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Re: File Number SR-NASDAQ-2012-137

Elizabeth M. Murphy
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090

Dear Ms. Murphy:

I am an academic whose main area of research is market microstructure. I am the co-author of one of the papers (Paying for Market Quality) cited in the original request for comments. In addition I have co-authored another paper which examines the benefits of designating a market maker with affirmative obligations entitled The Value of the Specialist: Empirical Evidence from the CBOE. Finally I recently finished a project for the Treasury of the United Kingdom on minimum obligations of market makers. I therefore, feel I am well qualified to address the efficacy of proposed NASDAQ Rule 5950. Let me say that I fully support this particular version of the rule (as I did the original) and urge the Commission to allow its enactment. I further urge the Commission to adopt a stance that will allow future rules allowing direct payment between issuers and market makers to be enacted. These payments from issuers to market makers are used in a number of countries outside of the United States with great success. These arrangements are the future of trading and will result in maximizing the value of issuers that make the payments. They will also result in lower transaction costs, lower volatility, and higher depth for investors.

A number of studies have examined the impact on market quality of requiring market makers to have affirmative obligations. For example when the Chicago Board Options Exchange imposed a market maker with affirmative obligations on an existing competing market maker system, spreads narrowed significantly and it is estimated the action saved investors over $200 million annually[1]. Every one of the empirical papers on the subject concludes that the

[1] See D. G. Weaver and A. Anand **"**The Value of the Specialist: Empirical Evidence from the CBOE" *Journal of Financial Markets,* Vol. 9, no. 2, 100-118, 2006.

affirmative obligations improve market quality. The following improvements are found in various studies:

- Lower transaction costs
- Improved price discovery
- Increased volume
- Lower volatility
- Higher depth
- Lower cost of capital
- Increased issuing firm value

Exactly how do these market makers provide this liquidity? The published version of my co-authored paper "Paying for Market Quality" directly examines this issue.[2] We find that market makers trade more passively after entering into liquidity-providing contracts, and their propensity for passive trading increases when spreads widen. Market makers are also more likely to trade passively against contemporaneous market movements after entering into these agreements. Market makers entering into these agreements can then be seen as providing liquidity buffers against supply and demand shocks.

Can designating someone to provide liquidity and charging them with affirmative obligations improve social welfare? That is the question examined by Bessembinder, Hao and M. Lemmon (2006).[3] The authors model a trading world composed of investors who trade either based on private information they have (informed traders) or for liquidity purposes (uninformed traders) as well as competing market makers without any affirmative obligations. To create benchmarks, the authors set a competitive spread - or the spread that would naturally arise in a market without a market maker with affirmative obligations. They then introduce a market maker with an affirmative obligation. Since market makers, by assumption, earn a fair profit at the competitive spread, if the market maker with affirmative obligations sets a narrower spread market markers earn less than a fair profit. Since market makers have other opportunities where they *can* earn a fair profit, the authors point out that market makers will need a side payment in compensation.

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[2] See D. G. Weaver, A. Anand, and C. Tanggaard "Paying for Market Quality" *Journal of Financial and Quantitative Analysis,* Vol. 44, 1427-1457, 2009.

[3] See H. Bessembinder, H., J. Hao, and M. Lemmon (2006) "Why designate market makers? Affirmative obligations and market quality" *Working paper*, University of Utah.

Bessembinder, et al. argues that the cost of this side payment improves social welfare. The authors explain further that the narrower spreads arising from a designated market maker with an affirmative obligation to set a spread narrower than would exist otherwise, will induce both uninformed and informed traders to trade more. This in turn will lead to increased price efficiency and faster price discovery.

What are current forms of side payments made to market makers? Traditional NYSE specialists were originally compensated by trading profits derived from their monopoly access to the information contained in a closed limit order book. During the transition from traditional specialist to the current system, NYSE market makers were allowed to have their algorithmic computer interact with incoming orders before they were exposed to other orders.

Today on the NYSE (both the NYSE and AMEX units) Designated Market Makers and Supplemental Liquidity Providers receive larger rebates than other traders for providing liquidity. On NASDAQ only registered market makers are allowed to transmit bids and offers to be displayed on the NASDAQ system. Of the remaining equity markets in the U.S. market makers receive no exchange-based compensation or privileges. However, one benefit of being a market maker in the US is the ability to short stocks without locating the physical shares. In Toronto, RDTs are compensated through time priority in that they are allowed to participate in any incoming marketable order up to 40% of the minimum guaranteed fill.

