

Required fields are shown with yellow backgrounds and asterisks.

Page 1 of * 92	SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 Form 19b-4		File No.* SR - 2016 - * 29	Amendment No. (req. for Amendments *)
Filing by International Securities Exchange Pursuant to Rule 19b-4 under the Securities Exchange Act of 1934				
Initial * <input checked="" type="checkbox"/>	Amendment * <input type="checkbox"/>	Withdrawal <input type="checkbox"/>	Section 19(b)(2) * <input checked="" type="checkbox"/>	Section 19(b)(3)(A) * <input type="checkbox"/>
			Section 19(b)(3)(B) * <input type="checkbox"/>	
Pilot <input type="checkbox"/>	Extension of Time Period for Commission Action * <input type="checkbox"/>	Date Expires * <input type="text"/>	Rule <input type="checkbox"/> 19b-4(f)(1) <input type="checkbox"/> 19b-4(f)(4) <input type="checkbox"/> 19b-4(f)(2) <input type="checkbox"/> 19b-4(f)(5) <input type="checkbox"/> 19b-4(f)(3) <input type="checkbox"/> 19b-4(f)(6)	
Notice of proposed change pursuant to the Payment, Clearing, and Settlement Act of 2010			Security-Based Swap Submission pursuant to the Securities Exchange Act of 1934	
Section 806(e)(1) * <input type="checkbox"/>		Section 806(e)(2) * <input type="checkbox"/>	Section 3C(b)(2) * <input type="checkbox"/>	
Exhibit 2 Sent As Paper Document <input type="checkbox"/>		Exhibit 3 Sent As Paper Document <input type="checkbox"/>		
Description				
Provide a brief description of the action (limit 250 characters, required when Initial is checked *).				
<input type="text" value="A proposal to amend ISE Rule 723, concerning its Price Improvement Mechanism."/>				
Contact Information				
Provide the name, telephone number, and e-mail address of the person on the staff of the self-regulatory organization prepared to respond to questions and comments on the action.				
First Name *	<input type="text" value="Andrew"/>	Last Name *	<input type="text" value="Madar"/>	
Title *	<input type="text" value="Senior Associate General Counsel"/>			
E-mail *	<input type="text" value="andrew.madar@nasdaq.com"/>			
Telephone *	<input type="text" value="(301) 978-8420"/>	Fax	<input type="text" value="(301) 978-8472"/>	
Signature				
Pursuant to the requirements of the Securities Exchange Act of 1934,				
has duly caused this filing to be signed on its behalf by the undersigned thereunto duly authorized.				
(Title *)				
Date	<input type="text" value="12/09/2016"/>	<input type="text" value="Executive Vice President and General Counsel"/>		
By	<input type="text" value="Edward S. Knight"/>	<input type="text" value="edward.knight@nasdaq.com"/>		
(Name *)				
NOTE: Clicking the button at right will digitally sign and lock this form. A digital signature is as legally binding as a physical signature, and once signed, this form cannot be changed.				

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

For complete Form 19b-4 instructions please refer to the EFFF website.

Form 19b-4 Information *

Add Remove View

The self-regulatory organization must provide all required information, presented in a clear and comprehensible manner, to enable the public to provide meaningful comment on the proposal and for the Commission to determine whether the proposal is consistent with the Act and applicable rules and regulations under the Act.

Exhibit 1 - Notice of Proposed Rule Change *

Add Remove View

The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 1A- Notice of Proposed Rule Change, Security-Based Swap Submission, or Advance Notice by Clearing Agencies *

Add Remove View

The Notice section of this Form 19b-4 must comply with the guidelines for publication in the Federal Register as well as any requirements for electronic filing as published by the Commission (if applicable). The Office of the Federal Register (OFR) offers guidance on Federal Register publication requirements in the Federal Register Document Drafting Handbook, October 1998 Revision. For example, all references to the federal securities laws must include the corresponding cite to the United States Code in a footnote. All references to SEC rules must include the corresponding cite to the Code of Federal Regulations in a footnote. All references to Securities Exchange Act Releases must include the release number, release date, Federal Register cite, Federal Register date, and corresponding file number (e.g., SR-[SRO]-xx-xx). A material failure to comply with these guidelines will result in the proposed rule change, security-based swap submission, or advance notice being deemed not properly filed. See also Rule 0-3 under the Act (17 CFR 240.0-3)

Exhibit 2 - Notices, Written Comments, Transcripts, Other Communications

Add Remove View

Exhibit Sent As Paper Document

Copies of notices, written comments, transcripts, other communications. If such documents cannot be filed electronically in accordance with Instruction F, they shall be filed in accordance with Instruction G.

Exhibit 3 - Form, Report, or Questionnaire

Add Remove View

Exhibit Sent As Paper Document

Copies of any form, report, or questionnaire that the self-regulatory organization proposes to use to help implement or operate the proposed rule change, or that is referred to by the proposed rule change.

Exhibit 4 - Marked Copies

Add Remove View

The full text shall be marked, in any convenient manner, to indicate additions to and deletions from the immediately preceding filing. The purpose of Exhibit 4 is to permit the staff to identify immediately the changes made from the text of the rule with which it has been working.

Exhibit 5 - Proposed Rule Text

Add Remove View

The self-regulatory organization may choose to attach as Exhibit 5 proposed changes to rule text in place of providing it in Item I and which may otherwise be more easily readable if provided separately from Form 19b-4. Exhibit 5 shall be considered part of the proposed rule change.

Partial Amendment

Add Remove View

If the self-regulatory organization is amending only part of the text of a lengthy proposed rule change, it may, with the Commission's permission, file only those portions of the text of the proposed rule change in which changes are being made if the filing (i.e. partial amendment) is clearly understandable on its face. Such partial amendment shall be clearly identified and marked to show deletions and additions.

1. Text of the Proposed Rule Change

(a) The International Securities Exchange, LLC (the “Exchange” or the “ISE”), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”)¹ and Rule 19b-4 thereunder,² is filing with the Securities and Exchange Commission (“SEC” or “Commission”) a proposal to amend ISE Rule 723, concerning its Price Improvement Mechanism (“PIM”). Certain aspects of PIM are currently operating on a pilot basis (“Pilot”), which was initially approved by the Commission in 2004,³ and which is set to expire on January 18, 2017.⁴

The Pilot concerns (i) the termination of the exposure period by unrelated orders; and (ii) no minimum size requirement of orders eligible for PIM. ISE seeks to make the Pilot permanent, and also proposes to change the requirements for providing price improvement for Agency Orders of less than 50 option contracts.

A notice of the proposed rule change for publication in the Federal Register is attached as Exhibit 1. The text of the proposed rule change is attached as Exhibit 5.

(b) Not applicable.

(c) Not applicable.

2. Procedures of the Self-Regulatory Organization

The proposed rule change was approved by the Board of Directors of the

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

³ See Securities Exchange Act Release No. 50819 (December 8, 2004), 69 FR 75093 (December 15, 2004) (SR-ISE-2003-06) (“PIM Approval Order”).

⁴ See Securities Exchange Act Release No. 78344 (July 15, 2016), 81 FR 47459 (July 21, 2016) (SR-ISE-2016-17).

Exchange on November 18, 2016. No other action is necessary for the filing of the rule change.

Questions and comments on the proposed rule change may be directed to:

Andrew Madar
Senior Associate General Counsel
Nasdaq, Inc.
301-978-8420.

3. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

a. Purpose

The purpose of this proposed rule change is to make permanent certain pilots within Rule 723, relating to PIM. Paragraph .03 of the Supplementary Material to Rule 723 provides that there is no minimum size requirement for orders to be eligible for PIM. Paragraph .05 concerns the termination of the exposure period by unrelated orders. In addition, ISE proposes to modify the requirements for PIM auctions involving less than 50 contracts (other than auctions involving Complex Orders) where the National Best Bid and Offer ("NBBO") is only \$0.01 wide.

Background

The Exchange adopted PIM in 2004 as a price-improvement mechanism on the Exchange.⁵ The PIM is a process that allows Electronic Access Members ("EAM") to

⁵ In addition to the PIM Approval Order and the most recent extension cited above, the following proposed rule changes have been submitted in connection with PIM. See Securities Exchange Act Release Nos. 52027 (July 13, 2005), 70 FR 41804 (July 20, 2005) (SR-ISE-2005-30); 54146 (July 14, 2006), 71 FR 41490 (July 21, 2006) (SR-ISE-2006-39); 56106 (July 19, 2007), 72 FR 40914 (July 25, 2007) (SR-ISE-2007-62); 56156 (July 27, 2007), 72 FR 43305 (August 3, 2007) (SR-ISE-2007-66); 58197 (July 18, 2008), 73 FR 43810 (July 28, 2008) (SR-ISE-2008-60); 60333 (July 17, 2009), 74 FR 36792 (July 24, 2009) (SR-ISE-2009-52); 62513 (July 16, 2010), 75 FR 43221 (July 23, 2010) (SR-ISE-2010-75); 64931 (July 20, 2011), 76 FR 44642 (July 26, 2011) (SR-ISE-2011-41); 67202

provide price improvement opportunities for a transaction wherein the Member seeks to execute an agency order as principal or execute an agency order against a solicited order (a “Crossing Transaction”). A Crossing Transaction is comprised of the order the EAM represents as agent (the “Agency Order”) and a counter-side order for the full size of the Agency Order (the “Counter-Side Order”). The Counter-Side Order may represent interest for the Member’s own account, or interest the Member has solicited from one or more other parties, or a combination of both.

Rule 723 sets forth the criteria pursuant to which the PIM is initiated. Specifically, a Crossing Transaction must be entered only at a price that is equal to or better than the national best bid or offer (“NBBO”) and better than the limit order or quote on the ISE order book on the same side of the Agency Order. The Crossing Transaction may be priced in one-cent increments. The Crossing Transaction may not be canceled, but the price of the Counter-Side Order may be improved during the exposure period.

Rule 723 also sets forth requirements relating to the exposure of orders in PIM and the termination of the exposure period. Upon entry of a Crossing Transaction into the Price Improvement Mechanism, a broadcast message that includes the series, price and size of the Agency Order, and whether it is to buy or sell, will be sent to all Members. This broadcast message will not be included in the ISE disseminated best bid or offer and will not be disseminated through OPRA. Members will be given 500 milliseconds to indicate the size and price at which they want to participate in the

(June 14, 2012), 77 FR 36589 (June 19, 2012) (SR-ISE-2012-54); 69853 (June 25, 2013), 78 FR 39390 (July 1, 2013) (SR-ISE-2013-41); 72467 (June 25, 2014), 79 FR 37377 (July 1, 2014) (SR-ISE-2014-33); 75482 (July 17, 2015), 80 FR 43807 (July 23, 2015) (SR-ISE-2015-23).

execution of the Agency Order (“Improvement Orders”). Improvement Orders may be entered by all Members for their own account or for the account of a Public Customer in one-cent increments at the same price as the Crossing Transaction or at an improved price for the Agency Order, and for any size up to the size of the Agency Order. During the exposure period, Improvement Orders may not be canceled, but may be modified to (1) increase the size at the same price, or (2) improve the price of the Improvement Order for any size up to the size of the Agency Order. During the exposure period, responses (including the Counter Side Order, Improvement Orders, and any changes to either) submitted by Members shall not be visible to other auction participants. The exposure period will automatically terminate (i) at the end of the 500 millisecond period, (ii) upon the receipt of a market or marketable limit order on the Exchange in the same series, or (iii) upon the receipt of a nonmarketable limit order in the same series on the same side of the market as the Agency Order that would cause the price of the Crossing Transaction to be outside of the best bid or offer on the Exchange.

Rule 723 also describes how orders will be executed at the end of the exposure period. Specifically, at the end of the exposure period, the Agency Order will be executed in full at the best prices available, taking into consideration orders and quotes in the Exchange market, Improvement Orders, and the Counter-Side Order. The Agency Order will receive executions at multiple price levels if there is insufficient size to execute the entire order at the best price. At a given price, Priority Customer interest is executed in full before Professional Orders and any other interest of Members (i.e., proprietary interest from Electronic Access Members and Exchange market makers).

After Priority Customer interest at a given price, Professional Orders and

Members' interest will participate in the execution of the Agency Order based upon the percentage of the total number of contracts available at the price that is represented by the size of the Members' interest.

In the case where the Counter-Side Order is at the same price as Members' interest (after Priority Customer interest at a given price), the Counter-Side order will be allocated the greater of one (1) contract or forty percent (40%) of the initial size of the Agency Order before other Member interest is executed. Upon entry of Counter-Side orders, Members can elect to automatically match the price and size of orders, quotes and responses received during the exposure period up to a specified limit price or without specifying a limit price. In this case, the Counter-Side order will be allocated its full size at each price point, or at each price point within its limit price if a limit is specified, until a price point is reached where the balance of the order can be fully executed. At such price point, the Counter-Side order shall be allocated the greater of one contract or forty percent (40%) of the original size of the Agency Order, but only after Priority Customer Orders at such price point are executed in full. Thereafter, all other orders, Responses, and quotes at the price point will participate in the execution of the Agency Order based upon the percentage of the total number of contracts available at the price that is represented by the size of the order, Response or quote. An election to automatically match better prices cannot be cancelled or altered during the exposure period.

When a market order or marketable limit order on the opposite side of the market from the Agency Order ends the exposure period, it will participate in the execution of the Agency Order at the price that is mid-way between the best counter-side interest and the NBBO, so that both the market or marketable limit order and the Agency Order

receive price improvement. Transactions will be rounded, when necessary, to the \$0.01 increment that favors the Agency Order.

The Pilot

As described above, two components of PIM are currently operating on a pilot basis: (i) the termination of the exposure period by unrelated orders; and (ii) no minimum size requirement of orders entered into PIM. The pilot has been extended until January 18, 2017.⁶

As described in greater detail below, during the pilot period the Exchange has been required to submit, and has been submitting, certain data periodically as required by the Commission, to provide supporting evidence that, among other things, there is meaningful competition for all size orders within the PIM, that there is significant price improvement for all orders executed through the PIM, and that there is an active and liquid market functioning on the Exchange both within PIM and outside of the Auction mechanism. The Exchange has also analyzed the impact of certain aspects of the Pilot; for example, situation in which PIM is terminated prematurely by an unrelated order.

The Exchange now seeks to have the Pilot approved on a permanent basis. In addition, the Exchange proposes to modify the scope of PIM so that, with respect to PIM orders for less than 50 option contracts, members will be required to receive price improvement of at least one minimum price improvement increment over the NBBO if the NBBO is only \$0.01 wide. For orders of 50 contracts or more, or if the difference in the NBBO is greater than \$0.01, and for Complex Orders, the requirements for price improvement remain the same.

⁶ See note 4 above.

Price Improvement for Orders Under 50 Contracts

Currently, the PIM may be initiated if all of the following conditions are met. A Crossing Transaction must be entered only at a price that is equal to or better than the NBBO and better than the limit order or quote on the ISE order book on the same side of the Agency Order. The Crossing Transaction may be priced in one-cent increments. The Crossing Transaction may not be canceled, but the price of the Counter-Side Order may be improved during the exposure period.

ISE proposes to amend Rule 723(b) to require Electronic Access Members to provide at least \$0.01 price improvement for an Agency Order if that order is for less than 50 contracts and if the difference between the NBBO is \$0.01. For the period beginning January 19, 2017 until a date specified by the Exchange in a Regulatory Information Circular, which date shall be no later than July 15, 2017, ISE will adopt a member conduct standard to implement this requirement.⁷ Under this provision, ISE is proposing to amend the Auction Eligibility Requirements to require that, if the Agency Order is for less than 50 option contracts, and if the difference between the NBBO is \$0.01, an Electronic Access Member shall not enter a Crossing Transaction unless such Crossing Transaction is entered at a price that is one minimum price improvement increment better than the NBBO on the opposite side of the market from the Agency

⁷ The Exchange notes that its indirect parent company, U.S. Exchange Holdings, Inc. has been acquired by Nasdaq, Inc. See Securities Exchange Act Release No. 78119 (June 21, 2016), 81 FR 41611 (June 27, 2016) (SR-ISE-2016-11). Pursuant to this acquisition, ISE platforms are migrating to Nasdaq platforms, including the platform that operates PIM. ISE intends to retain the proposed member conduct standard requiring price improvement for options orders of under 50 contracts where the difference between the NBBO is \$0.01 until the ISE platforms and the corresponding symbols are migrated to the platforms operated by Nasdaq, Inc.

Order, and better than any limit order on the limit order book on the same side of the market as the Agency Order. This requirement will apply regardless of whether the Agency Order is for the account of a public customer, or where the Agency Order is for the account of a broker dealer or any other person or entity that is not a Public Customer.

To enforce this requirement, ISE also proposes to amend Rule 1614 (Imposition of Fines for Minor Rule Violations). Specifically, ISE will add Rule 1614(d)(4), which will provide that any Member who enters an order into PIM for less than 50 contracts, while the National Best Bid or Offer spread is \$0.01, must provide price improvement of at least one minimum price improvement increment better than the NBBO on the opposite side of the market from the Agency Order, which increment may not be smaller than \$0.01. Failure to provide such price improvement will result in members being subject to the following fines: \$500 for the second offense, \$1,000 for the third offense, and \$2,500 for the fourth offense. Subsequent offenses will subject the member to formal disciplinary action. The Exchange will review violations on a monthly cycle to assess these violations. This provision shall also be in effect for the period beginning January 19, 2017 until a date specified by the Exchange in a Regulatory Information Circular, which date shall be no later than until September 15, 2017.⁸

⁸ As noted above, ISE will be eliminating the member conduct standard requiring price improvement for options orders of under 50 contracts, where the difference between the NBBO is \$0.01, by July 15, 2017. However, ISE Mercury, LLC (“ISE Mercury”) is filing a rule change that adopts a similar member conduct standard, and that references proposed ISE Rule 1614(d)(4) as the means for enforcing its member conduct standard. ISE Mercury is proposing that its member conduct standard shall be in effect until a date specified by the Exchange in a Regulatory Information Circular, which date shall be no later than September 15, 2017. Accordingly, ISE is proposing that the date for eliminating Rule 1614(d)(4) shall be specified by the Exchange in a Regulatory Information Circular, which date shall be no later than until September 15, 2017.

The Exchange will conduct electronic surveillance of PIM to ensure that members comply with the proposed price improvement requirements for option orders of less than 50 contracts. Specifically, using an electronic surveillance system that produces alerts of potentially unlawful PIM orders, the Exchange will perform a frequent review of member firm activity to identify instances of apparent violations. Upon discovery of an apparent violation, the Exchange will attempt to contact the appropriate member firm to communicate the specifics of the apparent violation with the intent to assist the member firm in preventing submission of subsequent problematic orders. The Exchange will review the alerts monthly and determine the applicability of the MRVP and appropriate penalty. The Exchange is not limited to the application of the MRVP, and may at its discretion, choose to escalate a matter for processing through the Exchange's disciplinary program.

The Exchange is also proposing a systems-based mechanism to implement this price improvement requirement, which shall be effective following the migration of a symbol to INET, the platform operated by Nasdaq, Inc. that will also operate the PIM. Under this provision, if the Agency Order is for less than 50 option contracts, and if the difference between the National Best Bid and National Best Offer ("NBBO") is \$0.01, the Crossing Transaction must be entered at one minimum price improvement increment better than the NBBO on the opposite side of the market from the Agency Order and better than the limit order or quote on the ISE order book on the same side of the Agency Order.

