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June 27, 2018

Mr. Brent J. Fields
Secretary
U.S. Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549-1090

Re: Transaction Fee Pilot; Securities Exchange Act Release No. 82873; File No. S7-05-18

Dear Mr. Fields:

Investors Exchange LLC ("IEX") is writing again on the Securities and Exchange Commission's ("Commission" or "SEC") proposed Transaction Fee Pilot for NMS Stocks ("Pilot")[1] to respond to certain statements contained in a comment letter on the Pilot submitted by NYSE Group Inc. ("NYSE"),[2] as well as recent public communications by NYSE directed to public issuers.

Summary

In the wake of overwhelmingly positive support for the Pilot by asset managers, pension funds, and other constituencies,[3] NYSE has launched an aggressive public relations campaign to promote the view that the Pilot would harm both investors and public company issuers. In its comment letter on the Pilot, NYSE predicts that the Pilot would increase bid-offer spreads, thereby making stock transactions more expensive for investors, which would make certain public companies "less attractive to investors," which would then impact issuers' ability to raise capital. NYSE has amplified this far-fetched and complex string of logic in messages sent widely to listed companies, urging them to write letters opposing the Pilot or to ask for the right to opt out of possible inclusion in one of the Pilot's test groups. NYSE seeks to support its argument about costs to investors with a "study" purporting to show higher costs to investors that would result from the Pilot.

NYSE's statements to issuers and others defending their rebate practices and alleging the Pilot will harm investors and public companies represent fearmongering built on a set of knowingly false premises and contain significant omissions.

Investor Support for the Pilot

In communications with public issuers, NYSE critically and purposefully omits the public comments of support for the Pilot expressed by asset managers, pension funds, and others representing trillions of dollars in investment assets. These investor comment letters directly contradict NYSE's assertion that the Pilot would harm investors and were part of the public record prior to NYSE's statements on the Pilot. In fact, many of these investors cite the harm caused by the current rebate system, which is

[1] Securities Exchange Act Release No. 82873 (March 14, 2018), 83 FR 13008 (March 26, 2018) ("SEC Release").
[2] Letter from Elizabeth R. King, General Counsel and Corporate Secretary, NYSE Group, Inc. to Brent J. Fields Secretary, SEC, dated May 31, 2018 ("NYSE Letter").
[3] *See* comment file at https://www.sec.gov/comments/s7-05-18/s70518.htm.

verified by public data showing that investor orders are often disadvantaged when sent to the exchanges who pay the largest rebates. These sophisticated investors understand quite well how they are disadvantaged by high access fees and rebates, and NYSE does not speak for them or for their interests.

Investor and Issuer Interests are Aligned

NYSE's allegations of public company issuer harm are based entirely on its false assertions that investors will be harmed, public companies included in the Pilot will be "less attractive to investors," and that issuer cost of capital will rise as a result. Investors supporting the Pilot have trillions of dollars invested in public companies, and certainly would not seek to devalue those investments or impair any company's ability to raise capital relative to their peers. Further, T. Rowe Price, a publicly traded company and sophisticated asset manager, has specifically supported the Pilot both as an asset manager and from its perspective as a corporate issuer.

NYSE's Shifting Stance

NYSE fails to acknowledge or attempt to reconcile previous statements by its holding company that rebates should not be legal and that the "conflicts and complexities" associated with the rebate system "outweigh any perceived benefit."

Investor Study is Based on False Assumptions

NYSE's study alleging that investors will be harmed is based on a set of assumptions that are patently false and inconsistent with actual market dynamics. NYSE failed to disclose these assumptions in its communications with public company issuers, making its statements difficult to evaluate or challenge without market expertise.

Complaints about Competition are Really about Profits

NYSE further complains that the Pilot is unfair because it would not apply to alternative trading systems ("ATSs"), while ignoring the differences between exchanges and ATSs and the fact that the Pilot would make it less expensive for many orders to trade on-exchange. NYSE attacks the Pilot as impermissible "rate setting," but it fails to acknowledge that the SEC has long regulated exchange pricing in a way that benefits NYSE.