Turning to Europe, Euronext Liquidity Providers obtain a reduction in fees and may receive side payments from the companies they trade. Designated Sponsors (DSs) on Deutsche Börse receive an exchange set annual fee of €34,000 from each listed firm. In addition if DSs participate in at least 90% of all call auctions for their stocks (minimum is 80%) they then receive reimbursement from the exchange for transaction costs. For Deutsche Börse specialists their compensation is the trading profits derived from monopolistic information as were traditional NYSE specialists. NASDAQ OMX's European exchanges as well as those from the Oslo Stock Exchange and Euronext receive compensation directly from the listed companies they trade in. Although many of the contracts are not publically available, those available for Swedish firms indicate an average payment to market makers of SEK276,000 while those on Norwegian firms indicate an average of NOK300,000.

Charitou and Panayides (2009) examine the method of liquidity provision in 30 stock markets in 29 countries.[4] They find that only the Tokyo Stock Exchange relies completely on public order flow for liquidity. The remaining 29 markets rely on market makers to provide liquidity beyond that supplied by the public. They find that, at least in major markets, these market makers have affirmative obligations. The most common affirmative obligation for market makers in these markets is a rule on maximum spread width.

Therefore, it can be seen from the above that

- The use of market makers with affirmative obligations is widespread
- These affirmative obligations improve social welfare, issuer value, and market quality for investors
- Direct payments from issuers to market makers are used in a number of markets with great success

In addition, there have been no reports of manipulation attempts by issuers, or abuses by market makers. Issuers view the costs of these agreements as they do any other project. If the benefits the issuing firm accrues are greater than the costs they will enter an agreement to contract for liquidity provision. We should allow US firms to directly pay market makers for improving the quality of the market for the firm's securities. In the instant case, the Commission should allow the enactment of NASDAQ's Market Quality Program.

I will now attempt to answer the voluminous questions the Commission has asked in its release.

1. *Are the same arguments and rationale discussed by NASDAQ for operating companies equally applicable to exchange-traded products? Would the reported effects of other market-making incentive programs designed to enhance the market quality of traded operating companies be similar if applied to exchange-traded products? If so, how so? If not, why not?*

There will undoubtedly be an improvement in market quality if market makers are incentivized to do so. I suspect that, as with stocks, the benefits will vary across ETFs. Some may see very little benefit. Others a great deal. It may be that a variable fee may allow greater benefits across all products. In the Nordic markets, issuers negotiate fees based on the desired improvement in market quality. Some issuers realize that the costs are too high given the quality of their current market.

[4] See A. Charitou, and M. Panayides, "Market making in international capital markets" *International Journal of Managerial Finance* 5, 50-80, 2009.

2*. How, if at all, might a market-making incentive program applied to exchange-traded products impact the operating companies that comprise the index underlying such exchange-traded products? Under what circumstances could an impact on those companies be beneficial or harmful? Could any impact differ depending on whether or not an exchange-traded product uses derivatives to gain exposure to such companies, or uses leverage or inverse leverage?*

To the extent that the exchange-traded product increases trading volume in the underlying operating company stock that company will benefit. This is due to the fact that higher trading volume results in lower spreads for the operating company.

3*. What are commenters' views on NASDAQ"s assertion that being included as a "component" of an exchange-traded product (such as an ETF) results in benefits to an individual operating company? Do commenters agree with this assertion? Why or why not? Could such benefits arise independently from a company's inclusion in an underlying index, regardless of whether an exchange-traded product tracking such an index is traded? Is there any data available that analyzes the impact on a company when it becomes a component of an underlying index versus when it becomes a portfolio component of an exchange-traded product that tracks such an index?*

It is not the inclusion in an index that matters to the operating company, but rather the trading volume increase resulting from trading products based on the index. The benefits of being included in an index are limited to changes in investors' view of the company. I am not aware of any study that examines the impact on an operating company of being part of an actively traded ETF, but it would be interesting to study it.

4. How does the rationale in support of trading lesser-known or smaller operating companies translate to the need for similar support of an exchange-traded product that tracks these companies? What about an exchange-traded product that tracks and invests in very liquid companies, but itself has low levels of liquidity? Is there an independent rationale for needing to support these types of exchange-traded products when the market does not? Are there unintended consequences of incentivizing such products? If so, what are they?

Any product or operating company with low liquidity will benefit from incentivized improvements in market quality. The key is whether the cost outweighs the benefit. I cannot think of any unintended consequences.

5*. Given the inherent arbitrage link between trading exchange-traded products and their underlying holdings, why would a lack of liquidity in such a product impact the ability of market makers to quote relatively narrow bids and offers? What, if anything, does a lack of liquidity or wide bid-ask spread in an exchange-traded product indicate about the ability of a market maker to make effective use of arbitrage and the creation/redemption mechanisms often associated with exchange-traded products? How, if at all, would a market-making incentive program affect any intraday premium (discount) of the traded price of an exchange-traded product above (below) its intraday indicative value?*

I have not studied creation/redemption and arbitrage mechanisms sufficiently to fully address this question. However, arbitrage does not prevent the value of the index and fund to deviate by

up to 10 percentage points.[5] Therefore, I doubt that arbitrage can improve the liquidity for a fund. As far as the MQP is concerned, what seems to matter most is the competition in the secondary market for the exchange product. If there is not enough trading in a product to justify an investment in inventory for the market maker they will set a wide spread. If they narrow the spread beyond the competitive level they will lose money. The payments provide offsets to market marker loses.