The Exchange believes that these changes to PIM may provide additional opportunities for Agency Orders of under 50 option contracts to receive price

improvement over the NBBO where the difference in the NBBO is \$0.01. ISE notes that the statistics for the current pilot, which include, among other things, price improvement for orders of less than 50 option contracts under the current auction eligibility requirements, show relatively small amounts of price improvement for such orders. ISE believes that the proposed requirements will therefore increase the price improvement that orders of under 50 option contracts may receive in PIM.

The Exchange will retain the current requirements for auction eligibility where the Agency Order is for 50 option contracts or more, or if the difference between the NBBO is greater than \$0.01. Accordingly, the Exchange is amending the Auction Eligibility Requirements to state that, if the PIM Order is for 50 option contracts or more or if the difference between the NBBO is greater than \$0.01, the Crossing Transaction must be entered only at a price that is equal to or better than the NBBO and better than the limit order or quote on the ISE order book on the same side as the Agency Order.

No Minimum Size Requirement

Supplemental Material .03 to Rule 723 provides that, as part of the current Pilot, there will be no minimum size requirement for orders to be eligible for the Auction.⁹ The Exchange proposed the no-minimum size requirement for the PIM because it believed that this would provide small customer orders with the opportunity to participate in the PIM and to receive corresponding price improvement. In initially approving the PIM, the

⁹ The provision relating to the no minimum size requirement also requires the Exchange to submit certain data, periodically as required by the Commission, to provide supporting evidence that, among other things, there is meaningful competition for all size orders within the PIM, that there is significant price improvement for all orders executed through the PIM, and that there is an active and liquid market functioning on the Exchange outside of the PIM. Any raw data which is submitted to the Commission will be provided on a confidential basis.

Commission noted that the no minimum size requirement provided an opportunity for more market participants to participate in the auction. The Commission also stated that it would evaluate PIM during the Pilot Period to determine whether it would be beneficial to customers and to the options market as a whole to approve any proposal requesting permanent approval to permit orders of fewer than 50 contracts to be submitted to the PIM.¹⁰

As noted above, throughout the Pilot, the Exchange has been required to submit certain data periodically to provide supporting evidence that, among other things, there is meaningful competition for all size orders within the PIM, that there is significant price improvement for all orders executed through the PIM, and that there is an active and liquid market functioning on the Exchange both within PIM and outside of the Auction mechanism.

The Exchange believes that the data gathered since the approval of the Pilot establishes that there is liquidity and competition both within PIM and outside of PIM, and that there are opportunities for significant price improvement within PIM.¹¹

In the period between January and June 2016, the PIM executed a total of 7.12 million contracts, which represented 2.86% of total ISE contract volume and 0.35% of industry volume. The percent of ISE volume traded in PIM ranged from 2.24% in June 2016 to 3.59% in February 2016. For complex orders, in January 2016, 25,854 complex

¹⁰ See PIM Approval Order, supra note 3.

¹¹ Specifically, the Exchange gathered and reported nine separate data fields relating to simple PIM orders of fewer than 50 contracts, including (1) the number of orders of fewer than 50 contracts entered into the PIM; (2) the percentage of all orders of fewer than 50 contracts sent to ISE that are entered into the PIM; (3) the spread in the option, at the time an order of fewer than 50 contracts is submitted to the PIM; and (4) of PIM trades, the percentage done at the NBBO plus \$.01, plus \$.02, plus \$.03, etc. See PIM Approval Order, supra note 3.

orders of greater than 50 contracts were entered into PIM, which represents 0.18% of total ISE volume.

The Exchange compiled price improvement data in simple PIM orders from January through June 2016 that divides the data into the following groups: (1) orders of over 50 contracts where the Agency Order was on behalf of a Public Customer and ISE was at the NBBO; (2) orders of over 50 contracts where the Agency Order was on behalf of a Public Customer and ISE was not at the NBBO; (3) orders of over 50 contracts where the Agency Order was on behalf of a non-customer and ISE was at the NBBO; (4) orders of over 50 contracts where the Agency Order was on behalf of a non-customer and ISE was not at the NBBO; (5) orders of 50 contracts or less where the Agency Order was on behalf of a Public Customer and ISE was at the NBBO; (6) orders of 50 contracts or less where the Agency Order was on behalf of a Public Customer and ISE was not at the NBBO; (7) orders of 50 contracts or less where the Agency Order was on behalf of a non-customer and ISE was at the NBBO; and (8) orders of 50 contracts or less where the Agency Order was on behalf of a non-customer and ISE was not at the NBBO.

For January 2016, where the order was on behalf of a Public Customer, the order was for 50 contracts or less, and ISE was at the NBBO, the most contracts traded (194,249) occurred when the spread was between \$0.05 and \$0.10.¹² Of these, the greatest number of contracts (43,888) received no price improvement. There was an average number of five participants when the spread was between \$0.05 and \$0.10.

¹² This discussion of January 2016 data is intended to be illustrative of data that was gathered between January 2016 and July 2016. The complete underlying data for January 2016 through June 2016 for these eight categories is attached as Exhibit 3a for simple orders entered in PIM, and Exhibit 3b for complex orders entered in PIM.

When the spread was \$0.01 for this same category, a total of 17,202 contracts traded; 16,032 contracts received no price improvement, and 1,170 received \$0.01 price improvement. There was an average number of three participants when the spread was \$0.01.

In comparison, in January 2016, where the order was on behalf of a Public Customer, and the order was for greater than 50 contracts, and ISE was at the NBBO, the most contracts traded (14,078) occurred where the spread was between \$0.10 and \$0.20. Of those contracts, the greatest number of contracts (6,254) received price improvement of \$0.05 to \$0.10, and 44 contracts received no price improvement. There was an average number of 6 participants where the spread was between \$0.10 and \$0.20.

In January 2016, where the order was on behalf of a Public Customer, the order was for 50 contracts or less, and ISE was not at the NBBO, the most contracts traded (76,326) occurred when the spread was between \$0.05 and \$0.10. Of these contracts, the greatest number of contracts (18,008) received no price improvement. There was an average number of four participants when the spread was between \$0.05 and \$0.10. In comparison, when the spread was \$0.01 in this same category, a total of 17,687 contracts traded; 17,270 of those contracts received no price improvement, and 417 of those contracts received \$0.01 price improvement. There was an average number of three participants when the spread was \$0.01.

In comparison, in January 2016, where the order was on behalf of a Public Customer, the order was for greater than 50 contracts, and ISE was not at the NBBO, the most contracts traded (10,541) occurred when the spread was between \$0.10 and \$0.20. Of these contracts, the greatest number (3,738) received price improvement of \$0.05 to

\$0.10. There was an average number of 6 participants where the spread was between \$0.10 and \$0.20.

In January 2016, the greatest number of complex orders traded (2,139) traded when the spread was at \$0.05. Of those orders, 181 represented orders of 50 or fewer contracts. During that period, the highest percentage (29.30%) of orders of greater than 50 contracts received \$0.01 price improvement, and the highest percentage (20.4%) received no price improvement. For orders of greater than 50 contracts, the greatest number of orders (436) executed where there were no participants (besides the Electronic Access Member that entered the order). For orders of less than 50 contracts, the greatest number of orders (15) executed when there were no participants.

ISE believes that the data gathered during the Pilot period indicates that there is meaningful competition in PIM auctions for all size orders, there is an active and liquid market functioning on the Exchange outside of the auction mechanism, and that, coupled with the proposed requirements for price improvement for options orders of under 50 contracts, there are opportunities for significant price improvement for orders executed through PIM. The Exchange therefore believes that it is appropriate to approve the no-minimum size requirement on a permanent basis.

Early Conclusion of the PIM Auction

Supplemental Material .05 to Rule 723 provides that Rule 723(c)(5) and Rule 723(d)(4), which relate to the termination of the exposure period by unrelated orders shall be part of the current Pilot. Rule 723(c)(5) provides that the exposure period will

automatically terminate (i) at the end of the 500 millisecond period,¹³ (ii) upon the receipt of a market or marketable limit order on the Exchange in the same series, or (iii) upon the receipt of a nonmarketable limit order in the same series on the same side of the market as the Agency Order that would cause the price of the Crossing Transaction to be outside of the best bid or offer on the Exchange. Rule 723(d)(4) provides that, when a market order or marketable limit order on the opposite side of the market from the Agency Order ends the exposure period, it will participate in the execution of the Agency Order at the price that is mid-way between the best counter-side interest and the NBBO, so that both the market or marketable limit order and the Agency Order receive price improvement. Transactions will be rounded, when necessary, to the \$.01 increment that favors the Agency Order.¹⁴

¹³ As initially approved, this provision of Rule 723(c)(5) provided that the exposure period would automatically terminate at the end of the three second period. See Securities Exchange Act Release No. 49323 (February 26, 2004), 69 FR 10087 (March 3, 2004) (Notice of filing for SR-ISE-2003-06). This exposure period was subsequently reduced to one second, and then to the current 500 milliseconds. See Securities Exchange Act Release Nos. 58224 (July 25, 2008), 73 FR 44303 (July 30, 2008) (SR-ISE-2007-94); 68849 (February 6, 2013), 78 FR 9973 (February 12, 2013) (SR-ISE-2012-100). The Exchange notes that it is proposing to further modify the exposure period to a time period of no less than 100 milliseconds and no more than one second. See Securities Exchange Act Release No. 79352 (November 18, 2016), 81 FR 85277 (November 25, 2016) (SR-ISE-2016-26).

¹⁴ When the Pilot was initially approved, there were two sections of Rule 723(d) that were approved on a pilot basis. Rule 723(d)(5) was approved on a pilot basis, which was subsequently re-numbered as current Rule 723(d)(4). See Securities Exchange Act Release No. 72554 (July 8, 2014), 79 FR 40830 (July 14, 2014) (SR-ISE-2014-35). Rule 723(d)(6) was also approved on a pilot basis, but was subsequently deleted as that functionality was no longer offered on the Exchange. See Securities Exchange Act Release No. 68570 (January 3, 2013) (SR-ISE-2012-82).

As with the no minimum size requirement, the Exchange has gathered data on these three conditions to assess the effect of early PIM Auction conclusions on the Pilot.¹⁵

¹⁵ The Exchange agreed to gather and submit the following data on this part of the Pilot: (1) the number of times that a market or marketable limit order in the same series on the same side of the market as the Agency Order prematurely ended the PIM auction, and the number of times such orders were entered by the same (or affiliated) firm that initiated the PIM that was terminated; (2) the percentage of PIM early terminations due to the receipt of a market or marketable limit order in the same series on the same side of the market that occurred within a 1/2 second of the start of the PIM auction; the percentage that occurred within one second of the start of the PIM auction; the percentage that occurred within one and 1/2 second of the start of the PIM auction; the percentage that occurred within 2 seconds of the start of the PIM auction; the percentage that occurred within 2 and 1/2 seconds of the PIM auction; and the average amount of price improvement provided to the Agency Order where the PIM is terminated early at each of these time periods; (3) the number of times that a market or marketable limit order in the same series on the opposite side of the market as the Agency Order prematurely ended the PIM auction and at what time the unrelated order ended the PIM auction, and the number of times such orders were entered by the same (or affiliated) firm that initiated the PIM that was terminated; (4) the percentage of PIM early terminations due to the receipt of a market or marketable limit order in the same series on the opposite side of the market that occurred within a 1/2 second of the start of the PIM auction; the percentage that occurred within one second of the start of the PIM auction; the percentage that occurred within one and 1/2 second of the start of the PIM auction; the percentage that occurred within 2 seconds of the start of the PIM auction; the percentage that occurred within 2 and 1/2 seconds of the PIM auction; and the average amount of price improvement provided to the Agency Order where the PIM is terminated early at each of these time periods; (5) the number of times that a nonmarketable limit order in the same series on the same side of the market as the Agency Order that would cause the price of the Crossing Transaction to be outside of the best bid or offer on the Exchange prematurely ended the PIM auction and at what time the unrelated order ended the PIM auction, and the number of times such orders were entered by the same (or affiliated) firm that initiated the PIM that was terminated; (6) the percentage of PIM early terminations due to the receipt of a market or marketable limit order in the same series on the same side of the market as the Agency Order that would cause the price of the Crossing Transaction to be outside of the best bid or offer on the Exchange that occurred within a 1/2 second of the start of the PIM auction; the percentage that occurred within one second of the start of the PIM auction; the percentage that occurred within one and 1/2 second of the start of the PIM auction; the percentage that occurred within 2

For the period from January 2016 through June 2016, there were a total of 673 early terminated auctions. The number of orders in early terminated PIM auctions constituted 0.15% of total PIM orders. There were a total of 9,595 contracts that traded through early terminated auctions. The number of contracts in early terminated PIM auctions represented 0.13% of total PIM contracts. Of the early terminated auctions, 49.93% of those auctions received price improvement, and 37.31% of contracts that traded in an early-terminated auction received price improvement. Of the PIM auctions that terminated early and received price improvement from January 2016 through June 2016, the total amount of price improvement received was \$185.11.

For complex orders, in January 2016, one order terminated early, and the PIM period upon termination was greater than or equal to 0.5 seconds. That order received \$0.005 price improvement.

Based on the data gathered during the pilot, the Exchange does not anticipate that any of these conditions will occur with significant frequency in either simple or complex orders, or will otherwise significantly affect the functioning of the PIM. The Exchange also notes 49.93% of auctions in simple orders that terminated early received price improvement, and that, for simple orders, 37.31% of the contracts in auctions that terminated early received price improvement, with a total price improvement of \$185.11. The Exchange therefore believes it is appropriate to approve this aspect of the Pilot on a permanent basis.

seconds of the start of the PIM auction; the percentage that occurred within 2 and 1/2 seconds of the PIM auction; and the average amount of price improvement provided to the Agency Order where the PIM is terminated early at each of these time periods; and (7) the average amount of price improvement provided to the Agency Order when the PIM auction is not terminated early (i.e., runs the full three seconds). See PIM Approval Order, supra note 3.

b. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the provisions of Section 6 of the Act,¹⁶ in general and with Section 6(b)(5) of the Act,¹⁷ in that it is designed to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest; and is not designed to permit unfair discrimination between customers, issuers, brokers, or dealers, or to regulate by virtue of any authority conferred by the Act matters not related to the purposes of the Act or the administration of the Exchange.

The Exchange believes that the proposed rule change is also consistent with Section 6(b)(8) of the Act¹⁸ in that it does not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act.

Specifically, the Exchange believes that PIM, including the rules to which the Pilot applies, results in increased liquidity available at improved prices, with competitive final pricing out of the complete control of the Electronic Access Member that initiated the auction. The Exchange believes that PIM promotes and fosters competition and affords the opportunity for price improvement to more options contracts. The Exchange believes that the changes to the PIM requiring price improvement of at least one

¹⁶ 15 U.S.C. 78f.

¹⁷ 15 U.S.C. 78f(b)(5).

¹⁸ 15 U.S.C. 78f(b)(8).

minimum price improvement increment over the NBBO for Agency Orders of less than 50 option contracts where the difference in the NBBO is \$0.01 will provide further price improvement for those orders, and thereby encourage additional submission of those orders into PIM. The Exchange believes that the proposal, which subjects members to the Minor Rule Violation Plan for failing to provide the required price improvement, coupled with the Exchange's surveillance efforts, are designed to facilitate members' compliance with the proposed requirement.

The Exchange believes that approving the Pilot on a permanent basis is also consistent with the Act. With respect to the no minimum size requirement, the Exchange believes that the data gathered during the Pilot period indicates that there is meaningful competition in the PIM for all size orders, there is an active and liquid market functioning on the Exchange outside of the auction mechanism, and that there are opportunities for significant price improvement for orders executed through PIM, including for small customer orders.

With respect to the early termination of the PIM, the Exchange believes that it is appropriate to terminate an auction (i) at the end of the 500 millisecond period, (ii) upon the receipt of a market or marketable limit order on the Exchange in the same series, or (iii) upon the receipt of a nonmarketable limit order in the same series on the same side of the market as the Agency Order that would cause the price of the Crossing Transaction to be outside of the best bid or offer on the Exchange. Based on the data gathered during the pilot, the Exchange does not anticipate that any of these conditions will occur with significant frequency for either simple or complex orders, or will otherwise disrupt the functioning of the PIM. The Exchange also notes that a significant percentage of

contracts in auctions that terminated early received price improvement. The Exchange also believes that it is consistent with the Act to require that, when a market order or marketable limit order on the opposite side of the market from the Agency Order ends the exposure period, it will participate in the execution of the Agency Order at the price that is mid-way between the best counter-side interest and the NBBO, so that both the market or marketable limit order and the Agency Order receive price improvement.

4. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The proposal will apply to all Exchange members, and participation in the PIM process is completely voluntary. Based on the data collected by the Exchange during the Pilot, the Exchange believes that there is meaningful competition in the PIM for all size orders, there are opportunities for significant price improvement for orders executed through PIM, and that there is an active and liquid market functioning on the Exchange outside of the PIM. The Exchange believes that requiring increased price improvement for Agency Orders may encourage competition by attracting additional orders to participate in the PIM. The Exchange believes that approving the Pilot on a permanent basis will not significantly impact competition, as the Exchange is proposing no other change to the Pilot beyond implementing it on a permanent basis.

5. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

No written comments were either solicited or received.

6. Extension of Time Period for Commission Action

Not applicable.

7. Basis for Summary Effectiveness Pursuant to Section 19(b)(3) or for Accelerated Effectiveness Pursuant to Section 19(b)(2)

The Exchange requests accelerated effectiveness pursuant to Section 19(b)(2) of the Act.¹⁹ The Exchange is requesting, and believes that good cause exists for granting, accelerated approval so that this proposal will be approved and effective as of the current expiration date of the Pilot, which is January 18, 2017. This will avoid any potential investor confusion or market disruption that could otherwise result from a temporary interruption in the PIM.

8. Proposed Rule Change Based on Rules of Another Self-Regulatory Organization or of the Commission

Not applicable.

9. Security-Based Swap Submissions Filed Pursuant to Section 3C of the Act

Not applicable.

10. Advance Notices Filed Pursuant to Section 806(e) of the Payment, Clearing and Settlement Supervision Act

Not applicable.

11. Exhibits

1. Notice of Proposed Rule Change for publication in the Federal Register.
- 3a. Summary of pilot data for simple orders.
- 3b. Summary of pilot data for complex orders.
5. Text of the proposed rule change.

¹⁹ 15 U.S.C. 78s(b)(2).

EXHIBIT 1

SECURITIES AND EXCHANGE COMMISSION
(Release No. _____ ; File No. SR-ISE-2016-29)

December __, 2016

Self-Regulatory Organizations; International Securities Exchange, LLC; Notice of Filing of Proposed Rule Change to Amend ISE Rule 723 and to Make Pilot Program Permanent

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (“Act”)¹, and Rule 19b-4 thereunder,² notice is hereby given that on December 9, 2016, the International Securities Exchange, LLC (the “Exchange” or the “ISE”), filed with the Securities and Exchange Commission (“SEC” or “Commission”) the proposed rule change as described in Items I, II, and III, below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization’s Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend ISE Rule 723, concerning its Price Improvement Mechanism (“PIM”). Certain aspects of PIM are currently operating on a pilot basis (“Pilot”), which was initially approved by the Commission in 2004,³ and which is set to expire on January 18, 2017.⁴ The Pilot concerns (i) the termination of the exposure period by unrelated orders; and (ii) no minimum size requirement of orders

¹ 15 U.S.C. 78s(b)(1).

² 17 CFR 240.19b-4.

³ See Securities Exchange Act Release No. 50819 (December 8, 2004), 69 FR 75093 (December 15, 2004) (SR-ISE-2003-06) (“PIM Approval Order”).

