with the responsibility of standing ready to provide liquidity to the markets of the securities trading on the system. As a result, a completely valid comparison cannot be made between NASDAQ and commercial ECNs. There are, however, valuable lessons to be learned from the structure of NASDAQ, which future ECNs may want to replicate without casting themselves in the role of an exchange under the new regulatory structure discussed in the preceding sections.

VI. PRACTICAL SUGGESTIONS FOR THE ISLAMIC ATS

Up until this point, the discussion has steadily moved from theoretical to practical. Now, it is necessary to take another step in this direction. As has already been said, ECNs established themselves as competitors to established exchanges. In order to compete, ECNs differentiated themselves by focusing on the advantages trading on their venue held for investors. In theory, the advantages that the ECNs pointed out were accurate. However, the fact that they could not attract liquidity—in itself a necessary characteristic—became the most decisive factor in their success. It is expected that, given all other ingredients in a recipe for success, the missing key ingredient will continue to be liquidity. Hence, the Islamic ATS should carefully evaluate the sources of such liquidity and then carefully evaluate the potential means of attracting that liquidity to its venue.

The first step any potential Islamic ATS takes should be to decide that it will not set itself up as if in some sort of inherent competition with the established exchanges. The major and regional exchanges have proven very flexible and creative in responding to the threat once believed to have been posed by ECNs. The NYSE has been most active in this regard. Given some of the "re-structuring" the exchanges have in store, the competition for order flow will only get worse—and the ECNs will find themselves competing with stronger, more modern looking exchanges. The NYSE has begun to adopt a multi-platform structure designed to meet the needs and concerns of the different types of investors. For smaller orders and smaller, individual investors concerned with speed and accuracy, the NYSE is moving to automating its order management systems. At the same time, in deference to the concerns of institutional players who usually are more concerned with price improvement rather than certainty of execution, the NYSE is creating a separate order management system

relying heavily on the “human” factor contributed by the specialists who can use more subjective means for evaluating how the large institutional orders should be handled. Most notably, the NYSE has announced plans to go online with what will be called, “Virtual NYSe” [sic]. This system is “the real-time, three-dimensional, virtual-reality representation of the trading floor that, when placed on the Internet, will enable online investors to be in a virtual trading crowd and to look at the limit orders in the specialist’s book.”^{xxv}

Meanwhile, NASDAQ has also begun to transform itself in light of the more order-driven nature of the markets as well. NASDAQ is made up of a series of “markets,” the two most notable of which are SelectNet and SOES. SelectNet can be generalized as the embodiment of NASDAQ. In this system, market makers have the ability to deliver orders to other market makers as well negotiate trades based on their posted quotes. SelectNet accepts both proprietary and agency orders with no restrictions on size. Limit orders and quotes were not placed in a central limit order file used to develop and order book. SOES on the other hand does not accept proprietary orders, but rather allows small public orders to be traded against market makers quotes. In this sense, it is an automatic execution system, with each incoming orders being rotated between market makers for each stock. Market makers for a stock are required to be part of this rotation. Since the system executes these orders against their quotes automatically, market makers are relatively passive participants in the system since they cannot enter proprietary orders and are limited to updating their quotes on the system. In order to allow market makers to take advantage of the alternatives offered in the Order Handling Rules, NASDAQ made certain changes to both systems to allow for enhanced ECN access.

Since the approval of the Order Handling Rules, NASDAQ has attempted to develop newer order delivery and display systems that assist in both compliance with the Order Handling Rules and the increased participation of ECNs in trading. Before 1998, NASDAQ submitted two plans of proposed systems—N*Prove and NAqcess—both of which failed to gain approval by the SEC. Then, in 1998, NASDAQ submitted its third proposal for the NASDAQ Order Delivery and Execution System, nicknamed NODES. In short, NODES would integrate the functionalities of the older SelectNet and SOES systems and develop a central limit order book that can be seen by the public. This is a break with the traditional appearance of orders and quotes and functionality on SelectNet and SOES. It also heralds a shift in market structure for NASDAQ that brings it one more step functionally closer to ECNs than it already has become due to the Order Handling Rules. However, the NODES proposal was later withdrawn and replaced by a proposed system dubbed “Supermontage.” This system has recently received approval from the SEC. Once operating, the system will integrate order delivery, execution, and reporting functions once currently handled by SOES and SelectNet among others.

The recent moves by the NYSE and NASDAQ highlight an important methodological difference between the exchanges and the ECNs. In short, while the ECNs discounted the importance of the established exchanges and their structure—to the point of declaring them dead while they yet had life—the exchanges on the other hand, did not discount the importance of the technology represented by ECNs in the future look of the markets. The ECNs would do well, then, to re-evaluate their opinions on the role that the exchanges have yet to play. By choosing to not compete with the exchanges, the Islamic ECN can approach its business with a totally different paradigm. This paradigm values the roles the exchanges currently play and will probably continue to play into the foreseeable future.