A Model Built on Conflicts

NYSE fails to acknowledge its own conflicts of interest in now defending the rebate system, which are related to existing sources of revenues from monopoly control of market data and connectivity that are inextricably linked to that system.

We believe that issuers and investors should be able to trust that exchanges will deal with them in an honest and transparent way, especially on matters of market structure. We think that NYSE's communications on this issue represent a breach of that trust.

The following are more detailed responses to NYSE's comment letter and communications:

Investor Support Belies NYSE's Claims of Investor Harm

The SEC's proposal has triggered an unprecedented outpouring of support from institutional investors of all types. This includes a list of many of the largest and most sophisticated asset managers and pension funds that trade in the market today, representing many trillions of dollars in investment assets. An appendix to this letter shows a list of all those institutional investors and their associations that have written or co-signed public comment letters in support of the Pilot to date.

NYSE appears to suggest that the investors who have written in large numbers to support the Pilot are ignorant of their own interests. We believe that these investors understand quite well the costs, both explicit and hidden, that they incur every day because of the current market structure, and this is precisely why they are supporting the Pilot: to represent the best interests of the many millions of beneficiaries that their firms represent.

The Interests of Issuers and Investors are Aligned

NYSE's argument that public company issuers will be harmed is based partly on the same invalid premises that underlie its allegations of investor harm, as detailed below. NYSE claims that because of wider quoted spreads, transactions in listed companies' securities "would be more expensive and less attractive to investors, which would negatively impact issuers' ability to raise capital."[4]

This assertion directly contradicts the public support by investors for the Pilot. These investors have trillions of dollars of capital invested in thousands of companies, some of which may be included in the Pilot. They would not support the Pilot if there was a valid basis for believing that it would change the relative valuation, market quality, or cost of capital for public companies. Further, many of these investors are issuers themselves and are of course well-aware that their own stocks may be included in one of the test groups. Nowhere in their comments did these investors express concern for the effect of exchange pricing, and specifically the payment of rebates, on their desire to own stock of a company that may be subject to the Pilot, its valuation relative to peers, or the company's ability to raise capital.

To the contrary, T. Rowe Price, one of the largest and most sophisticated assets managers in the world and a publicly-traded company, submitted a comment letter that included its perspective as an issuer. [5] Specifically, T. Rowe Price wrote: "We welcome the opportunity for our stock to be included in the Pilot, with the ultimate goal of improving the overall market to be one where prices can be set by long-term investors without distortion from speculative market participants." With regard to rebates, it wrote that "[w]e do not expect that a reduction or outright removal of rebates will have any significant or harmful effects on the quality of prices displayed in the public lit market, interfere with genuine liquidity and price formation, or negatively impact our stock's trading volume, spread, or displayed size."

T. Rowe Price's statement reflects common sense economic realities. The fundamental forces of supply and demand that affect the trading market and the relative attractiveness of individual public company

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[4] NYSE Letter at 3.

[5] Letter from Mehmet S. Kinak, Vice President, Global Head of Systematic Trading & Market Structure, and Jonathan Siegel, Vice President, Senior Legal Counsel, T. Rowe Price, to Brent J. Fields, Secretary, SEC, dated June 12, 2018.

stocks will be in no way impaired if NYSE and other exchanges are precluded from paying a rebate, or required to accept a lower access fee.[6]

NYSE also implausibly argues that companies' cost of capital will increase based on data that companies with a wider spread on average incur a higher discount for secondary offerings. This makes no sense. Cost of capital is based on fundamental factors specific to each company and investor demand for its stock. Those factors may influence the quoted spread also, but there is no evidence or basis for asserting that issuer costs of capital are *caused* by quoted spreads.

Why would NYSE Risk its Reputation by Misleading Public Companies?