⁴ See Securities Exchange Act Release No. 78344 (July 15, 2016), 81 FR 47459 (July 21, 2016) (SR-ISE-2016-17).

eligible for PIM. ISE seeks to make the Pilot permanent, and also proposes to change the requirements for providing price improvement for Agency Orders of less than 50 option contracts.

The text of the proposed rule change is available on the Exchange's Website at <http://nasdaq.cchwallstreet.com>, at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The purpose of this proposed rule change is to make permanent certain pilots within Rule 723, relating to PIM. Paragraph .03 of the Supplementary Material to Rule 723 provides that there is no minimum size requirement for orders to be eligible for PIM. Paragraph .05 concerns the termination of the exposure period by unrelated orders. In addition, ISE proposes to modify the requirements for PIM auctions involving less than 50 contracts (other than auctions involving Complex Orders) where the National Best Bid and Offer ("NBBO") is only \$0.01 wide.

Background

The Exchange adopted PIM in 2004 as a price-improvement mechanism on the

Exchange.⁵ The PIM is a process that allows Electronic Access Members (“EAM”) to provide price improvement opportunities for a transaction wherein the Member seeks to execute an agency order as principal or execute an agency order against a solicited order (a “Crossing Transaction”). A Crossing Transaction is comprised of the order the EAM represents as agent (the “Agency Order”) and a counter-side order for the full size of the Agency Order (the “Counter-Side Order”). The Counter-Side Order may represent interest for the Member’s own account, or interest the Member has solicited from one or more other parties, or a combination of both.

Rule 723 sets forth the criteria pursuant to which the PIM is initiated. Specifically, a Crossing Transaction must be entered only at a price that is equal to or better than the national best bid or offer (“NBBO”) and better than the limit order or quote on the ISE order book on the same side of the Agency Order. The Crossing Transaction may be priced in one-cent increments. The Crossing Transaction may not be canceled, but the price of the Counter-Side Order may be improved during the exposure period.

Rule 723 also sets forth requirements relating to the exposure of orders in PIM

⁵ In addition to the PIM Approval Order and the most recent extension cited above, the following proposed rule changes have been submitted in connection with PIM. See Securities Exchange Act Release Nos. 52027 (July 13, 2005), 70 FR 41804 (July 20, 2005) (SR-ISE-2005-30); 54146 (July 14, 2006), 71 FR 41490 (July 21, 2006) (SR-ISE-2006-39); 56106 (July 19, 2007), 72 FR 40914 (July 25, 2007) (SR-ISE-2007-62); 56156 (July 27, 2007), 72 FR 43305 (August 3, 2007) (SR-ISE-2007-66); 58197 (July 18, 2008), 73 FR 43810 (July 28, 2008) (SR-ISE-2008-60); 60333 (July 17, 2009), 74 FR 36792 (July 24, 2009) (SR-ISE-2009-52); 62513 (July 16, 2010), 75 FR 43221 (July 23, 2010) (SR-ISE-2010-75); 64931 (July 20, 2011), 76 FR 44642 (July 26, 2011) (SR-ISE-2011-41); 67202 (June 14, 2012), 77 FR 36589 (June 19, 2012) (SR-ISE-2012-54); 69853 (June 25, 2013), 78 FR 39390 (July 1, 2013) (SR-ISE-2013-41); 72467 (June 25, 2014), 79 FR 37377 (July 1, 2014) (SR-ISE-2014-33); 75482 (July 17, 2015), 80 FR 43807 (July 23, 2015) (SR-ISE-2015-23).

and the termination of the exposure period. Upon entry of a Crossing Transaction into the Price Improvement Mechanism, a broadcast message that includes the series, price and size of the Agency Order, and whether it is to buy or sell, will be sent to all Members. This broadcast message will not be included in the ISE disseminated best bid or offer and will not be disseminated through OPRA. Members will be given 500 milliseconds to indicate the size and price at which they want to participate in the execution of the Agency Order (“Improvement Orders”). Improvement Orders may be entered by all Members for their own account or for the account of a Public Customer in one-cent increments at the same price as the Crossing Transaction or at an improved price for the Agency Order, and for any size up to the size of the Agency Order. During the exposure period, Improvement Orders may not be canceled, but may be modified to (1) increase the size at the same price, or (2) improve the price of the Improvement Order for any size up to the size of the Agency Order. During the exposure period, responses (including the Counter Side Order, Improvement Orders, and any changes to either) submitted by Members shall not be visible to other auction participants. The exposure period will automatically terminate (i) at the end of the 500 millisecond period, (ii) upon the receipt of a market or marketable limit order on the Exchange in the same series, or (iii) upon the receipt of a nonmarketable limit order in the same series on the same side of the market as the Agency Order that would cause the price of the Crossing Transaction to be outside of the best bid or offer on the Exchange.

Rule 723 also describes how orders will be executed at the end of the exposure period. Specifically, at the end of the exposure period, the Agency Order will be executed in full at the best prices available, taking into consideration orders and quotes in

the Exchange market, Improvement Orders, and the Counter-Side Order. The Agency Order will receive executions at multiple price levels if there is insufficient size to execute the entire order at the best price. At a given price, Priority Customer interest is executed in full before Professional Orders and any other interest of Members (i.e., proprietary interest from Electronic Access Members and Exchange market makers).

After Priority Customer interest at a given price, Professional Orders and Members' interest will participate in the execution of the Agency Order based upon the percentage of the total number of contracts available at the price that is represented by the size of the Members' interest.

In the case where the Counter-Side Order is at the same price as Members' interest (after Priority Customer interest at a given price), the Counter-Side order will be allocated the greater of one (1) contract or forty percent (40%) of the initial size of the Agency Order before other Member interest is executed. Upon entry of Counter-Side orders, Members can elect to automatically match the price and size of orders, quotes and responses received during the exposure period up to a specified limit price or without specifying a limit price. In this case, the Counter-Side order will be allocated its full size at each price point, or at each price point within its limit price if a limit is specified, until a price point is reached where the balance of the order can be fully executed. At such price point, the Counter-Side order shall be allocated the greater of one contract or forty percent (40%) of the original size of the Agency Order, but only after Priority Customer Orders at such price point are executed in full. Thereafter, all other orders, Responses, and quotes at the price point will participate in the execution of the Agency Order based upon the percentage of the total number of contracts available at the price that is

represented by the size of the order, Response or quote. An election to automatically match better prices cannot be cancelled or altered during the exposure period.

When a market order or marketable limit order on the opposite side of the market from the Agency Order ends the exposure period, it will participate in the execution of the Agency Order at the price that is mid-way between the best counter-side interest and the NBBO, so that both the market or marketable limit order and the Agency Order receive price improvement. Transactions will be rounded, when necessary, to the \$0.01 increment that favors the Agency Order.

The Pilot

As described above, two components of PIM are currently operating on a pilot basis: (i) the termination of the exposure period by unrelated orders; and (ii) no minimum size requirement of orders entered into PIM. The pilot has been extended until January 18, 2017.⁶

As described in greater detail below, during the pilot period the Exchange has been required to submit, and has been submitting, certain data periodically as required by the Commission, to provide supporting evidence that, among other things, there is meaningful competition for all size orders within the PIM, that there is significant price improvement for all orders executed through the PIM, and that there is an active and liquid market functioning on the Exchange both within PIM and outside of the Auction mechanism. The Exchange has also analyzed the impact of certain aspects of the Pilot; for example, situation in which PIM is terminated prematurely by an unrelated order.

⁶ See note 4 above.

The Exchange now seeks to have the Pilot approved on a permanent basis. In addition, the Exchange proposes to modify the scope of PIM so that, with respect to PIM orders for less than 50 option contracts, members will be required to receive price improvement of at least one minimum price improvement increment over the NBBO if the NBBO is only \$0.01 wide. For orders of 50 contracts or more, or if the difference in the NBBO is greater than \$0.01, and for Complex Orders, the requirements for price improvement remain the same.

Price Improvement for Orders Under 50 Contracts

Currently, the PIM may be initiated if all of the following conditions are met. A Crossing Transaction must be entered only at a price that is equal to or better than the NBBO and better than the limit order or quote on the ISE order book on the same side of the Agency Order. The Crossing Transaction may be priced in one-cent increments. The Crossing Transaction may not be canceled, but the price of the Counter-Side Order may be improved during the exposure period.

ISE proposes to amend Rule 723(b) to require Electronic Access Members to provide at least \$0.01 price improvement for an Agency Order if that order is for less than 50 contracts and if the difference between the NBBO is \$0.01. For the period beginning January 19, 2017 until a date specified by the Exchange in a Regulatory Information Circular, which date shall be no later than July 15, 2017, ISE will adopt a member conduct standard to implement this requirement.⁷ Under this provision, ISE is

⁷ The Exchange notes that its indirect parent company, U.S. Exchange Holdings, Inc. has been acquired by Nasdaq, Inc. See Securities Exchange Act Release No. 78119 (June 21, 2016), 81 FR 41611 (June 27, 2016) (SR-ISE-2016-11). Pursuant to this acquisition, ISE platforms are migrating to Nasdaq platforms, including the platform that operates PIM. ISE intends to retain the proposed

proposing to amend the Auction Eligibility Requirements to require that, if the Agency Order is for less than 50 option contracts, and if the difference between the NBBO is \$0.01, an Electronic Access Member shall not enter a Crossing Transaction unless such Crossing Transaction is entered at a price that is one minimum price improvement increment better than the NBBO on the opposite side of the market from the Agency Order, and better than any limit order on the limit order book on the same side of the market as the Agency Order. This requirement will apply regardless of whether the Agency Order is for the account of a public customer, or where the Agency Order is for the account of a broker dealer or any other person or entity that is not a Public Customer.

To enforce this requirement, ISE also proposes to amend Rule 1614 (Imposition of Fines for Minor Rule Violations). Specifically, ISE will add Rule 1614(d)(4), which will provide that any Member who enters an order into PIM for less than 50 contracts, while the National Best Bid or Offer spread is \$0.01, must provide price improvement of at least one minimum price improvement increment better than the NBBO on the opposite side of the market from the Agency Order, which increment may not be smaller than \$0.01. Failure to provide such price improvement will result in members being subject to the following fines: \$500 for the second offense, \$1,000 for the third offense, and \$2,500 for the fourth offense. Subsequent offenses will subject the member to formal disciplinary action. The Exchange will review violations on a monthly cycle to assess these violations. This provision shall also be in effect for the period beginning January

member conduct standard requiring price improvement for options orders of under 50 contracts where the difference between the NBBO is \$0.01 until the ISE platforms and the corresponding symbols are migrated to the platforms operated by Nasdaq, Inc.

19, 2017 until a date specified by the Exchange in a Regulatory Information Circular, which date shall be no later than until September 15, 2017.⁸

The Exchange will conduct electronic surveillance of PIM to ensure that members comply with the proposed price improvement requirements for option orders of less than 50 contracts. Specifically, using an electronic surveillance system that produces alerts of potentially unlawful PIM orders, the Exchange will perform a frequent review of member firm activity to identify instances of apparent violations. Upon discovery of an apparent violation, the Exchange will attempt to contact the appropriate member firm to communicate the specifics of the apparent violation with the intent to assist the member firm in preventing submission of subsequent problematic orders. The Exchange will review the alerts monthly and determine the applicability of the MRVP and appropriate penalty. The Exchange is not limited to the application of the MRVP, and may at its discretion, choose to escalate a matter for processing through the Exchange's disciplinary program.

The Exchange is also proposing a systems-based mechanism to implement this price improvement requirement, which shall be effective following the migration of a symbol to INET, the platform operated by Nasdaq, Inc. that will also operate the PIM.

⁸ As noted above, ISE will be eliminating the member conduct standard requiring price improvement for options orders of under 50 contracts, where the difference between the NBBO is \$0.01, by July 15, 2017. However, ISE Mercury, LLC ("ISE Mercury") is filing a rule change that adopts a similar member conduct standard, and that references proposed ISE Rule 1614(d)(4) as the means for enforcing its member conduct standard. ISE Mercury is proposing that its member conduct standard shall be in effect until a date specified by the Exchange in a Regulatory Information Circular, which date shall be no later than September 15, 2017. Accordingly, ISE is proposing that the date for eliminating Rule 1614(d)(4) shall be specified by the Exchange in a Regulatory Information Circular, which date shall be no later than until September 15, 2017.

Under this provision, if the Agency Order is for less than 50 option contracts, and if the difference between the National Best Bid and National Best Offer (“NBBO”) is \$0.01, the Crossing Transaction must be entered at one minimum price improvement increment better than the NBBO on the opposite side of the market from the Agency Order and better than the limit order or quote on the ISE order book on the same side of the Agency Order.

The Exchange believes that these changes to PIM may provide additional opportunities for Agency Orders of under 50 option contracts to receive price improvement over the NBBO where the difference in the NBBO is \$0.01. ISE notes that the statistics for the current pilot, which include, among other things, price improvement for orders of less than 50 option contracts under the current auction eligibility requirements, show relatively small amounts of price improvement for such orders. ISE believes that the proposed requirements will therefore increase the price improvement that orders of under 50 option contracts may receive in PIM.

The Exchange will retain the current requirements for auction eligibility where the Agency Order is for 50 option contracts or more, or if the difference between the NBBO is greater than \$0.01. Accordingly, the Exchange is amending the Auction Eligibility Requirements to state that, if the PIM Order is for 50 option contracts or more or if the difference between the NBBO is greater than \$0.01, the Crossing Transaction must be entered only at a price that is equal to or better than the NBBO and better than the limit order or quote on the ISE order book on the same side as the Agency Order.

No Minimum Size Requirement

Supplemental Material .03 to Rule 723 provides that, as part of the current Pilot, there will be no minimum size requirement for orders to be eligible for the Auction.⁹ The Exchange proposed the no-minimum size requirement for the PIM because it believed that this would provide small customer orders with the opportunity to participate in the PIM and to receive corresponding price improvement. In initially approving the PIM, the Commission noted that the no minimum size requirement provided an opportunity for more market participants to participate in the auction. The Commission also stated that it would evaluate PIM during the Pilot Period to determine whether it would be beneficial to customers and to the options market as a whole to approve any proposal requesting permanent approval to permit orders of fewer than 50 contracts to be submitted to the PIM.¹⁰

As noted above, throughout the Pilot, the Exchange has been required to submit certain data periodically to provide supporting evidence that, among other things, there is meaningful competition for all size orders within the PIM, that there is significant price improvement for all orders executed through the PIM, and that there is an active and liquid market functioning on the Exchange both within PIM and outside of the Auction mechanism.

⁹ The provision relating to the no minimum size requirement also requires the Exchange to submit certain data, periodically as required by the Commission, to provide supporting evidence that, among other things, there is meaningful competition for all size orders within the PIM, that there is significant price improvement for all orders executed through the PIM, and that there is an active and liquid market functioning on the Exchange outside of the PIM. Any raw data which is submitted to the Commission will be provided on a confidential basis.

¹⁰ See PIM Approval Order, supra note 3.

The Exchange believes that the data gathered since the approval of the Pilot establishes that there is liquidity and competition both within PIM and outside of PIM, and that there are opportunities for significant price improvement within PIM.¹¹

In the period between January and June 2016, the PIM executed a total of 7.12 million contracts, which represented 2.86% of total ISE contract volume and 0.35% of industry volume. The percent of ISE volume traded in PIM ranged from 2.24% in June 2016 to 3.59% in February 2016. For complex orders, in January 2016, 25,854 complex orders of greater than 50 contracts were entered into PIM, which represents 0.18% of total ISE volume.

The Exchange compiled price improvement data in simple PIM orders from January through June 2016 that divides the data into the following groups: (1) orders of over 50 contracts where the Agency Order was on behalf of a Public Customer and ISE was at the NBBO; (2) orders of over 50 contracts where the Agency Order was on behalf of a Public Customer and ISE was not at the NBBO; (3) orders of over 50 contracts where the Agency Order was on behalf of a non-customer and ISE was at the NBBO; (4) orders of over 50 contracts where the Agency Order was on behalf of a non-customer and ISE was not at the NBBO; (5) orders of 50 contracts or less where the Agency Order was on behalf of a Public Customer and ISE was at the NBBO; (6) orders of 50 contracts or less where the Agency Order was on behalf of a Public Customer and ISE was not at the

¹¹ Specifically, the Exchange gathered and reported nine separate data fields relating to simple PIM orders of fewer than 50 contracts, including (1) the number of orders of fewer than 50 contracts entered into the PIM; (2) the percentage of all orders of fewer than 50 contracts sent to ISE that are entered into the PIM; (3) the spread in the option, at the time an order of fewer than 50 contracts is submitted to the PIM; and (4) of PIM trades, the percentage done at the NBBO plus \$.01, plus \$.02, plus \$.03, etc. See PIM Approval Order, *supra* note 3.

NBBO; (7) orders of 50 contracts or less where the Agency Order was on behalf of a non-customer and ISE was at the NBBO; and (8) orders of 50 contracts or less where the Agency Order was on behalf of a non-customer and ISE was not at the NBBO.

For January 2016, where the order was on behalf of a Public Customer, the order was for 50 contracts or less, and ISE was at the NBBO, the most contracts traded (194,249) occurred when the spread was between \$0.05 and \$0.10.¹² Of these, the greatest number of contracts (43,888) received no price improvement. There was an average number of five participants when the spread was between \$0.05 and \$0.10. When the spread was \$0.01 for this same category, a total of 17,202 contracts traded; 16,032 contracts received no price improvement, and 1,170 received \$0.01 price improvement. There was an average number of three participants when the spread was \$0.01.

In comparison, in January 2016, where the order was on behalf of a Public Customer, and the order was for greater than 50 contracts, and ISE was at the NBBO, the most contracts traded (14,078) occurred where the spread was between \$0.10 and \$0.20. Of those contracts, the greatest number of contracts (6,254) received price improvement of \$0.05 to \$0.10, and 44 contracts received no price improvement. There was an average number of 6 participants where the spread was between \$0.10 and \$0.20.

In January 2016, where the order was on behalf of a Public Customer, the order was for 50 contracts or less, and ISE was not at the NBBO, the most contracts traded

¹² This discussion of January 2016 data is intended to be illustrative of data that was gathered between January 2016 and July 2016. The complete underlying data for January 2016 through June 2016 for these eight categories is attached as Exhibit 3a for simple orders entered in PIM, and Exhibit 3b for complex orders entered in PIM.

(76,326) occurred when the spread was between \$0.05 and \$0.10. Of these contracts, the greatest number of contracts (18,008) received no price improvement. There was an average number of four participants when the spread was between \$0.05 and \$0.10. In comparison, when the spread was \$0.01 in this same category, a total of 17,687 contracts traded; 17,270 of those contracts received no price improvement, and 417 of those contracts received \$0.01 price improvement. There was an average number of three participants when the spread was \$0.01.

In comparison, in January 2016, where the order was on behalf of a Public Customer, the order was for greater than 50 contracts, and ISE was not at the NBBO, the most contracts traded (10,541) occurred when the spread was between \$0.10 and \$0.20. Of these contracts, the greatest number (3,738) received price improvement of \$0.05 to \$0.10. There was an average number of 6 participants where the spread was between \$0.10 and \$0.20.

In January 2016, the greatest number of complex orders traded (2,139) traded when the spread was at \$0.05. Of those orders, 181 represented orders of 50 or fewer contracts. During that period, the highest percentage (29.30%) of orders of greater than 50 contracts received \$0.01 price improvement, and the highest percentage (20.4%) received no price improvement. For orders of greater than 50 contracts, the greatest number of orders (436) executed where there were no participants (besides the Electronic Access Member that entered the order). For orders of less than 50 contracts, the greatest number of orders (15) executed when there were no participants.