Given the acceptance of such a paradigm, the next consideration becomes one of finding a new source of liquidity. Actually, this would still be a methodological error on the part of the Islamic ECN. The Islamic ECN—and any ECN for that matter—should simply look to the old sources of liquidity: the established exchanges. This would mean then that not only would the ECN not compete with the exchanges, their specialists, and market makers, but it would also partner with them to share the liquidity already in existence. The exact form of any such partnership would be highly dependent upon the exchange itself and certainly upon the degree of its automation.

For some of the smaller regional exchanges, for example, the ECN might represent an opportunity to “outsource” its automated trading, and thus allow it to avoid the expensive process of building or upgrading the infrastructure necessary to keep it competitive. At the same time, even an exchange with a well developed infrastructure might look favorably on some sort of partnership with an ECN—especially an ECN that serves a niche market in the manner that the Islamic ECN would—for obvious marketing reasons. Several market participants have seen the value of this niche strategy. For example, Deutsche Borse is exploring the establishment of an ECN dealing in derivatives while others are looking at an ECN for mutual funds for institutional traders.^{xxvi} Exchanges, specialists, and market makers might also see the advantages of leveraging the structure and automation of ECNs to meet the requirements of the 1996 Order Handling Rules, specifically the amended Quote Rule and new Display Rule.

In addition, competitive disparities exist between market makers and ECNs despite the increasing similarities brought about by the shifts in market structures after the approval of the Order Handling Rules. Market makers must now post limit orders. If another participant accesses that quote and executes against it,

then the system being used is functionally the same as an ECN. However, the disparities arise in the rights and duties of market makers versus those of ECNs.

First and foremost, ECNs are allowed to charge for access to quotes, while market makers are not...Second, NASDAQ does not deliver SOES executions to ECNs. When an ECN (or group of ECNs) is alone at the inside market, SOES orders against that market are held in queue until a market maker is available at that price to receive an execution. Third, ECNs are not required to display orders placed by non-market maker NASD members and non-NASD member entities (such as institutional investors). Market makers are required to display all orders, subject to the limited exceptions to the Order Handling rules described above.^{xxvii}

In practice, the most successful ECNs have been agency order systems rather than proprietary order systems. Nonetheless, if these disparities grow further in favor of the ECNs or the requirements placed upon market makers are perceived as causing undue competitive disadvantage, it may eventually become economically feasible for market makers to establish ECNs—though it is highly unlikely to occur. Until then, the current ECNs have an opportunity to alleviate these disparities through creative arrangements that leverage the increasing access they have to the NASDAQ systems and the market makers using those systems.

In reverse, by partnering with an exchange, the potential ECN would have access to the advantages of the exchange market structure. This would serve as a draw to institutional players seeking the subjective touch represented by specialists who could step in to manage market imbalances as well as lend the liquidity of their respective inventories to trading. Both venues have advantages and disadvantages. By merging to two systems in some form of partnership, the ECN and exchange can benefit from each other's strong points. This is in fact the route chosen by the NYSE in its decision to build a multi-platform market structure. The NYSE is simply differentiating the needs of different investor classes and tailoring systems to meet those needs. Any future partnership between an exchange and an ECN would simply build upon mutually beneficial aspects of their dissimilar market structure. At the same time, ECNs can benefit by continuing the strategy of partnering with brokerages in which the ECNs obtain commission business and the brokerages rely less on commissions and more on the benefits of increased asset bases attracted by the value-added services the partnership provides to their clients.

Lastly, another strategy for the Islamic ECN to consider is one in which it provides subscribers to multiple venues and systems. In essence, the Islamic ECN would be an ECN of ECNs (and exchanges). The Islamic ECN would consolidate all of the trading activity occurring on the various systems and markets. One market observer has coined the term "trademediary" for this strategy.^{xxviii} This market observer also cites the example of CyberCorp, which uses "...expert Systems and Artificial Intelligence techniques to aggregate ECNs and automated trading systems on a single interface."^{xxix} In short, the Islamic ECN must be willing to view itself as an entity that is unconstrained in its structural form rather than simply an alternative or variation of the traditional exchange structure.

VII. OTHER BUSINESS MODEL CONSIDERATIONS FOR THE ISLAMIC ECN

In addition to the pure order flow business model, the Islamic ECN has other revenue sources it can explore. Recommendations would be:

- Islamic brokerage services for executing trades
- Clearing and settlements services for participating brokerage houses.
- Product development and licensing
- Investment banking

The first two suggestions are self-explanatory and are in fact employed by many of the established exchanges. The last point in regard to Product Development is especially unique to the Islamic ECN. The Islamic financial industry in the United States is in its bare infancy and may yet be declared stillborn unless cooperation between the different financial product and service providers improves. The Islamic ECN can develop and serve as an outlet for potential products it can create and/or securitize from the portfolios of the rising Islamic banking and mortgage sector, to mention only one example. The Islamic ECN can also avail itself of licensing other products such as indexes and the newly created Folios. In addition, as for Investment Banking, the Islamic ECN would eventually be a natural venue for the introduction of Islamically financed business ventures via any one of a number of methods, including, of course, the initial public offering of a firm's stock. In short, the Islamic ECN need not be limited in the scope of its business model, given that there are so few viable institutions currently meeting the various financial needs of the Muslim community.