NYSE has gone to great lengths to mislead public companies into supporting its position, with misstatements and omissions of material facts, including the strong support of asset managers and pensions for the Pilot. Its statements on investor harm are easily disproven, so the question arises – why would NYSE take this risk?

In 2014, after its acquisition by Intercontinental Exchange, Inc. ("ICE"), NYSE's position on rebates was very straightforward. ICE's CEO and Chairman was quoted as saying that rebates should not be legal.[7] At the same time, in 2014, according to published reports, ICE circulated a draft set of proposals for reform that included a call to eliminate maker-taker pricing:

> *Maker-taker pricing has become the accepted form of pricing used by exchanges. With myriad different make-take and take-make pricing models in existence today, we believe the potential conflicts and complexity that ensue from the maker-taker models outweigh any perceived benefit.*[8]

Since exchange rebates were introduced over 10 years ago, NYSE has collected several billion dollars in listing fees from public companies, and nowhere in its 2014 statements on rebates did it ever express concern that the elimination of rebates would harm its public company listing clients.

We believe that ICE and NYSE now realize that NYSE's greatest financial asset is not its ability to match buyers and sellers at fair prices, but instead its ability to exploit monopoly pricing for the sale of connectivity and market data to each of its (now four, soon to be five) U.S. exchanges. NYSE's connectivity and market data revenues have increased dramatically in the past decade, and the value of connectivity and market data from each exchange is driven by its market share. NYSE market share, in turn, is driven by the payment of rebates to brokers to route orders to the exchange.

NYSE's highest margin product lines include the sale of high-speed connectivity and market data to high-speed traders. These products allow certain traders to disadvantage long-term investors who trade at slower speeds, clearly a situation that these investors would prefer to avoid. As a result, exchange

[6] We note that a number of other supportive letters were submitted by companies that are, or are affiliated with, publicly-traded entities, including Blackrock, Citigroup Global Markets, State Street, and Royal Bank of Canada.
[7] "NYSE's New Chief Puts Focus on Individual Investors", *Wall Street Journal* (November 12, 2013), available at https://www.wsj.com/articles/nyse8217s-new-chief-puts-focus-on-individual-investors-1384290959.

[8] "ICE's Six Recommendations for Reforming Markets", *Wall Street Journal* (December 18, 2014), available at https://blogs.wsj.com/moneybeat/2014/12/18/ices-six-recommendations-for-reforming-markets.

rebates paid to brokers, who represent those investors, become the primary method of attracting order flow to exchanges that provide poorer execution quality, based on publicly available data.

NYSE also enjoys a 40-year-old duopoly with Nasdaq for the primary listing of public company stocks. The billions of dollars in fees from these companies that NYSE has collected are largely driven by NYSE's market share in the stocks of those companies – which is driven by the payment of rebates.

All of these fee sources – connectivity, market data and listings – are characterized by Wall Street securities analysts as "subscription revenue." They provide steady and increasing revenue based on monthly or annual charges, they do not fluctuate with the volume in the market, and therefore they are highly coveted. But these subscription revenues are all partially justified and dependent on the ability of the exchange to maintain a captive level of market share that is held in place by the anchor of rebates.

NYSE's "Investor Cost Study" is Built on a Set of False Assumptions.

NYSE attached an "investor cost study" to its comment letter, and has used it in communications with public company issuers, purporting to show that the Pilot would result in increased costs to investors of $1 billion. NYSE claims that as a result of increased costs, certain companies will be at a disadvantage to their peers if they are included in the Pilot and their stocks may become "less attractive to investors." NYSE's analysis is flawed on its face because it is based on the false and unrealistic premises detailed below, although NYSE fails to identify these assumptions or provide any context that would call attention to them. The investor cost study assumes that:

- Market quality and costs to investors are *solely* a function of quoted spreads;
- A reduction in access fees and rebates will result in wider quoted spreads across *all* exchanges for *all* impacted stocks;
- Investors will be forced to pay the full difference between these presumably wider quotes, and investors will be unable to pay a price that is between the bid and offer quotes, as they often do today;
- Investors, through their own orders, will have no impact on the best bid and offer quotes, as they do today;
- These impacts will occur equally on all exchanges, including inverted and flat fee markets, which do not pay rebates to passive orders today;
- If rebates are removed, only that factor will change, disregarding the potential for any other change by market participants, including exchanges, in response to the Pilot; and
- Investors suffer no adverse consequences from the payment of rebates, an assumption that is contradicted by both public data and the expressed views of investors and brokers.

