

## COMMODITY FUTURES TRADING COMMISSION

### 17 CFR Part 50

RIN 3038-AE20

### Clearing Requirement Determination Under Section 2(h) of the Commodity Exchange Act for Interest Rate Swaps

**AGENCY:** Commodity Futures Trading Commission.

**ACTION:** Final rule.

**SUMMARY:** The Commodity Futures Trading Commission (Commission or CFTC) is adopting an amendment to the Commission's regulations to expand the existing clearing requirement for interest rate swaps pursuant to the pertinent section of the Commodity Exchange Act (CEA). The amended regulation requires that interest rate swaps denominated in certain currencies and having certain termination dates, as described herein, be submitted for clearing to a derivatives clearing organization (DCO) that is registered under the CEA (registered DCO) or a DCO that has been exempted from registration under the CEA (exempt DCO).

**DATES:** The amended rule is effective December 13, 2016. Specific compliance dates are discussed in the Supplementary Information.

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### I. Background

#### A. Clearing Requirement Proposal

On June 16, 2016, the Commission published a notice of proposed rulemaking (NPRM) to establish an expanded interest rate swap clearing requirement under section 2(h)(1)(A) of the CEA and Commission regulation 50.4(a).<sup>1</sup> The Commission proposed requiring clearing of certain interest rate swaps offered for clearing at Chicago Mercantile Exchange, Inc. (CME), Eurex Clearing AG (Eurex), LCH.Clearnet Ltd. (LCH), and/or Singapore Exchange Derivatives Clearing Ltd. (SGX), each a Commission-registered DCO.<sup>2</sup> The interest rate swaps proposed in the NPRM were: Fixed-to-floating interest rate swaps denominated in Australian dollar (AUD), Canadian dollar (CAD), Hong Kong dollar (HKD), Mexican peso (MXN), Norwegian krone (NOK), Polish zloty (PLN), Singapore dollar (SGD), Swedish krona (SEK), and Swiss franc (CHF) (collectively, the nine additional currencies); basis swaps denominated in AUD; forward rate agreements (FRAs)

<sup>1</sup> Clearing Requirement Determination Under Section 2(h) of the CEA for Interest Rate Swaps, 81 FR 39506 (June 16, 2016).

<sup>2</sup> Two DCOs that the Commission has exempted from registration, ASX Clear (Futures) Pty Ltd. (Australia) (ASX) and OTC Clearing Hong Kong Ltd., clear some of the swaps covered by this determination (AUD- and HKD-denominated interest rate swaps, respectively). Pursuant to Commission orders, these two DCOs are permitted to clear for U.S. proprietary accounts but not for U.S. customers. However, as discussed further below, should either of these two exempt DCOs decide that they wish to offer clearing to U.S. customers, they would be eligible to apply for registration as full DCOs. Because these DCOs have not submitted filings under Commission regulation 39.5(b), this final rule addresses only those registered DCOs that have submitted swaps for consideration under that regulation.

denominated in AUD, NOK, PLN, and SEK; overnight index swaps (OIS) denominated in AUD and CAD; and OIS having termination dates of up to three years that are denominated in U.S. dollar (USD), euro (EUR), or sterling (GBP).<sup>3</sup>

For the reasons discussed below, this final rulemaking expands the existing interest rate swap clearing requirement by requiring the clearing of all of the swaps covered by the NPRM, except for AUD-denominated FRAs.

#### B. Regulatory Background

The Commission's first clearing requirement determination issued in 2012 applied to four classes of interest rate swaps and two classes of credit default swaps.<sup>4</sup> The Commission is adopting this clearing requirement determination to require the clearing of certain, additional interest rate swaps pursuant to section 2(h) of the CEA. Under section 2(h)(1)(A) of the CEA, it is unlawful for any person to engage in a swap unless that person submits such swap for clearing to a DCO that is registered under the CEA or a DCO that is exempt from registration under the CEA if the swap is required to be cleared. The Commission may initiate a clearing requirement determination pursuant to a swap submission from a registered DCO.<sup>5</sup> Section 2(h)(2)(B)(i) of

<sup>3</sup> See Table 1 for information regarding which registered DCOs clear which interest rate swaps. Each DCO submitted information about the interest rate swaps subject to this rulemaking to the Commission pursuant to regulation 39.5(b), which is discussed further below.