6. Do commenters agree with the Exchange that the MQP would encourage tighter quoted prices and greater quoted size at the NBBO for MQP Securities? If so, please explain. If not, why not?

Yes since competition narrows spreads. However, I would prefer to see a spread width set in the agreement as they do in other countries. Then the benefits would be easier to calculate for issuing companies.

7. Do commenters believe that the MQP would result in MQP Market Makers quoting at better prices (and larger sizes) than they would otherwise quote without the incentives provided by the Program? Why or why not?

Yes for the same reasons stated for Question 6.

8. If the market qualities of two securities share similar characteristics (quoted spread, size, volume, etc.) but one is supported by MQP incentives and the other is not, what, if anything, does that suggest about the comparative robustness of those market qualities? Are there aspects of this type of incentivized market quality that should concern investors? Are such apparent improvements in market quality consistent with the Act and investor protection? Why or why not?

The objection function of a firm is to maximize firm value. This is done by accepting positive NPV projects. Based on this, all we can say about the two securities with comparable market quality is that one benefited from purchasing market quality and the other did not have the need.

9. Do commenters believe the MQP would or would not raise concerns regarding investor confidence, market integrity, and member standards? For example, NASD Rule 2460 was implemented, in part, to address concerns about issuers paying market makers to improperly influence the price of an issuer's stock. What are commenters' views on whether, and if so, how, the MQP would be consistent with this basis?

The implementation of paying market makers to improve market quality in other countries probably improved investor confidence as evidenced by the increases in volume and order size observed by researchers. I am not aware of a single instance of purported collusion between issuers and market makers in the ten years since the direct payments have existed outside the US. The payments made to market makers, as proposed in NASDAQ's MQP, are not of sufficient size to provide enough incentive for manipulation. In addition the diligence of FINRA

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[5] See Ian Salisbury, "ETFs Were Wider Off the Mark in 2009: Gap Averaged 1.25 Points From Index" *Wall Street Journal,* February 19, 2010

and the SEC in overseeing a fair market will act as a very large deterrent, again given the small payments that will be made. Manipulation will not be an issue.

10. Could there be conflicts of interest between an MQP Company (the issuer) and the designated MQP Market Maker(s) for such MQP Securities participating in the Program? If so, what are those conflicts of interest?81 Please explain whether NASDAQ"s proposal adequately addresses such potential conflicts.

I cannot foresee any conflicts.

11. Should such participation standards also be objective to ensure that there is a level playing field in determining who the issuers and market makers are for a particular MQP Security in the Program? Are the proposed criteria for participation by potential MQP Market Makers and/or potential MQP Companies in the MQP sufficiently clear, precise, and objective? Why or why not?

The standards are sufficient.

12. Is it appropriate and consistent with the Act to allow MQP Companies to pay the additional Supplemental MQP Fee at their discretion? Why or why not? Is it appropriate and consistent with the Act to allow MQP Companies to be able to decide how to allocate their Supplemental MQP Fee between Quote Share Payments and Trade Share Payments? Why or why not? What would be the impact on market maker incentives of allowing MQP Companies to pay the additional Supplemental MQP Fee and to decide how to allocate its Supplement MQP Fee between Quote Share Payments and Trade Share Payments? Please explain.

The two parties most knowledgeable about the distribution of fees and the market quality metrics required are the issuer and market maker. I am in favor of a variable negotiated contract between the parties as they have in Nordic markets.

13. With respect to a series of MQP Securities, should the MQP Company paying the MQP Fee be the sponsor or the fund? What impact, if any, would it have on fund investors if the fund pays the MQP Fee as opposed to the sponsor? Are the proposed Rules sufficiently clear as to which entity will be paying the MQP Fee?

Insofar as the sponsor earns fees for creating and managing the security (assuming an ETF or similar) then it is irrelevant since sponsors will factor the cost of a MQP market maker into the fee structure of the fund. For an operating company security there is only the issuing firm, so the question is irrelevant.

14. Should authorized participants participating in the creation and redemption of shares of MQP Securities that are also MQP Market Makers in those same MQP Securities be eligible to receive MQP Credits derived from Trade Share Payments? Would MQP Credits derived from Trade Share Payments give these authorized participants economic incentives to promote or sell shares of the MQP Security? Should such payments be viewed by the Commission as coming directly or indirectly from the fund complex of the MQP Security? Should MQP Credits derived from Trade Share Payments disqualify broker-dealer authorized participants from relying on the Commission's exemption from Section 11(d)(1) of the Act?