These assumptions are *all* false and disconnected from market experience and reality, and we can only assume that NYSE has published its analysis knowing this to be the case.

There is no basis for concluding the Pilot would lead to an increase in investor or issuer costs.

NYSE's allegations about market impact are built on the premises that (i) a reduction in rebates will lead to a widening of the quoted spread for all stocks included in the Pilot, and (ii) any change in quoted spreads will increase costs to investors and issuers. Both premises are false and unfounded.

The quoted spread is not a relevant measure of cost for most investors.

The size of the quoted spread is not the only, or even a very meaningful, way to measure liquidity, market quality, or cost to investors or issuers. Only in cases where a market participant is attempting to buy or sell, on an exchange, fewer shares than the total amount displayed at the national best bid or offer ("NBBO") is the quoted spread particularly relevant. Given that institutional investor orders are typically far larger than this amount, and retail investor orders are generally executed off-exchange, NYSE's reliance on quoted spread as a proxy for investor costs is baseless.

NYSE assumes that investors can only trade at quoted bid or offer prices.

NYSE makes the false assumption that investors and other participants can only trade at quoted prices by crossing the spread, i.e., by buying at the quoted offer price or selling at the quoted bid price. In fact, it is well-documented that investors trade in many other ways, depending on their needs and market conditions. They often send limit orders which will post at a given price level, or they seek to trade inside the NBBO (often at the midpoint between the best quoted bid and offer). For example, in May of 2018, on exchange markets, 13.4% of share volume traded at the midpoint, and 21.9% traded at prices better than the NBBO.[9] NYSE falsely assumes that 100% of investor volume trades with marketable orders at the far side of the quote, and no investor orders are executed with posted limit orders or at prices between the NBBO.

Activity on markets other than maker-taker exchanges refutes the premise that rebates are necessary.

Inverted exchanges *charge* participants to post quotes and pay a rebate to access those quotes. IEX does not pay rebates to either side of a trade, but instead charges a flat fee to both sides. If rebates were necessary to attract posted quotes, these markets would not exist, or at the least their share of overall market volume would be declining. In fact, public data shows the opposite.[10] The rising popularity of these exchanges is based in part on a growing body of research that suggests the largest rebate-paying exchanges provide the worst execution quality for quoted orders. Simply stated, the best bid and offer in the market is often represented by orders posted on inverted or flat fee markets, which do not pay rebates for displayed orders, and NYSE fails to account for this fact.

Displayed quotations are provided by many market participants, not just electronic market makers.

NYSE seems to assume that quotes are provided only by orders from electronic market makers, which is clearly untrue. Competition by investors and other participants has a meaningful impact. In fact, removing rebates may help investor orders to compete in setting quoted prices.[11] To the extent that investors more fully participate in setting best bid and offer quotes, there will be fewer cases where

[9] Based on NYSE Historical Trade and Quote data.

[10] From 2013 to 2018, the number of inverted and fee-fee stock exchanges in the U.S. has doubled from 3 to 6, and their collective market share has increased from 8% to 12%. See https://markets.cboe.com/us/equities/market_statistics/venue/market/all_market/.

[11] *See* Harris Letter at 8; Doug Clark, Managing Director, Head of Americas Market Structure, ITG, quoted in *MarketsMedia*, June 14, 2018: "We would expect that reductions in excessive intermediation (i.e., trading for the sole purpose of capturing rebates) would enable the buy side to improve its ability to trade passively and capture more spread".

they must cross the spread to meet their trading needs, which NYSE's study falsely assumes will occur on 100% of investor volume.