<sup>4</sup> Clearing Requirement Determination Under Section 2(h) of the CEA, 77 FR 74284 (Dec. 13, 2012) [hereinafter the First Clearing Requirement Determination]. The four classes of interest rate swaps defined under Commission regulation 50.4(a) include fixed-to-floating, basis, FRA, and OIS. In 2012, the Commission required that, for the fixed-to-floating, basis, and FRA classes, the top four currencies as measured by total notional amount be subject to required clearing. Those top four currencies were EUR, USD, GBP, and Japanese yen (JPY). All four currencies were specified in the fixed-to-floating, basis, and FRA classes under regulation 50.4(a). For OIS swaps, all the currencies except JPY were specified under the rule.

<sup>5</sup> Section 2(h)(2) of the CEA provides the Commission with authority to issue a determination that a swap is required to be cleared pursuant to two separate review processes. Section 2(h)(2)(A) of the CEA provides for a Commission-initiated review process whereby the Commission, on an ongoing basis, must review swaps (or a group, category, type or class of swaps) to make a determination as to whether a swap (or group, category, type or class of swaps) should be required to be cleared. The other process provided under section 2(h)(2)(B) of the CEA entails the Commission's review of swaps that are submitted by DCOs. Specifically, section 2(h)(2)(B)(i) of the CEA requires that each DCO submit to the Commission each swap (or group, category, type or class of swaps) that it plans to accept for clearing. The swaps subject to this rulemaking were submitted by DCOs pursuant to section 2(h)(2)(B)(i) of the CEA and Commission regulation 39.5(b).

the CEA requires a DCO to submit to the Commission each swap, or any group, category, type, or class of swaps that it plans to accept for clearing and provide notice to its members of the submission. Commission regulation 39.5(b) implements the procedural elements of section 2(h)(2)(B)–(C) by establishing the specific process for the submission of swaps by a DCO to the Commission for a clearing requirement determination.<sup>6</sup>

Accordingly, the Commission is issuing this final rulemaking to adopt an amendment to § 50.4(a) such that the following products are subject to the clearing requirement as set forth in regulation 50.4: (1) Fixed-to-floating swaps denominated in the nine additional currencies; (2) basis swaps denominated in AUD; (3) FRAs denominated in NOK, PLN, and SEK; (4) OIS denominated in AUD and CAD; and (5) OIS denominated in USD, EUR, and GBP that have termination dates of up to three years.

### C. Clearing Requirements in Other Jurisdictions

The following is an updated summary of actions taken by other jurisdictions towards implementing clearing mandates for interest rate swaps. The Commission believes that it is important to harmonize its swap clearing requirement with clearing mandates promulgated in other jurisdictions. For example, if a non-U.S. jurisdiction issued a clearing requirement and a swap dealer (SD) located in the U.S. were not subject to that non-U.S. clearing requirement, then a swap market participant located in the non-U.S. jurisdiction might be able to avoid the non-U.S. clearing requirement by entering into a swap with the SD located in the U.S.

As the Commission reviewed the regulation 39.5(b) submissions from DCOs, it considered whether those

products offered for clearing at DCOs were subject, or were likely to be subject, to a clearing requirement in another jurisdiction. For those products that were the subject of a clearing requirement rule or proposal outside of the U.S., the Commission reviewed the specifications of the products and the processes used by non-U.S. regulators to impose a clearing mandate. In addition, the Commission reviewed data produced and made available to the public in connection with any rule proposals or final rules implementing a clearing requirement in non-U.S. jurisdictions. Finally, the Commission considered comments submitted in response to clearing mandate rule proposals in non-U.S. jurisdictions and any subsequent changes that regulators made to final rules implementing a clearing mandate. In this manner, the Commission was informed by its review of non-U.S. jurisdictions' clearing mandates and considered those mandates in preparing this determination.