ISE believes that the data gathered during the Pilot period indicates that there is meaningful competition in PIM auctions for all size orders, there is an active and liquid

market functioning on the Exchange outside of the auction mechanism, and that, coupled with the proposed requirements for price improvement for options orders of under 50 contracts, there are opportunities for significant price improvement for orders executed through PIM. The Exchange therefore believes that it is appropriate to approve the no-minimum size requirement on a permanent basis.

Early Conclusion of the PIM Auction

Supplemental Material .05 to Rule 723 provides that Rule 723(c)(5) and Rule 723(d)(4), which relate to the termination of the exposure period by unrelated orders shall be part of the current Pilot. Rule 723(c)(5) provides that the exposure period will automatically terminate (i) at the end of the 500 millisecond period,¹³ (ii) upon the receipt of a market or marketable limit order on the Exchange in the same series, or (iii) upon the receipt of a nonmarketable limit order in the same series on the same side of the market as the Agency Order that would cause the price of the Crossing Transaction to be outside of the best bid or offer on the Exchange. Rule 723(d)(4) provides that, when a market order or marketable limit order on the opposite side of the market from the Agency Order ends the exposure period, it will participate in the execution of the Agency Order at the price that is mid-way between the best counter-side interest and the NBBO, so that both

¹³ As initially approved, this provision of Rule 723(c)(5) provided that the exposure period would automatically terminate at the end of the three second period. See Securities Exchange Act Release No. 49323 (February 26, 2004), 69 FR 10087 (March 3, 2004) (Notice of filing for SR-ISE-2003-06). This exposure period was subsequently reduced to one second, and then to the current 500 milliseconds. See Securities Exchange Act Release Nos. 58224 (July 25, 2008), 73 FR 44303 (July 30, 2008) (SR-ISE-2007-94); 68849 (February 6, 2013), 78 FR 9973 (February 12, 2013) (SR-ISE-2012-100). The Exchange notes that it is proposing to further modify the exposure period to a time period of no less than 100 milliseconds and no more than one second. See Securities Exchange Act Release No. 79352 (November 18, 2016), 81 FR 85277 (November 25, 2016) (SR-ISE-2016-26).

the market or marketable limit order and the Agency Order receive price improvement.

Transactions will be rounded, when necessary, to the \$.01 increment that favors the

Agency Order.¹⁴

As with the no minimum size requirement, the Exchange has gathered data on these three conditions to assess the effect of early PIM Auction conclusions on the

Pilot.¹⁵

¹⁴ When the Pilot was initially approved, there were two sections of Rule 723(d) that were approved on a pilot basis. Rule 723(d)(5) was approved on a pilot basis, which was subsequently re-numbered as current Rule 723(d)(4). See Securities Exchange Act Release No. 72554 (July 8, 2014), 79 FR 40830 (July 14, 2014) (SR-ISE-2014-35). Rule 723(d)(6) was also approved on a pilot basis, but was subsequently deleted as that functionality was no longer offered on the Exchange. See Securities Exchange Act Release No. 68570 (January 3, 2013) (SR-ISE-2012-82).

¹⁵ The Exchange agreed to gather and submit the following data on this part of the Pilot: (1) the number of times that a market or marketable limit order in the same series on the same side of the market as the Agency Order prematurely ended the PIM auction, and the number of times such orders were entered by the same (or affiliated) firm that initiated the PIM that was terminated; (2) the percentage of PIM early terminations due to the receipt of a market or marketable limit order in the same series on the same side of the market that occurred within a 1/2 second of the start of the PIM auction; the percentage that occurred within one second of the start of the PIM auction; the percentage that occurred within one and 1/2 second of the start of the PIM auction; the percentage that occurred within 2 seconds of the start of the PIM auction; the percentage that occurred within 2 and 1/2 seconds of the PIM auction; and the average amount of price improvement provided to the Agency Order where the PIM is terminated early at each of these time periods; (3) the number of times that a market or marketable limit order in the same series on the opposite side of the market as the Agency Order prematurely ended the PIM auction and at what time the unrelated order ended the PIM auction, and the number of times such orders were entered by the same (or affiliated) firm that initiated the PIM that was terminated; (4) the percentage of PIM early terminations due to the receipt of a market or marketable limit order in the same series on the opposite side of the market that occurred within a 1/2 second of the start of the PIM auction; the percentage that occurred within one second of the start of the PIM auction; the percentage that occurred within one and 1/2 second of the start of the PIM auction; the percentage that occurred within 2 seconds of the start of the PIM auction; the percentage that occurred within 2 and 1/2 seconds of the PIM auction; and the average amount of price

For the period from January 2016 through June 2016, there were a total of 673 early terminated auctions. The number of orders in early terminated PIM auctions constituted 0.15% of total PIM orders. There were a total of 9,595 contracts that traded through early terminated auctions. The number of contracts in early terminated PIM auctions represented 0.13% of total PIM contracts. Of the early terminated auctions, 49.93% of those auctions received price improvement, and 37.31% of contracts that traded in an early-terminated auction received price improvement. Of the PIM auctions that terminated early and received price improvement from January 2016 through June 2016, the total amount of price improvement received was \$185.11.

For complex orders, in January 2016, one order terminated early, and the PIM period upon termination was greater than or equal to 0.5 seconds. That order received \$0.005 price improvement.

improvement provided to the Agency Order where the PIM is terminated early at each of these time periods; (5) the number of times that a nonmarketable limit order in the same series on the same side of the market as the Agency Order that would cause the price of the Crossing Transaction to be outside of the best bid or offer on the Exchange prematurely ended the PIM auction and at what time the unrelated order ended the PIM auction, and the number of times such orders were entered by the same (or affiliated) firm that initiated the PIM that was terminated; (6) the percentage of PIM early terminations due to the receipt of a market or marketable limit order in the same series on the same side of the market as the Agency Order that would cause the price of the Crossing Transaction to be outside of the best bid or offer on the Exchange that occurred within a 1/2 second of the start of the PIM auction; the percentage that occurred within one second of the start of the PIM auction; the percentage that occurred within one and 1/2 seconds of the start of the PIM auction; the percentage that occurred within 2 seconds of the start of the PIM auction; the percentage that occurred within 2 and 1/2 seconds of the PIM auction; and the average amount of price improvement provided to the Agency Order where the PIM is terminated early at each of these time periods; and (7) the average amount of price improvement provided to the Agency Order when the PIM auction is not terminated early (i.e., runs the full three seconds). See PIM Approval Order, supra note 3.

Based on the data gathered during the pilot, the Exchange does not anticipate that any of these conditions will occur with significant frequency in either simple or complex orders, or will otherwise significantly affect the functioning of the PIM. The Exchange also notes 49.93% of auctions in simple orders that terminated early received price improvement, and that, for simple orders, 37.31% of the contracts in auctions that terminated early received price improvement, with a total price improvement of \$185.11. The Exchange therefore believes it is appropriate to approve this aspect of the Pilot on a permanent basis.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the provisions of Section 6 of the Act,¹⁶ in general and with Section 6(b)(5) of the Act,¹⁷ in that it is designed to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest; and is not designed to permit unfair discrimination between customers, issuers, brokers, or dealers, or to regulate by virtue of any authority conferred by the Act matters not related to the purposes of the Act or the administration of the Exchange.

¹⁶ 15 U.S.C. 78f.

¹⁷ 15 U.S.C. 78f(b)(5).

The Exchange believes that the proposed rule change is also consistent with Section 6(b)(8) of the Act¹⁸ in that it does not impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act.

Specifically, the Exchange believes that PIM, including the rules to which the Pilot applies, results in increased liquidity available at improved prices, with competitive final pricing out of the complete control of the Electronic Access Member that initiated the auction. The Exchange believes that PIM promotes and fosters competition and affords the opportunity for price improvement to more options contracts. The Exchange believes that the changes to the PIM requiring price improvement of at least one minimum price improvement increment over the NBBO for Agency Orders of less than 50 option contracts where the difference in the NBBO is \$0.01 will provide further price improvement for those orders, and thereby encourage additional submission of those orders into PIM. The Exchange believes that the proposal, which subjects members to the Minor Rule Violation Plan for failing to provide the required price improvement, coupled with the Exchange's surveillance efforts, are designed to facilitate members' compliance with the proposed requirement.

The Exchange believes that approving the Pilot on a permanent basis is also consistent with the Act. With respect to the no minimum size requirement, the Exchange believes that the data gathered during the Pilot period indicates that there is meaningful competition in the PIM for all size orders, there is an active and liquid market functioning on the Exchange outside of the auction mechanism, and that there are opportunities for

¹⁸ 15 U.S.C. 78f(b)(8).

significant price improvement for orders executed through PIM, including for small customer orders.

With respect to the early termination of the PIM, the Exchange believes that it is appropriate to terminate an auction (i) at the end of the 500 millisecond period, (ii) upon the receipt of a market or marketable limit order on the Exchange in the same series, or (iii) upon the receipt of a nonmarketable limit order in the same series on the same side of the market as the Agency Order that would cause the price of the Crossing Transaction to be outside of the best bid or offer on the Exchange. Based on the data gathered during the pilot, the Exchange does not anticipate that any of these conditions will occur with significant frequency for either simple or complex orders, or will otherwise disrupt the functioning of the PIM. The Exchange also notes that a significant percentage of contracts in auctions that terminated early received price improvement. The Exchange also believes that it is consistent with the Act to require that, when a market order or marketable limit order on the opposite side of the market from the Agency Order ends the exposure period, it will participate in the execution of the Agency Order at the price that is mid-way between the best counter-side interest and the NBBO, so that both the market or marketable limit order and the Agency Order receive price improvement.

B. Self-Regulatory Organization's Statement on Burden on Competition

The Exchange does not believe that the proposed rule change will impose any burden on competition not necessary or appropriate in furtherance of the purposes of the Act. The proposal will apply to all Exchange members, and participation in the PIM process is completely voluntary. Based on the data collected by the Exchange during the Pilot, the Exchange believes that there is meaningful competition in the PIM for all size orders, there are opportunities for significant price improvement for orders executed

through PIM, and that there is an active and liquid market functioning on the Exchange outside of the PIM. The Exchange believes that requiring increased price improvement for Agency Orders may encourage competition by attracting additional orders to participate in the PIM. The Exchange believes that approving the Pilot on a permanent basis will not significantly impact competition, as the Exchange is proposing no other change to the Pilot beyond implementing it on a permanent basis.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received from Members, Participants, or Others

No written comments were either solicited or received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the Federal Register or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the Exchange consents, the Commission shall: (a) by order approve or disapprove such proposed rule change, or (b) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic comments:

- Use the Commission's Internet comment form (<http://www.sec.gov/rules/sro.shtml>); or

- Send an e-mail to rule-comments@sec.gov. Please include File Number SR-ISE-2016-29 on the subject line.

Paper comments:

- Send paper comments in triplicate to Brent J. Fields, Secretary, Securities and Exchange Commission, 100 F Street, NE, Washington, DC 20549-1090.

All submissions should refer to File Number SR-ISE-2016-29. This file number should be included on the subject line if e-mail is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (<http://www.sec.gov/rules/sro.shtml>).

Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for website viewing and printing in the Commission's Public Reference Room, 100 F Street, NE, Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly.

All submissions should refer to File Number SR-ISE-2016-29 and should be submitted on or before [insert date 21 days from publication in the Federal Register].

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.¹⁹

Robert W. Errett
Deputy Secretary

¹⁹ 17 CFR 200.30-3(a)(12).

Total PIM Volume Data (Jan 2016 - June 2016)

Total	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	Jun. 2016	Totals/%
PIM	1,237,113	1,551,014	1,202,287	1,161,793	1,033,650	942,751	7,128,608
ISE	47,442,409	43,260,932	42,933,444	39,054,965	34,902,619	42,010,395	249,604,764
Industry	364,671,833	331,918,260	347,068,227	331,842,870	311,177,955	367,558,193	2,054,237,338
% PIM-to-ISE	2.61%	3.59%	2.80%	2.97%	2.96%	2.24%	2.86%
% PIM-to-Ind.	0.34%	0.47%	0.35%	0.35%	0.33%	0.26%	0.35%

ADV	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	Jun. 2016	Totals
PIM	65,111	77,551	57,252	55,323	49,221	42,852	57,489
ISE	2,496,969	2,163,047	2,044,450	1,859,760	1,662,029	1,909,563	2,012,942
Industry	19,193,254	16,595,913	16,527,058	15,802,041	14,817,998	16,707,191	16,566,430
Trading Days	19	20	21	21	21	22	124

PIM Price Improvement Data (Jan 2016 – June 2016)

Appendix: Detailed price improvement statistics for the volume transacted through PIM for January 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	7612	370	56	12	0	0	2	0	0	0	0	0	8052	3	50.94%	47.64%
0.02	3517	1472	63	4	12	4	0	0	0	0	0	0	5072	4	52.83%	46.87%
0.03	787	1852	344	31	0	0	0	0	0	0	0	0	3014	5	47.98%	37.47%
0.04	269	697	445	41	16	4	0	0	0	0	0	0	1472	5	39.84%	35.59%
0.05	244	1369	1659	1183	504	275	192	6	0	0	0	0	5432	6	25.47%	25.92%
>.05<=.10	108	1839	2631	2626	2196	1449	1711	65	0	30	0	1	12671	6	22.47%	23.67%
>.10<=.20	44	775	1130	1114	1374	1965	6254	1393	25	4	0	0	14078	6	26.38%	28.40%
>.20<=.30	0	8	26	112	198	555	2619	2169	302	0	0	0	5989	6	29.65%	24.25%
>.30<=.40	0	0	55	43	118	97	830	1976	363	175	0	1	3658	6	30.33%	31.28%
>.40<=.50	0	0	0	89	21	109	572	802	783	149	11	0	2536	5	24.92%	23.28%
>.50	1	0	4	46	11	76	501	1325	1578	982	577	2117	7218	5	28.21%	28.13%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	3980	272	25	8	0	0	0	0	0	0	0	0	4285	3	67.07%	63.88%
0.02	2554	366	89	0	4	0	0	1	0	11	0	8	3033	4	60.97%	51.33%
0.03	1073	682	100	8	0	6	0	0	0	0	0	0	1869	4	49.89%	42.88%
0.04	319	414	251	26	1	2	10	0	0	0	0	0	1023	4	51.22%	40.30%
0.05	1664	2065	998	474	501	220	376	44	0	0	0	0	6342	5	43.12%	39.40%
>.05<=.10	977	2024	1572	1332	694	923	1638	91	10	0	0	0	9261	5	50.79%	39.54%
>.10<=.20	497	756	1228	971	1154	1139	3738	984	69	5	0	0	10541	6	58.07%	43.10%
>.20<=.30	75	100	220	179	267	462	1717	1922	191	23	3	1	5160	6	60.73%	45.41%
>.30<=.40	28	60	65	80	130	437	801	1565	443	63	3	3	3678	6	53.53%	32.09%
>.40<=.50	78	0	4	17	28	196	299	637	483	99	20	26	1887	7	60.21%	49.34%
>.50	58	68	20	46	62	207	295	1407	1491	805	416	1491	6366	7	51.86%	38.65%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	0	5	0	0	0	0	0	0	0	0	0	0	5	2	100.00%	100.00%
0.02	0	5	0	0	0	0	0	0	0	0	0	0	5	5	58.33%	60.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	30	0	0	0	0	0	0	0	0	0	0	30	4	40.00%	40.00%
>.05<=.10	0	19	20	6	25	5	0	0	0	0	0	0	75	4	43.27%	36.00%
>.10<=.20	0	0	0	32	38	20	0	0	0	0	0	0	90	3	77.58%	65.56%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	11	0	0	0	0	0	0	0	0	0	0	0	22	5	46.67%	22.73%
0.02	21	7	0	0	0	0	0	0	0	0	0	0	28	3	70.00%	57.14%
0.03	39	50	0	0	0	0	0	0	0	0	0	0	89	4	27.19%	34.83%
0.04	6	10	0	0	10	0	0	0	0	0	0	0	26	3	63.33%	65.38%
0.05	0	59	0	2	0	0	0	0	0	0	0	0	61	5	0.00%	0.00%
>.05<=.10	26	39	30	0	0	6	0	5	0	0	0	0	106	4	20.63%	23.58%
>.10<=.20	0	0	10	0	10	0	2	0	0	0	0	0	22	3	13.33%	18.18%
>.20<=.30	0	6	0	0	5	10	0	0	0	0	0	0	21	6	22.73%	23.81%
>.30<=.40	0	0	0	0	0	0	7	0	0	0	0	0	7	5	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	2	0	0	1	0	0	0	0	0	3	4	50.00%	66.67%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	16032	1170	0	0	0	0	0	0	0	0	0	0	17202	3	50.48%	60.17%
0.02	15825	30705	263	0	0	0	70	0	0	0	0	0	46863	3	70.11%	81.61%
0.03	55502	18801	1307	883	0	0	0	0	0	0	0	0	76493	3	63.57%	86.31%
0.04	4489	11178	5199	650	1000	0	0	0	0	0	0	0	22516	4	48.33%	54.85%
0.05	1317	11428	4514	3671	1832	1049	40	0	0	0	0	0	23851	4	40.02%	52.17%
>.05<=.10	43888	41939	33805	23255	6937	32731	11584	110	0	0	0	0	194249	5	34.13%	53.01%
>.10<=.20	4891	14237	16568	29703	11780	36041	57465	6666	0	0	0	0	177351	5	28.94%	58.69%
>.20<=.30	3742	2806	8555	2165	1959	11063	11600	8608	1015	0	0	0	51513	4	31.89%	46.32%
>.30<=.40	2555	866	677	2428	386	5499	10954	13287	2435	1200	0	0	40287	4	26.55%	54.32%
>.40<=.50	14816	292	1401	385	459	1692	5089	6480	6721	1394	510	0	39239	4	21.55%	64.40%
>.50	207	1780	323	93	1156	2536	7487	9510	4569	3256	4428	9970	45315	4	36.87%	44.57%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	17270	417	0	0	0	0	0	0	0	0	0	0	17687	3	63.00%	56.68%
0.02	36568	5604	0	0	0	0	0	0	0	0	0	0	46846	4	59.69%	85.81%
0.03	16048	13538	797	0	0	0	0	0	0	0	0	0	31583	4	57.87%	80.63%
0.04	6068	8430	839	0	0	0	0	0	0	0	0	0	23989	4	55.11%	81.92%
0.05	17591	14996	7667	22239	2423	140	20	20	0	0	0	0	66730	4	51.17%	74.77%
>.05<=.10	18008	17381	17140	11129	395	2327	1269	69	0	0	0	0	76326	4	49.33%	62.43%
>.10<=.20	11044	4889	3316	6680	3470	8757	7402	976	0	0	0	0	47795	4	44.77%	60.73%
>.20<=.30	2441	1336	3150	1467	288	4512	10815	2541	32	0	0	0	28112	3	50.58%	67.73%
>.30<=.40	3319	212	55	42	204	5355	2357	205	190	133	0	0	12072	3	42.66%	65.65%
>.40<=.50	2343	217	276	15	2	1879	1632	2070	1170	50	0	0	9654	3	50.87%	71.06%
>.50	777	717	7	98	0	1141	3381	4113	557	678	247	1478	13194	3	57.36%	75.62%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	329	0	0	0	0	0	0	0	0	0	0	0	329	2	94.00%	94.00%
0.02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	0	100	500	50	0	0	0	0	0	0	650	4	20.00%	9.23%
>.10<=.20	0	0	0	182	0	150	187	0	0	0	0	0	519	4	45.00%	47.59%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	2017	33	0	0	0	0	0	2050	4	80.59%	80.59%