Quoted spreads are affected by many factors.

Many other factors besides rebates affect quoted spreads. For example, in many cases the minimum tick size plays a major role in determining the actual quoted spread of a security. If a security's inherent liquidity characteristics would otherwise result in a spread of less than a penny, which is the case for a significant portion of liquid stocks, then the minimum tick size artificially *widens* the spread to one penny. In these cases, there is no basis for NYSE's assumption that spreads will uniformly increase, nor does NYSE provide any. The assumptions are also refuted by previously cited statistics on the rising popularity of inverted exchanges that charge participants to post quotes (rather than paying a rebate). Public data shows that inverted and flat-fee exchanges often have quotes on *both* sides of the NBBO,[12] which shows that market participants are willing to pay these exchanges to post quotes at the NBBO based on their intrinsic desire to trade and not just in response to an exchange rebate.

In addition, for less liquid stocks, spreads tend to be wider, and as a result rebates become less relevant as a matter of simple mathematics. For example, in the case of a stock that typically trades at a five-cent quoted spread, a typical .0025 per share rebate would equal *one-twentieth* of the quoted spread, so in these instances a market maker's revenue from capturing the spread would far outweigh the contribution of the rebate.

NYSE assumes only rebates will change.

NYSE assumes that, if rebates are removed, nothing else about market dynamics will change, i.e., all other factors will remain static. It ignores, among other things, the impact of a change in investor participation, the ability of exchanges to incentivize market makers through means other than rebates, and the potential, as discussed below, that lower access fees will draw to exchanges certain types of orders that today are traded off-exchange. It also ignores the fact that the Pilot would allow the payment of certain incentives to market makers for stocks subject to a rebate ban. It is, in fact, much more realistic to assume that these factors *will* change. The purpose of a controlled test like the Pilot is to determine how, and how much.

NYSE ignores the negative impact of maker-taker pricing on investor outcomes.

Investor transaction costs are comprised of multiple elements, including commissions, net spreads, and adverse selection, among others. Adverse selection occurs when the price moves against the position of the investor immediately after a trade occurs. When exchanges pay rebates, they incentivize a race of participants to line up to quote at a given price level to receive the rebate. Investors typically lack the technological speed advantages to win a race to the front of an order queue, relegating their orders to the middle or back of the queue. When investors' orders are pushed to the middle or back of the queue, public data shows that they are less likely to trade at their desired price, and when they do trade, the overall market price as reflected by the NBBO is more likely to move against them, than when trading on venues that do not pay rebates.

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[12] According to Historical NYSE Trade and Quote Data, during May 2018, these venues collectively were quoting on both sides of the NBBO about 44% of the time on a volume-weighted basis.

In an analysis of publicly available data, IEX has shown that, because of this dynamic, investors incur worse overall outcomes on markets that pay rebates for posted quotes.[13] Institutional investor Brandes Investment Partners confirmed this point from firsthand experience in its recent comment letter.[14]

The Pilot will not Result in Unfair Competition

NYSE argues that the Pilot will result in unfair competition because the fee restrictions will not apply to alternative trading systems ("ATSs"), which it posits will draw order volume away from exchanges. These arguments ignore the differences in both regulation and status of exchanges, compared to ATSs, as well as the potential impact that lower fees will provide an incentive for certain orders to be sent to exchanges.