Consequently, the scope of the swaps included in this final rulemaking reflects the Commission's desire to harmonize with our counterparts abroad and is informed by the work of those regulators, as described below. In addition, the product specifications of the swaps included in this clearing requirement determination are intended to be consistent with those referenced in clearing mandates published by the Commission's counterparts abroad.<sup>7</sup>

### i. Australia

The Australian Securities and Investments Commission (ASIC) has published regulations that require certain Australian and non-Australian entities<sup>8</sup> to clear AUD-, USD-, GBP-,

EUR-, and JPY-denominated fixed-to-floating interest rate swaps, basis swaps, and FRAs, as well as AUD-, USD-, GBP-, and EUR-denominated OIS. The regulations' swap classes are co-extensive with those described in existing Commission regulation 50.4(a), except for the addition of AUD-denominated swaps. The first compliance date for an Australian market participant to comply with the Australian clearing mandate for AUD-denominated fixed-to-floating interest rate swaps and basis swaps was April 4, 2016.<sup>9</sup> The first compliance date for the Australian clearing mandate for AUD-denominated OIS will be October 3, 2016 and for AUD-denominated FRAs April 2, 2018.<sup>10</sup>

As a result of this clearing requirement determination, the classes of swaps required to be cleared under Commission regulation 50.4(a) are expanded to include AUD-denominated fixed-to-floating interest rate swaps, basis swaps, and OIS swaps that are consistent with the AUD-denominated swaps that are, or will be, required to be cleared by ASIC.<sup>11</sup>

### ii. Canada

In 2015, Canada's provincial securities regulators<sup>12</sup> published a draft rule that would require certain derivatives to be cleared.<sup>13</sup> On February 24, 2016, the Canadian provincial securities regulators published a revised draft rule that applies to certain

internationally active dealers. ASIC Derivative Transaction Rules (Clearing) 2015, available at: <https://www.comlaw.gov.au/Details/F2015L01960>.

<sup>9</sup> ASIC Derivative Transaction Rules (Clearing) 2015, at section 1.2.7.

<sup>10</sup> *Id.*, at section 1.2.3.

<sup>11</sup> For the reasons discussed below, the Commission is not finalizing its proposed requirement to clear AUD-denominated FRAs at this time.

<sup>12</sup> Canada's provincial securities regulators are collectively referred to as the Canadian Securities Administrators, including representatives from: The Alberta Securities Commission; the British Columbia Securities Commission; the Manitoba Securities Commission; the Financial and Consumer Services Commission of New Brunswick; the Office of the Superintendent of Securities Service Newfoundland and Labrador; the Office of the Superintendent of Securities of the Northwest Territories; the Nova Scotia Securities Commission; the Nunavut Securities Offices; the Ontario Securities Commission; the Office of the Superintendent of Securities of Prince Edward Island; the Autorité des marchés financiers; the Financial and Consumer Affairs Authority of Saskatchewan; and the Office of the Yukon Superintendent of Securities. See also, CSA Members, available at: <http://www.csa-acvm.ca/aboutcsa.aspx?id=80>.

<sup>13</sup> Draft National Instrument 94–101 respecting Mandatory Central Counterparty Clearing of Derivatives. Summary available at: [http://www.albertasecurities.com/Regulatory%20Instruments/5022685-v5-Proposed\\_NI\\_94-101\\_package.pdf](http://www.albertasecurities.com/Regulatory%20Instruments/5022685-v5-Proposed_NI_94-101_package.pdf).

<sup>6</sup> Section 2(h)(2)(B)–(C) of the CEA describes the process by which the Commission is required to review swap submissions from DCOs to determine whether the swaps should be subject to the clearing requirement. On June 23, 2016, the Commission published on its Web site for public comment 34 submissions from DCOs submitted pursuant to section 2(h)(2)(B) of the CEA and CFTC regulation 39.5(b) over the past few years. The public comment period closed on July 25, 2016, and five letters were submitted by that date. See CFTC Press Release, CFTC Requests Public Comment on Swap Clearing Requirement Submissions (June 23, 2016), available at: <http://www.cftc.gov/PressRoom/PressReleases/pr7396-16>. Any future proposals for a new clearing requirement determination related to the swaps covered by those 34 submissions would be subject to a separate notice and comment rulemaking process. Market participants may offer additional comments or feedback on market developments related to those 34 submissions by contacting any of the DCR staff named above.

<sup>7</sup> In the future, it may be appropriate to propose a clearing requirement under the CEA covering swaps that are not yet the subject of a proposed or final clearing mandate issued by a non-U.S. jurisdiction. See generally comment letter from the International Swaps and Derivatives Association, Inc. (ISDA), at 5, (discussing the goal of harmonizing clearing mandates, commending the Commission's independent analysis in the NPRM, and noting that "the CFTC does not have any control over the clearing mandates of its counterparts in non-U.S. jurisdictions and therefore should continue to conduct full and robust independent analysis prior to implementing any clearing mandates.").