Non-Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives	
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50					
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	100	0	0	0	0	0	0	0	0	0	0	0	100	4	40.00%	40.00%	
0.03	179	0	0	0	0	0	0	0	0	0	0	0	179	5	44.75%	45.25%	
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%	
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%	
>.05<=.10	350	20	0	96	60	0	0	0	0	0	0	0	526	6	38.74%	37.26%	
>.10<=.20	0	3	53	20	74	0	0	64	0	0	0	0	214	4	47.44%	49.53%	
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%	
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%	
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%	
>.50	0	0	0	0	0	398	54	0	0	0	0	0	452	3	50.00%	88.05%	

Appendix: Detailed price improvement statistics for the volume transacted through PIM for February 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	5852	657	30	19	0	0	0	1	0	0	0	0	6559	3	48.80%	47.13%
0.02	2945	2110	141	0	19	0	0	0	0	0	0	0	5215	4	52.34%	48.83%
0.03	1107	2828	232	54	17	5	16	0	0	0	0	0	4259	5	46.71%	43.66%
0.04	303	1347	244	58	0	0	0	0	0	0	0	0	1952	5	38.60%	35.55%
0.05	238	2882	2391	1090	476	247	263	5	0	0	0	0	7592	6	25.43%	27.64%
>.05<=.10	93	1810	2958	2119	1723	979	1433	51	0	1	6	3	11201	6	25.19%	26.31%
>.10<=.20	20	284	728	2508	1579	2697	5774	946	16	0	0	12	14564	6	21.45%	21.25%
>.20<=.30	10	10	0	77	105	527	2223	2317	86	34	5	35	5450	6	24.49%	22.18%
>.30<=.40	2	89	29	39	28	86	971	2283	852	182	23	29	4630	5	25.19%	21.83%
>.40<=.50	0	0	0	24	27	40	321	677	586	173	25	5	1878	6	24.87%	26.27%
>.50	0	17	13	0	33	33	469	1206	1934	1350	989	2136	8183	5	23.27%	24.40%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	1861	236	15	10	7	13	5	0	0	0	0	0	2147	4	61.37%	58.30%
0.02	1865	387	18	0	0	0	0	0	0	0	0	0	2270	4	63.59%	53.29%
0.03	1146	817	39	1	1	0	0	0	0	0	0	0	2004	5	47.44%	40.36%
0.04	525	494	205	34	0	1	4	1	0	0	0	3	1267	5	32.50%	31.26%
0.05	2278	2165	1012	555	255	232	448	13	0	1	0	0	6978	4	48.03%	40.72%
>.05<=.10	1106	2310	1630	976	590	784	1308	119	4	0	0	0	8827	5	49.03%	37.80%
>.10<=.20	578	1103	1112	1471	1304	1354	3192	908	28	3	0	3	11063	6	55.25%	35.88%
>.20<=.30	154	265	401	325	168	514	1732	1185	187	21	3	5	4960	6	62.37%	40.45%
>.30<=.40	118	46	29	104	103	145	1145	944	258	19	9	2	2922	6	60.74%	49.09%
>.40<=.50	96	48	78	1	8	118	345	544	307	77	12	11	1645	6	54.29%	40.73%
>.50	77	15	38	39	57	227	492	1691	1375	747	500	1450	6708	6	53.19%	40.08%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	27	1	0	0	0	0	0	0	0	0	0	0	28	2	71.13%	43.75%
0.02	0	5	0	0	0	0	0	0	0	0	0	0	5	2	100.00%	100.00%
0.03	0	64	0	0	0	0	0	0	0	0	0	0	64	5	70.00%	71.88%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	9	24	20	0	0	0	0	0	0	0	0	53	6	28.15%	22.64%
>.05<=.10	0	41	0	53	33	0	1	0	0	0	0	0	128	6	30.24%	20.31%
>.10<=.20	0	2	10	24	0	0	84	25	0	0	0	0	145	4	24.29%	39.76%
>.20<=.30	0	0	0	0	0	0	80	27	0	0	0	0	107	6	6.67%	16.82%
>.30<=.40	0	0	0	0	0	0	0	10	0	0	0	0	10	5	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	24	0	24	10	0.00%	0.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	121	0	0	0	0	0	0	0	0	0	0	0	121	2	70.42%	61.98%
0.02	101	0	0	0	0	0	0	0	0	0	0	0	101	4	55.00%	43.56%
0.03	84	0	0	0	0	0	0	0	0	0	0	0	84	4	53.32%	48.81%
0.04	30	72	15	0	0	0	0	0	0	0	0	0	117	5	27.69%	22.22%
0.05	17	84	0	0	0	0	0	0	0	0	0	0	101	5	43.41%	41.58%
>.05<=.10	7	70	77	0	3	0	0	0	0	0	0	0	157	5	34.37%	21.02%
>.10<=.20	0	13	37	0	25	6	17	0	0	0	0	0	98	5	33.27%	30.61%
>.20<=.30	5	0	0	21	0	30	21	0	0	0	0	0	77	5	11.11%	5.19%
>.30<=.40	0	0	0	0	0	0	0	0	3	0	0	0	3	7	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	24113	5559	0	0	0	0	0	0	0	0	0	0	29672	3	48.94%	50.41%
0.02	21260	58215	3256	0	0	0	0	0	0	0	0	0	82731	3	68.62%	77.76%
0.03	8156	35434	10204	47	0	0	0	0	0	0	0	0	53841	3	60.03%	63.83%
0.04	12477	17556	6798	1260	0	0	0	0	0	0	0	0	38091	4	47.28%	66.24%
0.05	10535	41293	9259	9848	2441	1820	248	0	0	0	0	0	75444	4	35.79%	61.95%
>.05<=.10	24015	43647	54871	24056	18346	12398	12007	60	0	0	0	0	189400	5	30.83%	52.35%
>.10<=.20	12365	26257	16500	25217	37214	25587	42575	8043	0	490	0	361	194810	4	34.38%	57.67%
>.20<=.30	3332	3457	1229	837	1328	7276	17340	25817	1050	0	0	0	61666	5	31.33%	55.62%
>.30<=.40	2282	1226	373	204	149	4468	9355	14988	1505	616	0	0	35216	4	34.72%	57.87%
>.40<=.50	607	552	735	793	713	1005	7592	6001	1726	389	1231	0	21344	4	33.70%	47.06%
>.50	1620	144	113	254	495	1708	4163	12768	7682	4271	6089	5741	45048	4	41.97%	62.44%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	21860	4053	0	63	0	0	0	0	0	0	0	0	25976	3	68.14%	84.43%
0.02	24038	6582	65	0	0	0	0	0	0	0	0	0	96259	4	60.78%	88.97%
0.03	19747	26697	2267	0	0	0	0	0	0	0	0	0	68072	4	54.42%	77.16%
0.04	12663	7369	1078	715	0	0	0	0	0	0	0	0	21825	3	57.81%	53.26%
0.05	22247	5751	14570	2823	1762	5139	80	0	50	0	0	0	56133	4	53.84%	74.47%
>.05<=.10	22259	34738	21743	8213	13328	8983	1847	0	0	0	0	0	141875	4	51.38%	67.79%
>.10<=.20	17971	18238	8945	10049	12449	16441	8191	4220	28	0	0	34	97259	4	44.85%	70.93%
>.20<=.30	9258	4819	1382	1228	550	6837	8924	2218	0	0	0	0	35216	3	55.22%	71.74%
>.30<=.40	1372	246	60	35	27	3345	3430	1110	204	0	0	0	9829	3	48.84%	68.97%
>.40<=.50	1447	447	51	0	0	967	1547	1749	508	0	0	0	6716	4	56.30%	65.71%
>.50	1331	1072	171	5	0	373	1820	7638	9200	295	190	1875	23970	3	49.42%	77.17%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	1050	0	0	0	0	0	0	0	0	0	0	0	1050	5	40.03%	40.03%
0.02	1261	503	0	0	0	0	0	0	0	0	0	0	1764	3	61.00%	69.16%
0.03	624	1290	0	0	0	0	0	0	0	0	0	0	1914	3	58.07%	59.49%
0.04	554	1	0	0	0	0	0	0	0	0	0	0	555	6	40.00%	40.00%
0.05	313	356	50	0	0	0	0	0	0	0	0	0	719	5	30.33%	37.41%
>.05<=.10	507	235	3943	150	80	100	0	0	0	0	0	0	5015	5	21.50%	48.00%
>.10<=.20	0	59	11	426	10	0	150	0	0	0	0	0	656	4	19.00%	26.53%
>.20<=.30	29	0	0	0	0	0	0	0	0	0	0	0	29	2	48.33%	48.33%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	250	0	0	0	0	0	0	0	0	0	0	0	250	2	80.00%	88.00%
0.02	2523	0	0	0	0	0	0	0	0	0	0	0	2523	3	55.17%	58.20%
0.03	667	44	0	0	0	0	0	0	0	0	0	0	711	5	44.22%	48.95%
0.04	66	50	0	0	0	0	0	0	0	0	0	0	116	5	40.45%	40.52%
0.05	341	0	0	0	0	0	0	0	0	0	0	0	341	2	62.46%	53.37%
>.05<=.10	48	32	900	0	50	0	0	0	0	0	0	0	1030	4	36.00%	76.12%
>.10<=.20	60	0	30	40	0	0	121	0	0	0	0	0	251	3	60.39%	64.14%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Appendix: Detailed price improvement statistics for the volume transacted through PIM for March 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	6964	528	11	0	0	0	55	4	0	0	0	0	7562	3	52.75%	47.03%
0.02	2907	1913	37	7	0	0	0	0	0	0	0	0	4864	4	57.95%	49.36%
0.03	619	2172	222	4	35	0	4	0	0	0	0	0	3056	5	48.40%	45.03%
0.04	235	1034	202	121	6	4	36	0	0	0	0	0	1638	5	45.17%	37.54%
0.05	420	3151	2945	1889	752	240	279	24	0	0	0	0	9700	6	26.26%	26.39%
>.05<=.10	255	1946	3708	2510	1724	1179	1387	90	1	0	0	0	12800	6	29.60%	27.33%
>.10<=.20	99	342	709	1651	1393	1929	5444	1071	11	2	0	0	12651	6	28.44%	23.47%
>.20<=.30	0	73	108	128	169	264	1845	2186	129	8	47	0	4972	5	32.15%	26.93%
>.30<=.40	9	25	49	54	5	244	970	1881	504	150	0	2	3893	5	31.61%	21.64%
>.40<=.50	34	0	17	13	19	65	325	1061	548	252	36	1	2371	5	27.95%	25.29%
>.50	0	0	6	18	0	0	239	1854	1779	1905	908	1925	8634	5	28.97%	24.78%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	2584	195	6	8	1	0	33	2	0	0	0	0	2829	4	73.64%	57.06%
0.02	1818	625	35	0	0	0	0	0	0	0	0	0	2478	4	69.19%	54.12%
0.03	763	731	102	2	0	0	3	0	0	0	0	0	1601	4	62.26%	51.03%
0.04	234	426	76	35	8	0	1	0	0	0	0	0	780	4	48.30%	40.54%
0.05	2335	3509	1550	585	477	281	688	42	8	0	0	0	9475	4	48.31%	42.14%
>.05<=.10	1190	2545	2416	1245	879	538	1428	168	36	1	0	27	10473	5	51.63%	38.44%
>.10<=.20	896	1247	1280	1102	822	894	2604	930	37	0	0	0	9812	5	59.77%	43.33%
>.20<=.30	158	415	344	598	208	407	1439	1202	164	4	1	1	4941	5	60.16%	39.43%
>.30<=.40	42	181	56	80	59	251	834	1249	330	45	12	0	3139	6	56.55%	41.79%
>.40<=.50	19	16	19	88	54	68	320	707	211	36	19	3	1560	6	56.66%	43.93%
>.50	8	60	25	24	42	81	207	1109	798	548	189	683	3774	6	49.43%	36.66%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.02	60	10	0	0	0	0	0	0	0	0	0	0	70	5	49.05%	47.14%
0.03	0	53	0	1	10	0	0	0	0	0	0	0	64	3	52.27%	53.13%
0.04	24	16	0	0	26	0	0	0	0	0	0	0	66	5	41.15%	40.91%
0.05	9	46	27	1	0	14	0	0	0	0	0	0	97	5	36.25%	26.79%
>.05<=.10	20	31	0	50	0	0	61	0	0	0	0	0	162	4	25.83%	35.56%
>.10<=.20	2	36	0	2	19	134	123	10	0	0	0	0	326	5	14.00%	14.42%
>.20<=.30	0	0	0	0	0	0	15	0	0	0	0	0	15	4	40.00%	40.00%
>.30<=.40	0	0	0	0	0	0	0	10	0	0	0	0	10	3	0.00%	0.00%
>.40<=.50	0	0	0	0	0	24	0	0	0	0	0	0	24	2	70.59%	70.59%
>.50	0	0	0	0	0	0	0	84	88	0	10	20	202	3	37.18%	30.20%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	77	12	0	0	0	0	0	0	0	0	0	0	89	4	44.57%	44.94%
0.02	174	0	0	0	0	0	0	0	0	0	0	0	174	3	53.64%	52.17%
0.03	121	107	0	0	0	0	0	0	0	0	0	0	228	4	54.92%	53.07%
0.04	58	74	0	0	0	0	0	0	0	0	0	0	132	4	50.42%	48.63%
0.05	77	76	0	0	0	1	0	0	0	0	0	0	154	5	40.23%	42.86%
>.05<=.10	189	391	163	63	0	0	0	0	0	0	0	0	806	3	50.71%	41.26%
>.10<=.20	15	46	32	14	15	0	14	0	0	0	0	0	136	5	27.86%	43.38%
>.20<=.30	0	2	12	0	12	4	8	0	0	0	0	0	38	5	22.50%	23.68%
>.30<=.40	0	0	0	0	0	0	25	0	0	0	5	0	30	5	50.00%	16.67%
>.40<=.50	0	9	6	0	0	0	14	0	0	0	0	0	29	5	30.00%	24.14%
>.50	6	6	6	0	28	28	1	63	0	11	30	9	188	3	51.18%	60.11%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	10446	4224	0	0	0	0	0	0	0	0	0	0	14670	3	48.62%	55.36%
0.02	8466	34024	488	0	0	0	0	0	0	0	0	0	42978	3	63.40%	80.68%
0.03	30683	26890	22109	1812	0	0	0	0	0	0	0	0	81494	3	58.96%	71.54%
0.04	5302	45113	7170	1514	697	0	0	0	0	0	0	0	59796	3	61.32%	43.46%
0.05	12818	16029	12105	2689	1394	1482	319	0	0	0	0	0	46836	5	40.92%	53.54%
>.05<=.10	9079	44096	32615	24073	5951	7553	4932	145	0	0	0	0	128444	5	32.78%	50.90%
>.10<=.20	11956	9699	19231	13221	13282	23021	38008	5625	0	0	0	0	134170	4	35.20%	59.74%
>.20<=.30	4601	1703	571	2045	1606	6448	13470	9495	2766	0	0	0	42705	4	28.98%	48.53%
>.30<=.40	1968	1014	188	647	321	1758	5431	8846	1499	0	0	0	21672	5	37.26%	42.99%
>.40<=.50	198	0	0	154	178	1150	1220	3879	545	150	70	0	7609	4	45.60%	59.37%
>.50	2017	230	141	196	48	1245	2185	5727	3598	3407	1000	8396	28201	5	38.52%	60.59%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	21258	664	0	0	0	0	0	0	0	0	0	0	24426	3	58.19%	59.88%
0.02	26731	7358	140	0	0	0	0	0	0	0	0	0	50814	4	50.96%	66.83%
0.03	21381	10809	812	0	0	55	0	0	0	0	0	0	50645	4	53.41%	51.92%
0.04	33413	5183	4255	0	416	0	0	0	0	0	0	0	53229	4	55.10%	78.67%
0.05	14763	9610	4999	2493	340	1092	326	0	0	0	0	0	33623	4	51.29%	67.36%
>.05<=.10	46184	19055	11448	11684	2389	4905	1730	20	0	0	0	0	101842	4	47.62%	63.26%
>.10<=.20	15745	6714	6398	2846	3202	14035	6789	2827	0	0	0	0	77368	3	53.87%	75.15%
>.20<=.30	3957	1282	577	986	1041	4791	3716	1262	103	0	0	0	19148	3	40.72%	59.97%
>.30<=.40	850	508	318	432	189	1822	3023	437	183	0	0	0	7762	3	50.03%	52.67%
>.40<=.50	425	171	279	123	35	159	2699	1815	101	0	0	0	5807	4	53.00%	76.36%
>.50	1139	247	0	784	14	359	1323	2714	1714	2	239	3796	12331	4	62.21%	81.58%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	371	0	0	0	0	0	0	0	0	0	0	0	371	5	40.00%	40.00%
0.02	1263	5300	0	0	0	0	0	0	0	0	0	0	6563	2	82.81%	86.39%
0.03	95	2693	0	0	0	0	0	0	0	0	0	0	2788	3	52.05%	46.47%
0.04	103	270	0	0	0	0	0	0	0	0	0	0	373	5	40.00%	40.00%
0.05	338	100	0	0	0	0	0	0	0	0	0	0	438	4	40.00%	40.00%
>.05<=.10	269	445	7008	790	206	800	0	0	0	0	0	0	9518	4	21.46%	29.00%
>.10<=.20	0	816	846	565	208	550	504	0	0	0	0	0	3489	3	39.39%	32.59%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	55	0	0	0	0	55	5	0.00%	0.00%

Non-Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	292	0	0	0	0	0	0	0	0	0	0	0	292	3	60.14%	60.27%
0.02	2676	144	0	0	0	0	0	0	0	0	0	0	2820	3	56.85%	56.66%
0.03	240	0	0	0	0	0	0	0	0	0	0	0	240	2	100.00%	100.00%
0.04	62	0	50	0	0	0	0	0	0	0	0	0	112	4	70.00%	63.08%
0.05	224	31	0	11	0	0	0	0	0	0	0	0	266	5	70.14%	72.99%
>.05<=.10	705	506	160	163	0	0	0	0	0	0	0	0	1534	3	52.76%	57.76%
>.10<=.20	96	166	25	10	29	54	108	100	0	0	0	0	588	4	31.20%	31.29%
>.20<=.30	30	0	142	0	50	0	675	0	0	0	0	0	897	3	59.42%	76.59%
>.30<=.40	0	0	0	0	0	200	0	0	0	0	0	0	200	2	100.00%	100.00%
>.40<=.50	0	0	0	0	80	0	0	0	0	0	0	0	80	3	100.00%	100.00%
>.50	0	0	0	0	0	0	0	50	0	0	0	0	50	2	100.00%	100.00%