Under Regulation NMS, exchanges with "automated quotations"[15] are entitled to "protected quote" status, meaning that orders in National Market System stocks cannot be executed on ATSs or other trading systems at a worse price than is displayed by the exchange. The SEC imposed on exchanges an access fee cap of $.003 per share,[16] to provide a check against the potential that exchanges would abuse their protected quote status by forcing participants to pay an excessive take fee. This cap has effectively codified with regulation a maximum fee that all the largest exchanges charge to marketable orders, creating a substantial financial disincentive for participants to send liquidity-taking orders to exchanges.[17]

We believe that, given this existing structure and the unique status that exchanges have, the Commission can appropriately decide not to impose the Pilot's price restrictions to ATSs, and there is certainly nothing arbitrary about that aspect of the proposal. NYSE argues that ATSs will have a competitive advantage and be able to draw order flow from exchanges by offering rebates, but it offers nothing more than conjecture that they could successfully do so. ATSs typically do not pay rebates today, and they generally charge a much lower take fee than the large exchanges. Economically, it is not clear that they could afford to start paying rebates to any degree that would be sufficient to draw meaningful order flow volume from exchanges. Further, exchanges have an advantage in receiving orders that require immediate execution.

NYSE also ignores the potential that substantially lower take fees in test group securities will counter any potential loss of rebate-driven volume. Given that all the large exchanges today impose the maximum standard take fee of $.0030 per share, a limit of $.0015 in Test Group 1 represents a 50% reduction in access fees; for Test Group 2, with a cap of $.0005, the reduction is 83%. It is

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[13] Elaine Wah, Stan Feldman, Francis Chung, Allison Bishop, & Daniel Aisen, "A Comparison of Execution Quality across U.S. Stock Exchanges," (April 19, 2017), avail. at https://papers.ssrn.com/sol3/papers.clm?abstract%20id=2955297.

[14] "Public data now shows the negative impact on investors from the maker-taker pricing model where certain exchanges pay 'rebates' to brokers in exchange for posting quotes on the exchange. Rebates result in long queues of orders to buy and sell on the largest exchanges, which can result in delays in execution of trades for long-term investors." https://www.sec.gov/comments/s7-05-18/s70518-3419059-162184.pdf.

[15] Securities Exchange Act Release No. 78101 (June 17, 2016) (approving IEX's application as a national securities exchange).

[16] Rule 610 of Regulation NMS, 17 CFR sec. 242.603.

[17] See Letter from John Ramsay, Chief Market Policy Officer, IEX, to Brent J. Fields, Secretary, SEC, dated May 30, 2018, at 2-3.

counterintuitive to think that these fee reductions will not motivate participants to redirect at least some of their order flow from ATSs or other venues to exchanges.

We believe that NYSE's real concern is not with less exchange volume or price transparency, but the potential impact on its own profitability. That remains to be seen, but it makes no sense to attack the Commission's proposal as an impermissible form of "rate setting" when the markets have been operating with exchange fee limits for more than 10 years. NYSE seems to be saying, "We are fine with the current fee regulation, because we have been able to operate very profitably under it, but it would be illegal to even test different fee restrictions unless you impose them on ATSs."

The Commission is seeking through the Pilot to examine the impact that exchange fees may have on overall market quality and results for investors. It should be obvious that the SEC is not obligated in designing the Pilot to aim for a structure that protects NYSE's business interests, rather than the public interest.

NYSE Fails to Address Conflicts of Interest

NYSE appears to acknowledge that rebates pose a conflict of interest that can affect order routing decisions, but at the same time it rejects any attempt to examine that conflict. Its comment letter states: "There is considerable evidence, including studies cited in the Proposal itself, that customer order flow moves freely from one exchange to another, often dictated by which venue offers the highest rebates."[18] It seems forced into this admission to justify the argument that it will be disadvantaged relative to other venues because it will be precluded from using rebates for some stocks. But once having acknowledged the conflict exists, NYSE argues that the Pilot is an inappropriate or illegal means to study it. Instead, NYSE argues that the Commission should instead request routing data from brokers, approve pending proposals to finalize broker routing disclosure, or else expand the proposal to capture "all forms of remuneration and incentives used to attract order flow."