<sup>8</sup> As defined under ASIC's final clearing rules, clearing entities subject to the Australian clearing mandate include Australian authorized deposit-taking institutions (ADIs) and Australian financial services licensee (AFS Licensees) that hold a total gross notional outstanding position of AUD 100 billion or more under specific circumstances, as measured at particular points in time. To account for non-Australian entities, ASIC's final rules also define foreign clearing entities, opt-in clearing entities, and cross-reference to Australia's Corporations Regulations 2001 definition of foreign

Canadian market participants<sup>14</sup> and proposes subjecting the following classes of interest rate swaps to a clearing mandate: CAD-, USD-, EUR-, and GBP-denominated fixed-to-floating interest rate swaps; USD-, EUR-, and GBP-denominated basis swaps; USD-, EUR-, and GBP-denominated FRAs; and CAD-, USD-, EUR-, and GBP-denominated OIS.<sup>15</sup> Subject to ministerial approvals, the Canadian provincial securities regulators' revised rule will take effect on May 9, 2017.<sup>16</sup> Consequently, it is the Commission's understanding that May 9, 2017 is the first compliance date upon which a Canadian market participant will be required to comply with the clearing mandate.<sup>17</sup>

As a result of this clearing requirement determination, the classes of swaps required to be cleared under Commission regulation 50.4(a) are expanded to include CAD-denominated fixed-to-floating interest rate swaps and OIS swaps that are consistent with the CAD-denominated swaps that will be required to be cleared by the Canadian provincial securities regulators.

### iii. European Union

On August 6, 2015, the European Commission adopted an initial interest rate swap clearing obligation for certain financial counterparties and non-financial counterparties<sup>18</sup> that the

European Securities and Markets Authority (ESMA) developed pursuant to the European Market Infrastructure Regulation (EMIR).<sup>19</sup> The initial European interest rate swap class is co-extensive with the clearing requirements under regulation 50.4(a), except that with respect to OIS, the European class covers OIS with a termination date range of up to three years instead of two. Similarly, the initial European class covers interest rate swaps denominated in USD, EUR, GBP, and JPY, but not any of the nine additional currencies.<sup>20</sup> Compliance with the European clearing obligation is required for transactions between clearing member counterparties at this time, and will be phased in between 2016 and 2018 for additional transactions by type of counterparty.<sup>21</sup> The first compliance date for a European market participant to comply with the clearing obligation for EUR-, USD-, and GBP-denominated OIS with termination dates ranging from seven days to three years was on June 21, 2016.<sup>22</sup> The EUR-, USD-, and GBP-denominated OIS with termination dates ranging from two years to three years that are included in this rulemaking are covered by the European Commission's initial clearing obligation.

On June 10, 2016, the European Commission adopted an expansion of the European Union clearing obligation for certain financial counterparties and non-financial counterparties<sup>23</sup> to cover

NOK-, PLN-, and SEK-denominated fixed-to-floating interest rate swaps and FRAs.<sup>24</sup> The first compliance date for a European market participant to comply with the NOK-, PLN-, and SEK-denominated fixed-to-floating interest rate swaps and FRA clearing obligation will be on February 9, 2017.<sup>25</sup> The European Commission's expanded clearing obligation will apply only to transactions between clearing member counterparties on February 9, 2017; the clearing obligation will be phased in for additional transactions by type of counterparty from 2017 to 2019.<sup>26</sup>

As a result of this clearing requirement determination, the classes of swaps required to be cleared under Commission regulation 50.4(a) are expanded to include (1) EUR-, USD-, and GBP-denominated OIS with termination dates ranging from two years to three years; (2) NOK-, PLN-, and SEK-denominated fixed-to-floating interest rate swaps; and (3) NOK-, PLN-, and SEK-denominated FRAs that are, or will soon be, required to be cleared by the European Commission.

*eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1178&from=EN.* This regulation contains a description of the categories of financial counterparties and non-financial counterparties subject to the European Union's clearing obligation. This description is substantively the same as the one applicable to the European Union's first clearing obligation related to interest rates swaps denominated in USD, EUR, GBP, and JPY, including OIS with a termination date of up to three years.