Sponsors and market makers are separate functions. I don't think a diversified firm that does both should be penalized. Doing so would reduce the competition for market making services.

15. Could the MQP have an impact (either positive or negative) on incentives for market making in other exchange-traded products listed and traded on NASDAQ that are not eligible for and/or do not participate in the Program, either because NASDAQ has limited the total number of MQP Securities that any one MQP Company may have in the MQP, the MQP Company does not qualify for the MQP, or the MQP Company's application for participation is otherwise denied? If so, what type of impact, and why? If not, why not? Please explain.

I am agnostic on this issue.

16. Proposed Rule 5950(d)(1)(A) states that the MQP will terminate if an MQP Security sustains an average NASDAQ ATV of two million shares or more for three consecutive months. Is this proposed threshold for discontinuance in the Program reasonable? If so, why? If not, why not? Should there be an alternative threshold or measure to determine termination from the Program? Please explain.

This is an arbitrary number that is no better or worse than another other large number. It would be best to wait and see what happens when funds meet the threshold and are released. The number may need to be adjusted, but at this point NASDAQ's guess is no worse than any other.

17. Could the MQP have unintended consequences on fair and orderly markets in an MQP Security when such security leaves the program? If so, what could these consequences be? If not, why not? Please explain.

It depends on why the fund leaves and the trading volume of the fund. The trading volume of the fund will have an impact on the spread of included firms. A reduction in fund volume would translate to a reduction in firm trading volume and an increase in spread. This impact should be relatively minor though.

18. NASDAQ has proposed to implement the MQP on a one-year pilot basis. Is one-year a reasonable time period during which to assess the impact of the proposed rules? If not, why not? Please explain.

One year is sufficiently long to get an idea as to how things work out. It may need to be extended if no funds become traded sufficiently to leave the program. Or the pilot program could be so successful that NASDAQ acts to leave pilot status sooner.

19. What additional data, if any, should be provided by NASDAQ to help assess during the pilot period whether the MQP is achieving its stated goals? For example, if the Exchange required MQP Securities to be listed and traded outside the MQP for a period of time before being eligible for the MQP, could such a requirement provide useful "before and after" data for MQP Securities to permit the Exchange and the Commission to more accurately assess the market quality of the securities before participating in the Program and the market quality of the same securities while participating in the Program? If so, how? If not, please explain.

Given the failure rate of funds, a non-MQP startup phase may doom the fund. A reduction in overall fund failure rates would be a success. Funds in the program could be compared to those that are not in the program. A before and after period would not avoid the temporal conditions surrounding the fund.

20. Do commenters believe that these disclosures would provide sufficient information to investors? If not, why not? Is there any other information that the Exchange should provide on

its website regarding the MQP and participating MQP Securities, MQP Companies, and MQP Market Makers? For example, should NASDAQ be required to provide notification on its website of any notices from an MQP Company or MQP Market Maker to withdraw from the Program? What advantages or disadvantages would such disclosure provide? Please explain.

I am agnostic on this issue, but more information is probably better than less.

21. Would it be helpful to investors to have public notice of an MQP Company's participation in the Program through means other than on the Exchange's website, such as in the MQP Company's periodic reports to the Commission, on the MQP Company's website, or through a ticker symbol identifier on the consolidated tape? Why or why not?

Given the lower volatility that this type of arrangement generates, a ticker symbol identifier would signal that fact to investors. I would think that NASDAQ would want such a notification since it may increase volume for the fund.

22. What are commenters' views on whether the proposed disclosures are sufficient to enable all investors, even less sophisticated investors, to understand the potential impact of the proposed MQP on the market quality of an MQP Security, including that an MQP Company's participation in the Program is voluntary and subject to withdrawal, or that the MQP Security may become ineligible for the Program if its trading volume reaches sufficiently high levels?

Given the potential for information overload, I think the proposed level is sufficient.

23. Should the Exchange be required to publicly (and anonymously) disclose statistics on the performance of MQP Market Makers? Would such disclosure provide meaningful information to investors (e.g., would such disclosure provide investors the opportunity to assess how much perceived liquidity is being provided by MQP Market Makers, as opposed to liquidity provided by market makers and other market participants who are not paid an MQP Credit)? If so, what information should be disclosed and why? If not, why not? What advantages or disadvantages would such disclosure provide? Please explain.

It may be useful, but it will require new metrics to provide a meaningful picture. I would think these metrics could be developed if the pilot program is deemed a success.

In summary, we should allow U.S. firms to directly pay market makers for improving the quality of the market for the firm's securities. In the instant case, the Commission should allow the enactment of NASDAQ's Market Quality Program.

Sincerely;