We favor enhanced routing disclosure, but it is not a sufficient substitute for the approach the Commission has proposed. Enhanced disclosure would provide data that could allow investors to question order routing decisions for individual trades, but investors are not in a position to know whether or how much fee conflicts may have impacted routing of their orders, nor is it reasonable to expect them to divine this. Nor can the Commission be expected to draw this conclusion by looking at broker data. As for expanding the proposal to deal with other conflicts, we view this as a form of deflection. It is not necessary to address all financial incentives to address the one practice that has been the source of greatest controversy.

The only way to fully address the conflict that NYSE acknowledges exists is to study the impact of different fee restrictions on routing behavior and the impact on market quality when the conflict is reduced or eliminated.

Conclusion

The debate over exchange rebates is well understood on Wall Street – as reflected by overwhelming support from large asset managers and pension funds for the SEC's proposed Pilot.

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[18] NYSE Letter, at 5 (citing Battalio Equity Market Study and other evidence).

In its comment letter and communications with publicly-traded companies, NYSE has attempted to garner support from Main Street by purposely misleading companies with a false narrative of investor and issuer harm while failing to disclose the fact of overwhelming investor support and the role that rebates play in NYSE's deeply conflicted business model.

We believe the Transaction Fee Pilot, as proposed by the SEC, is a much-needed step to collect data on the impact of exchanges fees and rebates on overall market quality. As always, the needs of investors and issuers should be paramount in considering the Pilot and any decision made after its conclusion. We believe that an honest and transparent debate will lead to the conclusion that the Pilot is in the best interests of both public companies and their stockholders.

Sincerely,

John Ramsay
Chief Market Policy Officer

cc: The Hon. Jay Clayton, Chairman
The Hon. Kara M. Stein, Commissioner
The Hon. Michael S. Piwowar, Commissioner
The Hon. Robert J. Jackson, Jr., Commissioner
The Hon. Hester M. Peirce, Commissioner

Mr. Brett Redfearn, Director, Division of Trading and Markets
Mr. David S. Shillman, Associate Director, Division of Trading and Markets
Mr. Richard Holley, III, Assistant Director, Division of Trading and Markets

Dr. Chyhe Becker, Acting Director, Division of Economic and Risk Analysis

Appendix

Abrams Capital Management, L.P.
Adage Capital Management
AGF Investments Inc.
Alaska Permanent Fund Corporation
Alberta Investment Management Corporation
Ariel Investments, LLC
Arizona State Retirement System
Blackrock, Inc.
Board of Education Retirement System of the City of New York
Brandes Investment Partners
California Public Employees Retirement System
California State Teachers' Retirement System
The Capital Group Companies
Chicago Equity Partners
Committee on Investment of Employee Benefit Assets
Copeland Capital Management, LLC
Council of Institutional Investors
Davis Selected Advisers, L.P.
Discovery Capital
Driehaus Capital Management LLC
Fidelity Investments
Franklin Templeton Investments
Glenmede Investment Management
Greenlight Capital, Inc.
Healthcare of Ontario Pension Plan
Illinois Public Pension Fund Association
Invesco Ltd.
Investment Company Institute
Janus Henderson Investors
Louisiana Trustee Education Council
Managed Funds Association
Maverick Capital
MFS Investment Management
Miller Value Partners, LLC
National Conference on Public Employee Retirement Systems
New York City Employees' Retirement System
New York City Police Pension Fund
New York City Fire Pension Plan
New York State Teachers' Retirement System
Norges Bank Investment Management
Nuveen, LLC

Oaktree Capital
OMERS Administration Corporation
Ontario Teachers' Pension Plan
OppenheimerFunds, Inc.
Pershing Square Capital Management, L.P.
San Diego City Employees' Retirement System
San Francisco Employees' Retirement System
Sawgrass Asset Management
Scoggin Management L.P.
Senator Investment Group LP
Southeastern Asset Management, Inc.
Southern Sun Asset Management
State of Wisconsin Investment Board
State Street Global Advisors
T. Rowe Price
Teachers Retirement System of the City of New York
Third Avenue Management, LLC
Vestcor, Inc.
Vanguard
Vontobel Asset Management
Wellington Management Company
Wyoming Retirement System