VIII. CONCLUSION

Given the infancy of Islamic financial institutions and the markets they intend to serve in the United States, expenditures in terms of both money and effort must be minimized as much as possible. While the advantages of registering as a broker-dealer as opposed to an exchange are evident to existing non-Islamic broker-dealers and ATSS, these advantages are vital to the establishment and operation of an Islamic ECN, which in any case would arise from a foundation that in itself was new and unproven in almost all aspects. Existing ECNs and other ATSS are systems belonging to institutions with long operating records and a wealth of experience to support them. The Islamic financial market has nothing in comparison. Before this new regulatory framework was put into place, establishing an Islamic broker-dealer and establishing an Islamic exchange were two separate goals, the latter being almost unattainable. Now, with this new framework, both goals can be considered almost one. Any existing or future Islamic brokerage firm can simply extend its operations to that of an Islamic ECN at much less cost, expenditure, and resultant business risk than ever before. The first key to this is the exemptions now provided by the SEC in the guise of Reg. ATS, governing the operation of ATSS that choose to register as broker-dealers. The second key is the opportunity for order flow derived from compliance with the Order Handling Rules of 1996.

It is only through constant innovation in products and institutions that the Islamic financial industry will be able to draw the active assets of Muslim investors away from their current place with non-Islamic financial institutions. Without this innovation, the Islamic financial industry cannot expect these assets to move from existing institutions to the newer ones based on Islamic principles. In essence, a strong strain of differentiation is required—differentiation between Islamic and non-Islamic financial institutions. This differentiation cannot be represented simply by the presence of Islamic principles, but new and creative ways of investing according to those principles. Simply touting a firm as “Islamic” will not secure that companies place within the industry, nor will the simple offering of an Islamic screen immediately draw Muslim investors and their assets.

Innovation is needed that not only supports the necessary activities of the Islamic financial institutions being established in the United States, but also that supports the identity of the Islamic financial industry as whole. Such would be the purpose of an Islamic ECN and a universe of Islamic products and services. Recent developments have favored the evolution of ECNs in general. While there are still many unanswered questions pertaining to both ATSS as discussed in this article, the Islamic financial industry would do well to make a closer inspection of the opportunities offered it by the new regulatory framework governing ECNs and other developments in the capital markets.

ⁱ Securities and Exchange Commission Division of Market Regulation. *Special Study: Electronic Communication Networks and After-Hours Trading*. Washington DC: June, 2000. p. 6.

ⁱⁱ Securities and Exchange Commission. *Exchange Act Release No. 40760*. Washington DC: December 8, 1998. p. 4.

ⁱⁱⁱ Securities and Exchange Commission. *Exchange Act Release No. 37619A*. Washington DC: September 6, 1996.

^{iv} *Exchange Act Release 40760* p. 5.

^v CFR 17 240.3b-16 (a) (1)-(2).

^{vi} CFR 17 240.3a1-1 (a) (2).

^{vii} CFR 17 242.300 (a).

^{viii} *Exchange Act Release 40760* p. 53.

^{ix} *Ibid.* p. 126.

^x *Exchange Act Release 37619A*. p. 8.

^{xi} *Ibid.* pp. 12-13.

^{xii} CFR 17 240.11Ac1-4.

^{xiii} CFR 17 240.11Ac1-1.

^{xiv} *Exchange Act Release 37619A*. pp. 88-90.

^{xv} CFR 17 240.11Ac1-1(c)(5).

^{xvi} CFR 17 204.11Ac1-1(c)(5)(ii).

^{xvii} *Exchange Act Release 37619A*. pp. 35-36.

^{xviii} *Ibid.* p. 62.

^{xix} *Ibid.* pp. 100-101. See also CFR 17 240.11Ac1-1(c)(5)(ii)(A)(1)-(2).

^{xx} New York Stock Exchange. *NYSE Constitution and Rules*. Rule 123B(a).

^{xxi} *Ibid.* Rule 123B(b)(1).

^{xxii} *Ibid.* Rule 104.

^{xxiii} National Association of Securities Dealers. *NASD Manual*. Rule 4613.

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- ^{xxiv} Ip, Greg. "Floor Show: If Big Board Specialists are an Anachronism, They're a Profitable One." *Wall Street Journal* CCXXXVII.49. March 12, 2001. p 1.
- ^{xxv} New York Stock Exchange Special Committee on Market Structure. *Governance and Ownership, Market Structure Report*. New York Stock Exchange. March 2000.
- ^{xxvi} EDS Global Financial Industry Group. *Electronic Communications Networks and Global Financial Markets*. April 2000. p 17.
- ^{xxvii} Smith, J., J.P. Selway III, and D.T. McCormick. *The NASDAQ Stock Market: Historical Background and Current Operation*. NASD Working Paper 98-01. NASD Department of Economic Research. August 1998. p. 48.
- ^{xxviii} *Ibid.* p. 18.
- ^{xxix} EDS Global Financial Industry Group. p. 34.