Appendix: Detailed price improvement statistics for the volume transacted through PIM for April 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	9286	434	2	20	0	0	0	0	0	0	0	0	9742	3	52.92%	43.28%
0.02	3890	929	9	0	0	0	0	0	0	0	0	0	4828	5	54.63%	42.66%
0.03	1000	1380	103	6	1	6	0	0	0	0	0	0	2496	5	42.37%	34.70%
0.04	153	857	509	21	0	0	0	0	0	0	0	0	1540	6	31.70%	34.32%
0.05	316	1790	2668	1914	490	113	113	0	0	0	0	0	7404	6	21.42%	21.29%
>.05<=.10	183	1976	2732	3566	1846	1676	1315	2	0	0	0	0	13296	6	24.96%	22.78%
>.10<=.20	50	1414	993	2192	1882	2788	4457	1056	1	0	0	0	14853	6	22.28%	20.13%
>.20<=.30	0	190	389	250	163	393	2080	1548	183	0	0	0	5216	6	22.07%	21.96%
>.30<=.40	100	54	10	306	117	464	1012	1848	127	34	0	0	4072	5	21.80%	25.88%
>.40<=.50	24	2	61	33	28	175	317	1225	554	37	2	4	2462	5	31.27%	33.05%
>.50	0	27	10	2	3	59	206	1660	991	447	402	1157	4964	5	21.44%	24.54%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	5268	269	64	45	0	0	0	0	0	0	0	0	5646	3	72.95%	58.47%
0.02	2585	425	44	0	0	0	0	0	0	0	0	0	3054	4	65.55%	50.03%
0.03	792	663	79	2	0	0	0	0	0	0	0	0	1536	4	50.33%	37.36%
0.04	468	696	264	0	2	2	0	0	0	0	0	0	1432	5	36.99%	28.90%
0.05	3026	3387	1695	728	456	69	94	12	0	0	0	0	9467	5	45.68%	40.63%
>.05<=.10	1483	2975	2229	1565	789	1205	504	47	0	0	0	0	10839	5	40.88%	32.82%
>.10<=.20	881	1773	1513	1665	1492	1136	2664	366	1	0	0	0	11491	5	44.70%	33.17%
>.20<=.30	302	338	207	421	222	663	1988	936	89	1	1	0	5168	6	39.55%	30.53%
>.30<=.40	80	54	158	154	82	282	714	770	153	12	14	0	2473	6	38.37%	30.38%
>.40<=.50	25	28	15	18	47	75	354	791	157	31	4	0	1545	6	32.54%	34.76%
>.50	65	36	1	79	49	54	606	888	1237	583	285	689	4572	6	30.16%	34.81%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	17	0	0	0	0	0	0	0	0	0	0	0	17	4	53.09%	43.75%
0.02	40	54	0	0	0	0	0	0	0	0	0	0	94	4	50.47%	38.68%
0.03	4	52	0	0	0	0	0	0	0	0	0	0	56	5	58.33%	43.08%
0.04	0	93	23	0	4	0	0	0	0	0	0	0	120	4	37.02%	35.00%
0.05	0	25	2	0	0	0	0	0	0	0	0	0	27	3	29.09%	21.62%
>.05<=.10	0	104	57	39	0	0	0	0	0	0	0	0	200	5	31.74%	35.07%
>.10<=.20	0	0	0	0	0	10	0	0	0	0	0	0	10	6	0.00%	0.00%
>.20<=.30	0	0	0	0	0	6	7	0	0	0	0	0	13	3	20.00%	30.77%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	139	0	0	0	0	0	0	0	0	0	0	0	139	3	65.16%	74.10%
0.02	126	14	0	0	0	0	0	0	0	0	0	0	140	5	47.77%	47.14%
0.03	96	33	0	0	0	0	0	0	0	0	0	0	129	5	36.53%	38.57%
0.04	49	23	0	0	0	0	0	0	0	0	0	0	72	4	45.86%	46.58%
0.05	43	64	42	0	0	0	0	0	0	0	0	0	149	4	49.83%	35.57%
>.05<=.10	2	17	59	1	10	0	0	0	0	0	0	0	89	5	41.50%	28.09%
>.10<=.20	1	3	0	10	14	14	10	5	0	0	0	0	57	4	25.56%	17.24%
>.20<=.30	0	0	0	0	20	0	29	0	0	0	0	0	49	5	59.18%	59.18%
>.30<=.40	0	0	0	0	0	0	0	8	0	0	0	0	8	9	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	10965	3391	100	0	0	0	0	0	0	0	0	0	14456	3	50.12%	58.02%
0.02	24773	35437	7562	0	0	0	0	0	0	0	0	0	67772	3	62.06%	78.52%
0.03	22243	62360	2947	390	0	0	0	0	0	0	0	0	87940	3	55.41%	78.36%
0.04	1258	33869	7285	416	0	52	0	0	0	0	0	0	42880	4	40.17%	65.22%
0.05	6513	25186	10928	5094	2941	495	64	0	0	0	0	0	51221	5	33.21%	57.25%
>.05<=.10	7851	29624	49001	22640	9524	12240	4938	100	1200	0	0	54	137172	5	27.75%	44.89%
>.10<=.20	9916	8669	11569	13675	37509	30359	34299	2981	0	0	0	0	149494	4	39.77%	58.37%
>.20<=.30	703	1376	1436	3352	129	3701	11231	6185	392	0	0	0	28505	4	38.75%	50.69%
>.30<=.40	394	3887	592	107	652	2914	4113	4431	1102	60	0	211	18488	4	41.24%	55.92%
>.40<=.50	231	49	130	93	0	1404	4161	2349	1574	513	0	0	10504	4	46.20%	55.28%
>.50	954	63	0	75	0	1702	2681	4950	6996	2223	1467	5742	26853	4	45.59%	55.32%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	29825	471	41	0	0	0	0	0	0	0	0	0	34264	3	65.44%	72.21%
0.02	33414	14840	73	0	0	0	0	0	0	0	0	0	56538	4	51.57%	73.49%
0.03	18801	4915	100	0	0	0	0	0	0	0	0	0	24027	4	44.49%	67.75%
0.04	14168	13699	9926	820	0	0	0	0	0	0	0	0	39224	3	50.13%	76.77%
0.05	22568	17249	1927	4133	809	740	0	0	0	0	0	0	47844	4	47.80%	64.30%
>.05<=.10	29475	10144	10725	5005	6076	9100	4129	0	0	0	0	456	85103	4	51.55%	67.66%
>.10<=.20	7641	4404	3967	7273	3254	14742	5414	239	0	0	0	0	51091	3	51.74%	68.56%
>.20<=.30	1803	401	634	1295	111	3438	2962	1840	60	0	0	0	28560	3	62.64%	83.93%
>.30<=.40	612	478	79	56	71	559	2418	1405	3	0	0	0	5681	4	52.47%	53.42%
>.40<=.50	250	200	0	0	135	235	1390	1491	0	0	0	0	3701	3	46.47%	60.77%
>.50	849	252	0	79	200	1366	3098	2134	1152	634	221	2012	11997	3	55.51%	72.15%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	910	62	0	0	0	0	0	0	0	0	0	0	972	4	64.96%	67.54%
0.02	1277	752	0	0	0	0	0	0	0	0	0	0	2029	3	66.18%	65.98%
0.03	0	332	0	0	0	0	0	0	0	0	0	0	332	5	55.00%	54.82%
0.04	382	300	0	0	0	0	0	0	0	0	0	0	682	5	40.00%	40.00%
0.05	0	506	0	0	0	0	0	0	0	0	0	0	506	6	40.07%	40.04%
>.05<=.10	490	0	580	500	0	0	0	0	0	0	0	0	1570	5	47.50%	60.13%
>.10<=.20	0	0	0	0	0	50	705	0	0	0	0	0	755	3	36.67%	62.78%
>.20<=.30	0	0	0	0	0	754	166	0	0	0	0	0	920	2	46.88%	65.22%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	78	78	0	0	0	0	0	0	0	0	0	0	156	4	42.62%	42.62%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	964	0	0	0	0	0	0	0	0	0	0	0	964	4	55.91%	57.26%
0.02	482	0	0	0	0	0	0	0	0	0	0	0	482	4	48.83%	48.34%
0.03	156	0	0	0	0	0	0	0	0	0	0	0	156	5	40.54%	40.38%
0.04	0	50	0	0	0	0	0	0	0	0	0	0	50	5	0.00%	0.00%
0.05	0	0	78	0	0	0	0	0	0	0	0	0	78	7	0.00%	0.00%
>.05<=.10	0	76	130	0	0	0	0	0	0	0	0	0	206	6	20.00%	29.13%
>.10<=.20	0	158	0	0	63	12	0	0	0	0	0	0	233	4	67.11%	78.97%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	28	64	0	0	0	0	0	92	5	69.57%	69.57%

Appendix: Detailed price improvement statistics for the volume transacted through PIM for May 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	4812	429	0	0	0	0	0	3	0	0	0	0	5244	3	50.92%	45.55%
0.02	1710	4988	174	17	16	1	0	0	0	0	0	0	6906	3	77.21%	69.59%
0.03	373	3103	883	68	0	0	0	0	0	0	0	0	4427	3	70.98%	64.17%
0.04	74	945	839	179	10	0	0	0	0	0	0	0	2047	3	68.80%	55.56%
0.05	244	1292	1564	1029	612	116	76	0	0	0	0	0	4933	4	51.59%	41.86%
>.05<=.10	151	1461	2501	2972	1907	2684	1437	12	0	0	0	0	13125	4	49.13%	34.93%
>.10<=.20	52	412	830	883	1123	2880	5586	692	7	0	0	27	12510	4	37.31%	24.73%
>.20<=.30	42	71	173	53	123	313	1565	1449	212	0	0	0	4001	5	38.52%	34.16%
>.30<=.40	0	10	46	43	55	205	778	1386	521	134	0	47	3225	4	35.64%	30.21%
>.40<=.50	0	10	0	0	0	0	127	591	282	88	13	1	1112	5	38.97%	34.44%
>.50	19	30	3	10	0	0	172	569	988	585	468	888	3756	5	35.79%	36.69%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	16037	408	13	0	0	0	0	0	0	0	0	0	16458	3	77.93%	73.33%
0.02	6581	3425	142	5	1	0	0	0	0	0	0	0	10154	3	72.75%	64.32%
0.03	2151	2490	657	72	4	0	0	0	0	0	0	0	5374	3	69.91%	58.42%
0.04	551	1308	860	105	22	10	0	0	0	0	0	0	2856	3	66.46%	60.87%
0.05	3504	2959	1587	637	254	132	60	0	0	0	0	0	9133	4	51.21%	46.61%
>.05<=.10	2864	3500	2016	1433	725	588	518	9	1	0	0	0	11654	4	46.42%	40.45%
>.10<=.20	1775	1005	826	741	943	881	2333	457	2	0	0	12	9010	4	48.26%	43.62%
>.20<=.30	468	170	159	381	163	712	1015	452	80	0	0	0	3612	4	51.37%	48.99%
>.30<=.40	224	78	105	74	45	207	459	600	316	66	5	0	2179	4	49.42%	46.40%
>.40<=.50	87	38	57	0	7	37	93	391	314	71	37	0	1132	5	48.66%	49.29%
>.50	60	76	114	41	30	91	242	735	794	339	136	481	3139	5	39.38%	30.09%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	41	0	1	0	0	0	0	0	0	0	0	0	42	3	39.66%	42.86%
0.02	48	105	16	0	0	0	0	0	0	0	0	0	169	3	57.34%	45.31%
0.03	1	47	0	0	0	0	0	0	0	0	0	0	48	4	64.77%	58.00%
0.04	0	19	11	0	0	0	0	0	0	0	0	0	30	6	21.15%	36.67%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	43	15	0	0	0	0	0	0	0	0	58	4	35.56%	31.03%
>.10<=.20	0	0	0	0	28	0	1	0	0	0	0	0	29	5	33.33%	3.45%
>.20<=.30	0	0	0	0	0	0	0	1	0	0	0	0	1	5	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	4	0	0	0	4	6	0.00%	0.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	48	10	0	0	0	0	0	0	0	0	0	0	58	4	70.71%	74.14%
0.02	5	34	0	0	0	0	0	0	0	0	0	0	39	6	20.00%	5.13%
0.03	38	45	0	0	0	0	0	0	0	0	0	0	83	5	47.37%	49.40%
0.04	0	0	20	0	0	0	0	0	0	0	0	0	20	2	100.00%	100.00%
0.05	3	6	0	0	0	0	0	0	0	0	0	0	9	6	33.33%	22.22%
>.05<=.10	29	37	23	16	0	0	0	0	0	0	0	0	105	4	36.90%	37.14%
>.10<=.20	0	1	0	0	0	0	0	0	0	0	0	0	1	4	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	5	0	0	0	0	0	5	6	50.00%	20.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	5	8	0	0	0	13	8	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	20398	9718	0	0	0	0	0	0	0	0	0	0	57446	3	62.44%	79.97%
0.02	39204	48438	3784	0	0	0	0	0	0	0	0	0	98770	3	67.61%	87.48%
0.03	18355	35442	3207	1375	0	0	0	0	0	0	0	0	64234	3	58.07%	68.50%
0.04	13220	49673	21625	6218	21	0	0	0	0	0	0	0	90757	4	52.71%	85.22%
0.05	29950	27346	13269	4630	14089	944	0	0	0	0	0	94	111863	4	40.58%	72.87%
>.05<=.10	27999	42537	37867	32346	9950	20192	6222	0	0	0	0	0	178191	4	38.20%	55.12%
>.10<=.20	18916	15643	22463	13671	7238	32049	22834	2288	0	0	0	0	142126	4	39.51%	60.70%
>.20<=.30	1298	5653	970	966	2575	17654	20446	5823	632	0	0	0	56017	4	45.28%	56.97%
>.30<=.40	1082	938	1596	76	300	4665	6989	4696	1201	100	0	0	21893	3	44.92%	57.19%
>.40<=.50	280	0	0	1399	644	1873	5185	7647	2066	87	403	0	19689	3	49.04%	56.90%
>.50	172	354	401	53	5	2385	2882	8479	7920	1953	2717	17276	44597	3	49.28%	68.99%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	13258	363	0	0	0	0	0	0	0	0	0	0	40951	3	66.32%	88.84%
0.02	31018	13804	1634	0	0	0	0	0	0	0	0	0	46456	3	60.80%	87.37%
0.03	10357	15444	1215	0	0	0	0	0	0	0	0	0	32871	3	61.73%	76.46%
0.04	3786	31523	9940	0	0	0	0	0	0	0	0	0	45249	3	49.52%	87.03%
0.05	25687	4578	3405	264	103	622	0	0	0	0	0	0	49607	3	52.38%	83.03%
>.05<=.10	21048	12585	7053	11369	1156	3195	1495	0	0	0	0	0	57901	3	51.74%	72.61%
>.10<=.20	14870	6344	6112	4009	1499	7628	4718	418	0	0	0	0	51622	3	58.47%	79.13%
>.20<=.30	1115	3509	535	69	328	6424	3856	584	50	0	0	0	16470	3	64.46%	71.86%
>.30<=.40	143	475	1500	12	0	2228	1756	1747	0	0	0	0	7861	3	59.08%	71.02%
>.40<=.50	250	0	0	1000	144	1167	933	2163	670	0	0	0	6432	3	59.53%	65.87%
>.50	172	304	29	0	5	1012	1126	2494	2552	39	1165	11070	19968	3	62.05%	87.87%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	173	0	0	0	0	0	0	0	0	0	0	0	173	2	63.27%	56.78%
0.02	326	0	0	0	0	0	0	0	0	0	0	0	326	4	55.56%	50.14%
0.03	200	154	71	0	0	0	0	0	0	0	0	0	425	5	45.19%	47.53%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.05<=.10	0	0	7500	50	0	100	0	0	0	0	0	0	7650	3	70.00%	98.82%
>.10<=.20	0	0	0	1000	0	0	0	0	0	0	0	0	1000	3	49.50%	49.50%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; Not at NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	562	0	0	0	0	0	0	0	0	0	0	0	562	2	76.12%	75.85%
0.02	0	100	0	0	0	0	0	0	0	0	0	0	100	2	100.00%	100.00%
0.03	100	0	0	0	0	0	0	0	0	0	0	0	100	3	70.00%	70.00%
0.04	300	0	0	0	0	0	0	0	0	0	0	0	300	4	40.00%	40.00%
0.05	430	0	0	0	0	0	0	0	0	0	0	0	430	3	55.00%	60.44%
>.05<=.10	0	0	20	80	0	0	0	0	0	0	0	0	100	5	20.00%	20.00%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	200	0	0	0	0	200	2	100.00%	100.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Appendix: Detailed price improvement statistics for the volume transacted through PIM for June 2016.

Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	5187	673	69	0	0	0	0	0	0	6	0	0	5935	3	52.11%	47.49%
0.02	1155	5045	204	0	0	0	0	0	0	0	0	0	6404	2	81.58%	75.70%
0.03	322	3596	1030	39	2	0	0	0	0	0	0	0	4989	3	70.45%	57.68%
0.04	116	1493	986	343	73	22	0	0	0	0	0	0	3033	3	64.44%	54.39%
0.05	424	1455	2255	1602	1424	388	127	0	0	0	0	0	7675	4	52.63%	47.12%
>.05<=.10	222	1136	1897	2300	2175	2139	2032	32	0	0	0	0	11944	4	49.36%	37.27%
>.10<=.20	107	437	583	692	719	1661	6307	1658	10	0	0	0	12174	4	39.65%	28.45%
>.20<=.30	18	78	89	232	55	376	1858	2297	517	3	0	0	5523	4	39.99%	31.07%
>.30<=.40	0	43	41	39	21	141	1071	3521	687	72	0	0	5636	4	38.90%	31.52%
>.40<=.50	0	0	2	2	2	15	100	526	434	304	60	0	1445	5	38.48%	29.79%
>.50	14	47	22	39	12	173	373	757	1180	911	661	2420	6609	5	31.82%	26.05%

Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	23501	820	39	0	4	11	0	0	0	0	0	0	24375	2	79.43%	75.84%
0.02	6626	4623	112	27	0	0	0	0	0	0	0	0	11388	3	75.50%	68.71%
0.03	2009	3113	1052	42	15	0	0	0	0	0	0	0	6231	3	74.10%	65.34%
0.04	810	1425	956	257	8	5	7	0	0	0	0	0	3468	3	69.87%	56.48%
0.05	2922	2048	1453	759	445	121	148	11	0	0	0	0	7907	3	61.75%	56.72%
>.05<=.10	3037	2383	2071	1274	884	580	724	83	0	2	0	0	11038	3	59.26%	53.40%
>.10<=.20	1529	841	822	698	755	690	1784	476	3	0	0	0	7598	3	49.82%	47.03%
>.20<=.30	557	296	213	270	175	290	1481	885	74	3	0	0	4244	4	50.81%	40.40%
>.30<=.40	283	28	32	51	8	121	503	646	222	109	0	0	2003	4	58.26%	52.23%
>.40<=.50	29	61	42	15	20	34	158	278	147	81	23	0	888	4	55.33%	42.53%
>.50	110	22	42	15	9	118	206	954	637	354	330	1093	3890	4	50.98%	43.33%

Non-Customer <50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	135	0	0	0	0	0	0	0	0	0	0	0	135	3	61.14%	42.51%
0.02	26	60	0	0	0	0	0	0	0	0	0	0	86	5	64.72%	74.73%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	22	0	0	0	0	0	0	0	0	0	0	22	3	40.91%	40.91%
0.05	0	0	0	0	0	0	14	0	0	0	0	0	14	5	0.00%	0.00%
>.05<=.10	0	43	34	20	0	0	0	0	0	0	0	0	97	4	10.47%	18.56%
>.10<=.20	0	0	0	0	5	0	60	0	0	0	0	0	65	4	20.00%	15.38%
>.20<=.30	0	0	0	0	0	0	0	0	20	0	0	0	20	4	50.00%	50.00%
>.30<=.40	0	0	0	0	0	0	0	10	0	0	0	0	10	2	100.00%	100.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	2	0	2	5	50.00%	50.00%

Non-Customer <50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	115	28	0	0	0	0	0	0	0	0	0	0	143	2	70.36%	64.52%
0.02	52	31	0	0	0	0	0	0	0	0	0	0	83	3	47.14%	46.99%
0.03	49	9	0	0	0	0	0	0	0	0	0	0	58	4	44.07%	44.83%
0.04	13	0	0	0	0	0	0	0	0	0	0	0	13	3	70.00%	53.85%
0.05	0	83	0	0	19	0	0	0	0	0	0	0	102	5	20.50%	26.47%
>.05<=.10	0	0	0	33	0	0	0	0	0	0	0	0	33	4	42.42%	42.42%
>.10<=.20	0	0	0	0	0	0	2	0	0	0	0	0	2	8	0.00%	0.00%
>.20<=.30	0	0	0	0	0	2	7	10	0	0	0	0	19	4	46.67%	60.00%
>.30<=.40	0	0	0	0	0	0	0	17	0	0	0	0	17	7	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	1	0	0	1	2	100.00%	100.00%

Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	9258	13676	0	0	0	0	0	0	0	0	0	0	25079	3	67.28%	81.90%
0.02	15939	32834	919	0	0	0	0	0	0	0	0	0	49692	3	65.27%	78.79%
0.03	7672	11963	1451	655	0	0	0	0	0	0	0	0	21741	3	47.17%	63.75%
0.04	17912	16958	3995	80	778	0	0	0	0	0	0	0	39723	3	57.46%	78.90%
0.05	6298	14420	9936	3776	2080	1123	29	0	0	0	0	0	37662	4	35.22%	49.12%
>.05<=.10	7927	21377	47104	23951	7625	9322	6077	52	0	0	200	0	123635	4	34.23%	53.99%
>.10<=.20	5134	8854	7663	12106	5993	17109	21445	10830	0	0	0	20	89154	4	33.38%	47.65%
>.20<=.30	216	1335	1027	861	1634	3533	13556	8661	0	0	0	0	30889	4	34.26%	55.98%
>.30<=.40	214	50	375	507	0	2811	6062	3377	5913	300	0	0	19609	4	40.98%	63.27%
>.40<=.50	0	0	0	0	200	3232	3393	2667	217	9	0	0	9718	4	32.53%	48.65%
>.50	679	278	100	12	0	124	1431	5808	2937	2287	995	2374	17025	4	40.45%	52.16%

Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	25488	6308	100	0	0	0	0	0	0	0	0	0	60582	2	77.84%	75.06%
0.02	26596	5489	981	0	0	0	0	0	0	0	0	0	40091	3	63.98%	80.63%
0.03	21664	6755	566	69	0	0	0	0	0	0	0	0	48828	3	69.62%	80.02%
0.04	37352	4314	1328	1167	200	0	0	0	0	0	0	0	44361	3	60.72%	65.43%
0.05	16936	5961	1613	1800	111	3995	0	0	0	0	0	0	30416	3	53.99%	77.90%
>.05<=.10	17279	7539	7422	6442	1141	4268	561	0	0	0	0	0	44652	3	56.03%	76.25%
>.10<=.20	5892	4721	1135	1074	1901	8423	1838	529	0	0	0	0	25513	3	53.46%	67.06%
>.20<=.30	578	382	2075	551	7	2860	1643	2712	0	0	0	0	10808	3	66.90%	78.09%
>.30<=.40	2365	36	2	2	98	1005	542	155	905	738	0	0	5848	3	46.85%	76.27%
>.40<=.50	173	84	93	123	0	0	150	1329	0	100	0	0	2052	4	29.09%	50.10%
>.50	508	308	0	0	72	1475	1082	663	913	89	115	1251	6476	4	57.03%	68.35%

Non-Customer >=50 contracts; At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	710	0	0	0	0	0	0	0	0	0	0	0	710	3	40.11%	40.07%
0.02	959	0	0	0	0	0	0	0	0	0	0	0	959	3	46.96%	44.56%
0.03	262	0	0	0	0	0	0	0	0	0	0	0	262	6	40.18%	40.23%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	0	50	0	0	0	0	0	0	0	0	0	0	50	5	40.00%	40.00%
>.05<=.10	0	100	0	0	0	80	0	0	0	0	0	0	180	3	70.00%	66.67%
>.10<=.20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%

Non-Customer >=50 contracts; Not At NBBO

Spread	Improvement												Total Contracts Traded	Average Number of Participant	Average Percent of Orders Initiator Receives	Average Percent of Contracts Initiator Receives
	0	0.01	0.02	0.03	0.04	0.05	>.05<=.10	>.10<=.20	>.20<=.30	>.30<=.40	>.40<=.50	>.50				
0.01	795	0	0	0	0	0	0	0	0	0	0	0	795	3	62.60%	62.38%
0.02	51	0	0	0	0	0	0	0	0	0	0	0	51	3	41.18%	41.18%
0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
0.05	271	0	0	0	0	0	0	0	0	0	0	0	271	3	40.59%	40.22%
>.05<=.10	0	0	20	80	0	0	0	0	0	0	0	0	100	4	80.00%	80.00%
>.10<=.20	0	0	0	60	0	40	50	0	0	0	0	0	150	4	70.00%	60.00%
>.20<=.30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.30<=.40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.40<=.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00%	0.00%
>.50	0	0	0	0	0	0	350	0	0	0	0	0	350	3	91.67%	85.71%

PIM Early Termination Data (Jan 2016 - June 2016)

	Jan. 2016	Feb. 2016	Mar. 2016	Apr. 2016	May. 2016	Jun. 2016	Totals/%
Early Terminated Auctions	141	205	136	97	50	44	673
% Early Terminated Auctions	0.14%	0.25%	0.16%	0.12%	0.09%	0.07%	0.15%
Traded Contracts in Early Terminated Auctions	1,475	3,535	856	2,450	766	513	9,595
% Traded Contracts in Early Terminated Auctions	0.12%	0.23%	0.07%	0.21%	0.07%	0.05%	0.13%
% Early Terminated Auctions Receiving PIM	62.41%	58.54%	48.53%	36.08%	24.00%	34.09%	49.93%
% Traded Contracts in Early Terminated Auctions Receiving PIM	47.93%	48.97%	51.17%	17.92%	21.93%	18.91%	37.31%
Amount of PI Received by Early Terminated Auctions	\$51.71	\$61.63	\$23.20	\$30.19	\$13.24	\$5.14	\$185.11

International Securities Exchange
ISE Regular Options Complex PIM Data January 2016

Data Request from SEC Approval Order		Response
1	No. PIM orders < 50	25854
2	Percent PIM orders < 50	0.18%
3	Percent All trades < 50	51.69%
4	Percent PIM trades < 50	83.37%
5	Percent all contracts orders < 50	18.44%
6	Percent PIM contracts orders < 50	47.08%
7	Spreads PIM orders < 50	Chart 1
8	% PIM trades at each price increment	Chart 2
9	PIM orders by spread & percent contracts by counterparty	Chart 1
10.1	No. PIMs ended early (same side mktb)	1
10.2	No. PIMs ended early (same side mktb) by time	Chart 3
11	Percent PIMs ended early (same side mktb) by time	Chart 3
12.1	No. PIMs ended early (op side mktb)	8
12.2	No. PIMs ended early (op side mktb) by time	Chart 4
13	Percent PIMs ended early (op side mktb) by time	Chart 4
14.1	No. PIMs ended early (same side not mktb)	0
14.2	No. PIMs ended early (same side not mktb) by time	Chart 5
15	Percent PIMs ended early (same side not mktb) by time	Chart 5
16	Average price improvement	\$0.0891

*Total number of PIMS ended early by order entered by the same firm on the same side (both

Chart 1

Spread	Total # Orders	# Orders < 50	% Cons Orders < 50 EAM	% Cons Orders < 50 MM	% Cons Orders < 50 Other	% Cons Orders < 50 PC	% Cons Orders < 50
0.05	2139	2278	81.5	18.2	0	0	0.3
0.10	388	409	73.1	26.4	0	0	0.5
0.15	209	231	66.2	33.3	0	0	0.5
0.20	107	109	67.4	32.1	0.1	0	0.4
0.25	59	57	62.4	37.1	0	0	0.5
0.30	51	53	59.2	40.3	0	0	0.5
>0.30	215	230	59.8	39.7	0	0	0.6

Chart 2

%Orders < 50	Price Improvement
34.7	0.01
15.9	0.02
7.9	0.03
5.4	0.04
4.5	0.05
4.2	0.06
3.6	0.07
3.1	0.08
2.5	0.09
2.2	0.10
1.5	0.11
1.2	0.12
13.3	>0.12

Chart 3 (PIMS Terminated Early Same Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	1	100.00	0.0050
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 4 (PIMS Terminated Early Opposite Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 5 (PIMS Terminated Same Side not Mktb)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000

> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

International Securities Exchange
ISE Regular Options Complex PIM Additional Data January 2016

Additional Data Request		Response
1	No. PIM orders >= 50	842
2	Percent PIM orders >= 50	0.02%
3	Spreads PIM orders >= 50	Chart A1
4	% PIM traded at each price improvement(# Orders < 50)	Chart A2
5	% PIM traded at each price improvement(# Orders >= 50)	Chart A3
6	Spreads PIM orders >= 50	Chart A1
7.a	No. PIMs on first Wednesday	1327
7.b	No. PIM orders < 50	1285
7.c	No. PIM orders >= 50	42
7.d	PIM Participants orders < 50	Chart A4
7.e	PIM Participants orders >= 50	Chart A4
8.a	No. PIMs on third Wednesday	2111
8.b	No. PIM orders < 50	2052
8.c	No. PIM orders >= 50	59
8.d	PIM Participants orders < 50	Chart A5
8.e	PIM Participants orders >= 50	Chart A5

Chart A1							
Spread	Total # Orders	# Orders >= 50	% Traded Orders >= 50 EAM	% Traded Orders >= 50 MM	% Traded Orders >= 50 Other	% Traded Orders >= 50 PC	% Traded Orders >= 50 Unrelated
0.05	2139	181	79.9	20	0	0	0.1
0.10	388	21	77.2	22.8	0	0	0
0.15	209	3	72.4	27.4	0	0	0.1
0.20	107	7	73.7	24.2	0	0	2.1
0.25	59	4	67.4	28	0	0	4.6
0.30	51	1	41.5	41.6	0	0	16.9
>0.30	215	5	68	30.9	0	0	1.1

Chart A2	
% Orders < 50	Price Improvement
15.50	0.00
29.30	0.01
13.40	0.02
6.70	0.03
4.60	0.04
3.80	0.05
3.60	0.06
3.00	0.07
2.60	0.08
2.10	0.09
1.90	0.10
1.30	0.11
1.00	0.12
11.20	>0.12

Chart A3	
% Orders >= 50	Price Improvement
20.4	0.00
31	0.01
13.4	0.02
7.1	0.03
4.4	0.04
3.8	0.05
3.4	0.06
3.5	0.07
2.4	0.08
2.5	0.09
2	0.10
1.4	0.11
1.1	0.12
3.4	>0.12

Chart A4		
Participant	# Orders < 50	# Orders >= 50
0	436	15
1	291	8
2	170	6
3	128	3
4	71	6
5	76	4
6	58	0
7	31	0
8	14	0
9	5	0
10	5	0

Chart A5		
Participant	# Orders < 50	# Orders >= 50
0	643	22
1	461	19
2	271	6
3	203	6
4	153	4
5	116	2
6	105	0
7	53	0
8	24	0
9	16	0
10	5	0
11	2	0

International Securities Exchange
ISE Regular Options Complex PIM Data February 2016

Data Request from SEC Approval Order		Response
1	No. PIM orders < 50	28867
2	Percent PIM orders < 50	0.15%
3	Percent All trades < 50	54.89%
4	Percent PIM trades < 50	91.86%
5	Percent all contracts orders < 50	20.02%
6	Percent PIM contracts orders < 50	46.89%
7	Spreads PIM orders < 50	Chart 1
8	% PIM trades at each price increment	Chart 2
9	PIM orders by spread & percent contracts by counterparty	Chart 1
10.1	No. PIMs ended early (same side mktb)	1
10.2	No. PIMs ended early (same side mktb) by time	Chart 3
11	Percent PIMs ended early (same side mktb) by time	Chart 3
12.1	No. PIMs ended early (op side mktb)	6
12.2	No. PIMs ended early (op side mktb) by time	Chart 4
13	Percent PIMs ended early (op side mktb) by time	Chart 4
14.1	No. PIMs ended early (same side not mktb)	0
14.2	No. PIMs ended early (same side not mktb) by time	Chart 5
15	Percent PIMs ended early (same side not mktb) by time	Chart 5
16	Average price improvement	\$0.0839

*Total number of PIMS ended early by order entered by the same firm on the same side (both

Chart 1

Spread	Total # Orders	# Orders < 50	% Cons Orders < 50 EAM	% Cons Orders < 50 MM	% Cons Orders < 50 Other	% Cons Orders < 50 PC	% Cons Orders < 50
0.05	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0
>0.30	0	0	0	0	0	0	0

Chart 2

%Orders < 50	Price Improvement
34.6	0.01
15.9	0.02
8.3	0.03
5.5	0.04
4.5	0.05
3.7	0.06
3.3	0.07
3.1	0.08
2.5	0.09
2.4	0.10
1.6	0.11
1.4	0.12
13.2	>0.12

Chart 3 (PIMS Terminated Early Same Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 4 (PIMS Terminated Early Opposite Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 5 (PIMS Terminated Same Side not Mktb)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

**International Securities Exchange
ISE Regular Options Complex PIM Additional Data February 2016**

Additional Data Request		Response
1	No. PIM orders >= 50	755
2	Percent PIM orders >= 50	0.01%
3	Spreads PIM orders >= 50	Chart A1
4	% PIM traded at each price improvement(# Orders < 50)	Chart A2
5	% PIM traded at each price improvement(# Orders >= 50)	Chart A3
6	Spreads PIM orders >= 50	Chart A1
7.a	No. PIMs on first Wednesday	1089
7.b	No. PIM orders < 50	1062
7.c	No. PIM orders >= 50	27
7.d	PIM Participants orders < 50	Chart A4
7.e	PIM Participants orders >= 50	Chart A4
8.a	No. PIMs on third Wednesday	1797
8.b	No. PIM orders < 50	1748
8.c	No. PIM orders >= 50	49
8.d	PIM Participants orders < 50	Chart A5
8.e	PIM Participants orders >= 50	Chart A5

Chart A1								
Spread	Total # Orders	# Orders >= 50	% Traded	% Traded	% Traded	% Traded	% Traded	% Traded
			Orders >= 50	Orders >= 50	Orders >= 50	Orders >= 50	Orders >= 50	Orders >= 50
			EAM	MM	Other	PC		Unrelated
0.05	0	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0	0
>0.30	0	0	0	0	0	0	0	0

Chart A2	
% Orders < 50	Price Improvement
16.00	0.00
29.10	0.01
13.40	0.02
7.00	0.03
4.60	0.04
3.70	0.05
3.10	0.06
2.80	0.07
2.60	0.08
2.10	0.09
2.00	0.10
1.30	0.11
1.10	0.12
11.10	>0.12

Chart A3

% Orders >= 50	Price Improvement
19.9	0.00
33.6	0.01
13.4	0.02
7.5	0.03
4.4	0.04
3.2	0.05
2.8	0.06
2.3	0.07
1.9	0.08
2	0.09
1.8	0.10
1.6	0.11
1.2	0.12
4.2	>0.12

Chart A4

Participant	# Orders < 50	# Orders >= 50
0	345	11
1	206	7
2	116	3
3	78	0
4	94	1
5	77	3
6	59	1
7	50	1
8	20	0
9	13	0
10	4	0

Chart A5

Participant	# Orders < 50	# Orders >= 50
0	516	24
1	451	11
2	265	5
3	162	5
4	118	1
5	88	1
6	73	1
7	44	1
8	18	0
9	10	0
10	3	0

**International Securities Exchange
ISE Regular Options Complex PIM Data March 2016**

Data Request from SEC Approval Order		Response
1	No. PIM orders < 50	25120
2	Percent PIM orders < 50	0.13%
3	Percent All trades < 50	53.82%
4	Percent PIM trades < 50	90.38%
5	Percent all contracts orders < 50	21.60%
6	Percent PIM contracts orders < 50	28.79%
7	Spreads PIM orders < 50	Chart 1
8	% PIM trades at each price increment	Chart 2
9	PIM orders by spread & percent contracts by counterparty	Chart 1
10.1	No. PIMs ended early (same side mktb)	1
10.2	No. PIMs ended early (same side mktb) by time	Chart 3
11	Percent PIMs ended early (same side mktb) by time	Chart 3
12.1	No. PIMs ended early (op side mktb)	8
12.2	No. PIMs ended early (op side mktb) by time	Chart 4
13	Percent PIMs ended early (op side mktb) by time	Chart 4
14.1	No. PIMs ended early (same side not mktb)	0
14.2	No. PIMs ended early (same side not mktb) by time	Chart 5
15	Percent PIMs ended early (same side not mktb) by time	Chart 5
16	Average price improvement	\$0.0786

*Total number of PIMS ended early by order entered by the same firm on the same side (both

Chart 1

Spread	Total # Orders	# Orders < 50	% Cons Orders < 50 EAM	% Cons Orders < 50 MM	% Cons Orders < 50 Other	% Cons Orders < 50 PC	% Cons Orders < 50
0.05	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0
>0.30	0	0	0	0	0	0	0

Chart 2

%Orders < 50	Price Improvement
32.9	0.01
13.2	0.02
8	0.03
6.4	0.04
5.5	0.05
4.6	0.06
3.5	0.07
3.2	0.08
2.4	0.09
2.4	0.10
1.9	0.11
1.6	0.12
14.3	>0.12

Chart 3 (PIMS Terminated Early Same Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 4 (PIMS Terminated Early Opposite Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 5 (PIMS Terminated Same Side not Mktb)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

**International Securities Exchange
ISE Regular Options Complex PIM Additional Data March 2016**

Additional Data Request		Response
1	No. PIM orders >= 50	806
2	Percent PIM orders >= 50	0.02%
3	Spreads PIM orders >= 50	Chart A1
4	% PIM traded at each price improvement(# Orders < 50)	Chart A2
5	% PIM traded at each price improvement(# Orders >= 50)	Chart A3
6	Spreads PIM orders >= 50	Chart A1
7.a	No. PIMs on first Wednesday	886
7.b	No. PIM orders < 50	857
7.c	No. PIM orders >= 50	29
7.d	PIM Participants orders < 50	Chart A4
7.e	PIM Participants orders >= 50	Chart A4
8.a	No. PIMs on third Wednesday	1057
8.b	No. PIM orders < 50	1028
8.c	No. PIM orders >= 50	29
8.d	PIM Participants orders < 50	Chart A5
8.e	PIM Participants orders >= 50	Chart A5

Chart A1

Spread	Total # Orders	# Orders >= 50	% Traded	% Traded	% Traded	% Traded	% Traded
			Orders >= 50 EAM	Orders >= 50 MM	Orders >= 50 Other	Orders >= 50 PC	Orders >= 50 Unrelated
0.05	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0
>0.30	0	0	0	0	0	0	0

Chart A2	
% Orders < 50	Price Improvement
18.00	0.00
27.00	0.01
10.90	0.02
6.50	0.03
5.20	0.04
4.50	0.05
3.80	0.06
2.90	0.07
2.60	0.08
2.00	0.09
2.00	0.10
1.60	0.11
1.30	0.12
11.80	>0.12

Chart A3	
% Orders >= 50	Price Improvement
22.2	0.00
31.2	0.01
11.5	0.02
7.3	0.03
5.2	0.04
4.2	0.05
3.2	0.06
2.2	0.07
1.9	0.08
2	0.09
1.1	0.10
1.3	0.11
0.9	0.12
5.8	>0.12

Chart A4		
Participant	# Orders < 50	# Orders >= 50
0	186	7
1	210	12
2	195	5
3	92	3
4	62	1
5	49	0
6	21	1
7	16	0
8	17	0
9	3	0
10	5	0
11	1	0

Chart A5		
Participant	# Orders < 50	# Orders >= 50
0	267	6
1	246	10
2	168	6
3	135	4
4	77	0
5	55	0
6	36	2
7	30	0
8	7	1
9	5	0
10	2	0

**International Securities Exchange
ISE Regular Options Complex PIM Data April 2016**

Data Request from SEC Approval Order		Response
1	No. PIM orders < 50	23602
2	Percent PIM orders < 50	0.14%
3	Percent All trades < 50	53.50%
4	Percent PIM trades < 50	91.17%
5	Percent all contracts orders < 50	23.02%
6	Percent PIM contracts orders < 50	18.36%
7	Spreads PIM orders < 50	Chart 1
8	% PIM trades at each price increment	Chart 2
9	PIM orders by spread & percent contracts by counterparty	Chart 1
10.1	No. PIMs ended early (same side mktb)	4
10.2	No. PIMs ended early (same side mktb) by time	Chart 3
11	Percent PIMs ended early (same side mktb) by time	Chart 3
12.1	No. PIMs ended early (op side mktb)	7
12.2	No. PIMs ended early (op side mktb) by time	Chart 4
13	Percent PIMs ended early (op side mktb) by time	Chart 4
14.1	No. PIMs ended early (same side not mktb)	0
14.2	No. PIMs ended early (same side not mktb) by time	Chart 5
15	Percent PIMs ended early (same side not mktb) by time	Chart 5
16	Average price improvement	\$0.0909

*Total number of PIMS ended early by order entered by the same firm on the same side (both

Chart 1

Spread	Total # Orders	# Orders < 50	% Cons Orders < 50 EAM	% Cons Orders < 50 MM	% Cons Orders < 50 Other	% Cons Orders < 50 PC	% Cons Orders < 50
0.05	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0
>0.30	0	0	0	0	0	0	0

Chart 2

%Orders < 50	Price Improvement
33.7	0.01
14	0.02
8	0.03
6.7	0.04
6	0.05
4.1	0.06
3.4	0.07
2.6	0.08
2.1	0.09
2.4	0.10
1.4	0.11
1.5	0.12
14	>0.12

Chart 3 (PIMS Terminated Early Same Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	1	100.00	0.0200
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 4 (PIMS Terminated Early Opposite Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 5 (PIMS Terminated Same Side not Mktb)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

**International Securities Exchange
ISE Regular Options Complex PIM Additional Data April 2016**

Additional Data Request		Response
1	No. PIM orders >= 50	734
2	Percent PIM orders >= 50	0.01%
3	Spreads PIM orders >= 50	Chart A1
4	% PIM traded at each price improvement(# Orders < 50)	Chart A2
5	% PIM traded at each price improvement(# Orders >= 50)	Chart A3
6	Spreads PIM orders >= 50	Chart A1
7.a	No. PIMs on first Wednesday	713
7.b	No. PIM orders < 50	689
7.c	No. PIM orders >= 50	24
7.d	PIM Participants orders < 50	Chart A4
7.e	PIM Participants orders >= 50	Chart A4
8.a	No. PIMs on third Wednesday	880
8.b	No. PIM orders < 50	847
8.c	No. PIM orders >= 50	33
8.d	PIM Participants orders < 50	Chart A5
8.e	PIM Participants orders >= 50	Chart A5

Chart A1

Spread	Total # Orders	# Orders >= 50	% Traded Orders >= 50 EAM	% Traded Orders >= 50 MM	% Traded Orders >= 50 Other	% Traded Orders >= 50 PC	% Traded Orders >= 50 Unrelated
0.05	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0
>0.30	0	0	0	0	0	0	0

Chart A2

% Orders < 50	Price Improvement
18.60	0.00
27.40	0.01
11.40	0.02
6.50	0.03
5.40	0.04
4.90	0.05
3.40	0.06
2.80	0.07
2.20	0.08
1.70	0.09
1.90	0.10
1.20	0.11
1.20	0.12
11.40	>0.12

Chart A3

% Orders >= 50	Price Improvement
26.7	0.00
33.8	0.01
12.3	0.02
5.6	0.03
4.1	0.04
4	0.05
3.1	0.06
2	0.07
1.7	0.08
1.2	0.09
0.9	0.10
0.6	0.11
0.6	0.12
3.5	>0.12

Chart A4

Participant	# Orders < 50	# Orders >= 50
0	228	7
1	176	12
2	97	2
3	59	2
4	44	0
5	32	0
6	24	1
7	17	0
8	6	0
9	4	0
11	2	0

Chart A5

Participant	# Orders < 50	# Orders >= 50
0	242	12
1	179	10
2	131	5
3	83	4
4	58	0
5	59	1
6	40	0
7	32	1
8	15	0
9	6	0
10	1	0
11	1	0

**International Securities Exchange
ISE Regular Options Complex PIM Data May 2016**

Data Request from SEC Approval Order		Response
1	No. PIM orders < 50	7729
2	Percent PIM orders < 50	0.05%
3	Percent All trades < 50	53.47%
4	Percent PIM trades < 50	92.69%
5	Percent all contracts orders < 50	22.61%
6	Percent PIM contracts orders < 50	11.92%
7	Spreads PIM orders < 50	Chart 1
8	% PIM trades at each price increment	Chart 2
9	PIM orders by spread & percent contracts by counterparty	Chart 1
10.1	No. PIMs ended early (same side mktb)	0
10.2	No. PIMs ended early (same side mktb) by time	Chart 3
11	Percent PIMs ended early (same side mktb) by time	Chart 3
12.1	No. PIMs ended early (op side mktb)	4
12.2	No. PIMs ended early (op side mktb) by time	Chart 4
13	Percent PIMs ended early (op side mktb) by time	Chart 4
14.1	No. PIMs ended early (same side not mktb)	0
14.2	No. PIMs ended early (same side not mktb) by time	Chart 5
15	Percent PIMs ended early (same side not mktb) by time	Chart 5
16	Average price improvement	\$0.1596

*Total number of PIMS ended early by order entered by the same firm on the same side (both

Chart 1

Spread	Total # Orders	# Orders < 50	% Cons Orders < 50 EAM	% Cons Orders < 50 MM	% Cons Orders < 50 Other	% Cons Orders < 50 PC	% Cons Orders < 50
0.05	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0
>0.30	0	0	0	0	0	0	0

Chart 2

%Orders < 50	Price Improvement
18.4	0.01
10.5	0.02
8.2	0.03
6.5	0.04
6.7	0.05
5.1	0.06
4.3	0.07
4	0.08
3.1	0.09
3	0.10
2.1	0.11
2.2	0.12
25.8	>0.12

Chart 3 (PIMS Terminated Early Same Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 4 (PIMS Terminated Early Opposite Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 5 (PIMS Terminated Same Side not Mktb)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

**International Securities Exchange
ISE Regular Options Complex PIM Additional Data May 2016**

Additional Data Request		Response
1	No. PIM orders >= 50	267
2	Percent PIM orders >= 50	0.00%
3	Spreads PIM orders >= 50	Chart A1
4	% PIM traded at each price improvement(# Orders < 50)	Chart A2
5	% PIM traded at each price improvement(# Orders >= 50)	Chart A3
6	Spreads PIM orders >= 50	Chart A1
7.a	No. PIMs on first Wednesday	304
7.b	No. PIM orders < 50	293
7.c	No. PIM orders >= 50	11
7.d	PIM Participants orders < 50	Chart A4
7.e	PIM Participants orders >= 50	Chart A4
8.a	No. PIMs on third Wednesday	330
8.b	No. PIM orders < 50	320
8.c	No. PIM orders >= 50	10
8.d	PIM Participants orders < 50	Chart A5
8.e	PIM Participants orders >= 50	Chart A5

Chart A1							
Spread	Total # Orders	# Orders >= 50	% Traded	% Traded	% Traded	% Traded	% Traded
			Orders >= 50	Orders >= 50	Orders >= 50	Orders >= 50	Orders >= 50
			EAM	MM	Other	PC	Unrelated
0.05	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0
>0.30	0	0	0	0	0	0	0

Chart A2	
% Orders < 50	Price Improvement
10.90	0.00
16.40	0.01
9.40	0.02
7.30	0.03
5.80	0.04
5.90	0.05
4.60	0.06
3.80	0.07
3.50	0.08
2.80	0.09
2.70	0.10
1.90	0.11
2.00	0.12
23.00	>0.12

Chart A3	
% Orders >= 50	Price Improvement
16.9	0.00
19.8	0.01
11.3	0.02
7.9	0.03
6	0.04
5.9	0.05
3.4	0.06
3.5	0.07
4.6	0.08
2.3	0.09
2.6	0.10
1.4	0.11
1.6	0.12
12.7	>0.12

Chart A4

Participant	# Orders < 50	# Orders >= 50
0	30	3
1	53	5
2	61	2
3	31	1
4	33	0
5	19	0
6	36	0
7	13	0
8	9	0
9	4	0
10	3	0
11	1	0

Chart A5

Participant	# Orders < 50	# Orders >= 50
0	13	1
1	51	4
2	40	2
3	50	0
4	48	2
5	32	0
6	38	1
7	25	0
8	12	0
9	7	0
10	4	0

**International Securities Exchange
ISE Regular Options Complex PIM Data June 2016**

Data Request from SEC Approval Order		Response
1	No. PIM orders < 50	7732
2	Percent PIM orders < 50	0.04%
3	Percent All trades < 50	53.86%
4	Percent PIM trades < 50	91.41%
5	Percent all contracts orders < 50	21.46%
6	Percent PIM contracts orders < 50	7.04%
7	Spreads PIM orders < 50	Chart 1
8	% PIM trades at each price increment	Chart 2
9	PIM orders by spread & percent contracts by counterparty	Chart 1
10.1	No. PIMs ended early (same side mktb)	3
10.2	No. PIMs ended early (same side mktb) by time	Chart 3
11	Percent PIMs ended early (same side mktb) by time	Chart 3
12.1	No. PIMs ended early (op side mktb)	6
12.2	No. PIMs ended early (op side mktb) by time	Chart 4
13	Percent PIMs ended early (op side mktb) by time	Chart 4
14.1	No. PIMs ended early (same side not mktb)	0
14.2	No. PIMs ended early (same side not mktb) by time	Chart 5
15	Percent PIMs ended early (same side not mktb) by time	Chart 5
16	Average price improvement	\$0.1936

*Total number of PIMS ended early by order entered by the same firm on the same side (both

Chart 1

Spread	Total # Orders	# Orders < 50	% Cons Orders < 50 EAM	% Cons Orders < 50 MM	% Cons Orders < 50 Other	% Cons Orders < 50 PC	% Cons Orders < 50
0.05	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0
>0.30	0	0	0	0	0	0	0

Chart 2

%Orders < 50	Price Improvement
17.7	0.01
10.2	0.02
6.6	0.03
5.7	0.04
6.2	0.05
5.2	0.06
4.2	0.07
4.2	0.08
2.9	0.09
3.3	0.10
1.9	0.11
2.3	0.12
29.7	>0.12

Chart 3 (PIMS Terminated Early Same Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	2	100.00	0.0350
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 4 (PIMS Terminated Early Opposite Side)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

Chart 5 (PIMS Terminated Same Side not Mktb)

Pim Period (in	Total Number	Percentage of	Average Price
<= 0.5	0	0.00	0.0000
> 0.5 & <= 1	0	0.00	0.0000
> 1 & <= 1.5	0	0.00	0.0000
> 1.5 & <= 2	0	0.00	0.0000
> 2 & <= 2.5	0	0.00	0.0000
> 2.5	0	0.00	0.0000

**International Securities Exchange
ISE Regular Options Complex PIM Additional Data June 2016**

Additional Data Request		Response
1	No. PIM orders >= 50	285
2	Percent PIM orders >= 50	0.00%
3	Spreads PIM orders >= 50	Chart A1
4	% PIM traded at each price improvement(# Orders < 50)	Chart A2
5	% PIM traded at each price improvement(# Orders >= 50)	Chart A3
6	Spreads PIM orders >= 50	Chart A1
7.a	No. PIMs on first Wednesday	277
7.b	No. PIM orders < 50	269
7.c	No. PIM orders >= 50	8
7.d	PIM Participants orders < 50	Chart A4
7.e	PIM Participants orders >= 50	Chart A4
8.a	No. PIMs on third Wednesday	254
8.b	No. PIM orders < 50	248
8.c	No. PIM orders >= 50	6
8.d	PIM Participants orders < 50	Chart A5
8.e	PIM Participants orders >= 50	Chart A5

Chart A1							
Spread	Total # Orders	# Orders >= 50	% Traded Orders >= 50 EAM	% Traded Orders >= 50 MM	% Traded Orders >= 50 Other	% Traded Orders >= 50 PC	% Traded Orders >= 50 Unrelated
0.05	0	0	0	0	0	0	0
0.10	0	0	0	0	0	0	0
0.15	0	0	0	0	0	0	0
0.20	0	0	0	0	0	0	0
0.25	0	0	0	0	0	0	0
0.30	0	0	0	0	0	0	0
>0.30	0	0	0	0	0	0	0

Chart A2	
% Orders < 50	Price Improvement
9.80	0.00
15.90	0.01
9.20	0.02
5.90	0.03
5.10	0.04
5.60	0.05
4.70	0.06
3.80	0.07
3.80	0.08
2.60	0.09
3.00	0.10
1.70	0.11
2.00	0.12
26.80	>0.12

Chart A3	
% Orders >= 50	Price Improvement
16.7	0.00
20.3	0.01
12.1	0.02
5.9	0.03
6.2	0.04
2.8	0.05
4.1	0.06
4.5	0.07
2.7	0.08
1.2	0.09
3	0.10
1.3	0.11
1.3	0.12
17.9	>0.12

Chart A4		
Participant	# Orders < 50	# Orders >= 50
0	41	0
1	49	7
2	46	0
3	38	0
4	30	0
5	27	1
6	19	0
7	11	0
8	4	0
9	3	0
10	1	0

Chart A5		
Participant	# Orders < 50	# Orders >= 50
0	17	0
1	45	1
2	59	4
3	33	1
4	28	0
5	29	0
6	18	0
7	12	0
8	5	0
9	1	0
11	1	0

EXHIBIT 5

Deleted text is [bracketed]. New text is underlined.

INTERNATIONAL SECURITIES EXCHANGE RULES

* * * * *

Chapter 7 Doing Business on the Exchange

* * * * *

723. Price Improvement Mechanism for Crossing Transactions

(a) The Price Improvement Mechanism is a process by which an Electronic Access Member can provide price improvement opportunities for a transaction wherein the Electronic Access Member seeks to facilitate an order it represents as agent, and/or a transaction wherein the Electronic Access Member solicited interest to execute against an order it represents as agent (a “Crossing Transaction”).

(b) Crossing Transaction Entry. A Crossing Transaction is comprised of the order the Electronic Access Member represents as agent (the “Agency Order”) and a counter-side order for the full size of the Agency Order (the “Counter-Side Order”). The Counter-Side Order may represent interest for the Member’s own account, or interest the Member has solicited from one or more other parties, or a combination of both.

For the period beginning January 19, 2017 until a date specified by the Exchange in a Regulatory Information Circular, which date shall be no later than July 15, 2017, the following provisions shall be in effect:

(1) If the Agency Order is for less than 50 option contracts, and if the difference between the National Best Bid and National Best Offer (“NBBO”) is \$0.01, the Electronic Access Member shall not enter a Crossing Transaction unless such Crossing Transaction is entered at one minimum price improvement increment better than the NBBO on the opposite side of the market from the Agency Order and better than the limit order or quote on the ISE order book on the same side of the Agency Order. Failure to provide such price improvement will subject the Electronic Access Member to the fines set forth in Rule 1614(d)(4).

(1)2) If the Agency Order is for 50 option contracts or more, or if the difference between the NBBO is greater than \$0.01, [A]a Crossing Transaction must be entered only at a price that is equal to or better than the [national best bid or offer (“]NBBO[”)] and better than the limit order or quote on the ISE order book on the same side of the Agency Order.

([2]3) The Crossing Transaction may be priced in one-cent increments.

([3]4) The Crossing Transaction may not be canceled, but the price of the Counter-Side Order may be improved during the exposure period.

After the date specified by the Exchange in a Regulatory Information Circular, which date shall be no later than July 15, 2017, the following provisions shall be in effect:

(1) If the Agency Order is for less than 50 option contracts, and if the difference between the National Best Bid and National Best Offer (“NBBO”) is \$0.01, the Crossing Transaction must be entered at one minimum price improvement increment better than the NBBO on the opposite side of the market from the Agency Order and better than the limit order or quote on the ISE order book on the same side of the Agency Order.

(2) If the Agency Order is for 50 option contracts or more, or if the difference between the NBBO is greater than \$0.01, a Crossing Transaction must be entered only at a price that is equal to or better than the national best bid or offer (“NBBO”) and better than the limit order or quote on the ISE order book on the same side of the Agency Order.

(3) The Crossing Transaction may be priced in one-cent increments.

(4) The Crossing Transaction may not be canceled, but the price of the Counter-Side Order may be improved during the exposure period.

* * * * *

Supplementary Material to Rule 723

.01 - .02 No Change.

.03 [Initially, and for at least a Pilot Period expiring on January 18, 2017, t]There will be no minimum size requirements for orders to be eligible for the Price Improvement Mechanism. [During the Pilot Period, the Exchange will submit certain data, periodically as required by the Commission, to provide supporting evidence that, among other things, there is meaningful competition for all size orders within the Price Improvement Mechanism, that there is significant price improvement for all orders executed through the Price Improvement Mechanism, and that there is an active and liquid market functioning on the Exchange outside of the Price Improvement Mechanism. Any raw data which is submitted to the Commission will be provided on a confidential basis.]

.04 No Change.

[.05 Paragraphs (c)(5) and (d)(4) will be effective for a Pilot Period expiring on January 18, 2017. During the Pilot Period, the Exchange will submit certain data relating to the frequency with which the exposure period is terminated by unrelated orders. Any raw data which is submitted to the Commission will be provided on a confidential basis.]

.0[6]5 No Change.

.0[7]6 No Change.

.0[8]7 Reserved.

.0[9]8 No Change.

.1[0]9 No Change.

.1[1]0 No Change.

* * * * *

Chapter 16 Discipline

* * * * *

Rule 1614. Imposition of Fines for Minor Rule Violations

(a) - (c) No change.

(d) *Violations Subject to Fines.* The following is a list of the rule violations subject to, and the applicable sanctions that may be imposed by the Exchange pursuant to, this Rule:

(1) – (3) No change.

(4) [Reserved.] **Violations of Rule 723 (Price Improvement Mechanism for Crossing Transactions).**

For the period beginning January 19, 2017 until a date specified by the Exchange in a Regulatory Information Circular, which date shall be no later than September 15, 2017, the following provision shall be in effect:

Any Member who enters an order into PIM for less than 50 contracts, while the National Best Bid or Offer spread is \$0.01, must provide price improvement of at least one minimum price improvement increment better than the NBBO on the opposite side of the market from the Agency Order, which increment may not be smaller than \$0.01. Failure to provide such price improvement will subject Members to the fines listed below.

Offense	Sanction
---------	----------

<u>2nd Offense</u>	<u>\$500</u>
<u>3rd Offense</u>	<u>\$1,000</u>
<u>4th Offense</u>	<u>\$2,500</u>
<u>Subsequent Offenses</u>	<u>Formal Disciplinary Action</u>

The Exchange will review violations on a monthly cycle to assess these violations.

(5) – (11) No change.

* * * * *