<sup>24</sup> European Commission press release announcing new rules on central clearing for interest rate derivatives contracts denominated in specific European currencies, available at: *http://europa.eu/rapid/press-release\_MEX-16-2171-en.htm#9*. See also European Commission Delegated Regulation (EU) No. 2016/1178, available at: *http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1178&from=EN*. The Commission notes that Poland and Sweden are members of the European Union, but Norway is not. Accordingly, the Commission staff has consulted separately with staff from Norway's financial regulators regarding this clearing requirement determination.

<sup>25</sup> European Commission Delegated Regulation (EU) No. 2016/1178, available at: *http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1178&from=EN*.

<sup>26</sup> *Id.* Under the European Commission Delegated Regulation (EU) No. 2016/1178, Category 1 counterparties are clearing members of at least one of the central counterparties authorized or recognized to clear at least one class of mandated derivatives, as of August 9, 2016; Category 2 counterparties are entities that meet the EUR 8 billion threshold of month-end average outstanding gross notional amounts of derivatives for a three month period, limited to financial counterparties or alternative investment funds that are non-financial counterparties; Category 3 counterparties are financial counterparties and alternative investment funds that are non-financial counterparties, that are not Category 1 or Category 2 counterparties; and Category 4 counterparties are non-financial counterparties that do not belong in Category 1, 2, or 3.

<sup>14</sup> The draft rule proposed by Canada's provincial securities regulators would require central counterparty clearing for transactions entered into between a local counterparty and: (i) A clearing member of a regulated clearing agency that clears a mandatory clearable derivative; (ii) an affiliated entity of the clearing member described in (i); or (iii) a local counterparty that has, together with its local affiliates, an aggregate gross notional amount of more than CAD 500 million outstanding (excluding intragroup transactions). See, Draft Regulation 94–101 respecting Mandatory Central Counterparty Clearing of Derivatives (2nd Publication). Summary available at: *http://www.lautorite.qc.ca/files/pdf/reglementation/instruments-derives/reglements/94-101/2016-02-24/2016fev24-94-101-avis-cons-en.pdf*.

<sup>15</sup> *Id.* The Canadian regulators' draft regulation does not propose to include CAD-denominated basis swaps or FRAs. Therefore, the Commission is adding only CAD-denominated fixed-to-floating interest rate swaps and OIS to the CFTC's clearing requirement under this determination.

<sup>16</sup> The Commission staff has consulted with Canadian provincial authorities to confirm the timetable for implementation of the clearing obligation.

<sup>17</sup> *Id.*

<sup>18</sup> The European Commission's clearing requirement applies to all financial counterparties (e.g., banks, insurers, asset managers, etc.) and certain non-financial counterparties, which are European Union entities that do not fall within the definition of a financial counterparty, but exceed the clearing thresholds (non-financial counterparties above the applicable clearing threshold by asset class). The non-financial counterparty clearing threshold for interest rate swaps is EUR 3 billion in gross notional value. See

European Commission Delegated Regulation (EU) No. 149/2013, available at: *http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:052:0011:0024:EN:PDF*.

<sup>19</sup> European Commission press release announcing the European Clearing Obligation, available at: *http://europa.eu/rapid/press-release\_IP-15-5459\_en.htm*. See also Regulation (EU) No. 648/2012.

<sup>20</sup> European Commission Delegated Regulation (EU) No. 2015/2205, available at: *http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R2205&from=EN*.

<sup>21</sup> *Id.* Under the European Commission Delegated Regulation (EU) No. 2015/2205, Category 1 counterparties are clearing members of at least one of the central counterparties authorized or recognized to clear at least one class of mandated derivatives, as of December 21, 2015; Category 2 counterparties are entities that meet the EUR 8 billion threshold of month-end average outstanding gross notional amounts of derivatives for a three month period, limited to financial counterparties or alternative investment funds that are non-financial counterparties; Category 3 counterparties are financial counterparties and alternative investment funds that are non-financial counterparties, that are not Category 1 or Category 2 counterparties; and Category 4 counterparties are non-financial counterparties that do not belong in Category 1, 2, or 3.

<sup>22</sup> European Commission Delegated Regulation (EU) No. 2015/2205, available at: *http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R2205&from=EN*.

<sup>23</sup> See European Commission Delegated Regulation (EU) No. 2016/1178, available at: *http://*

## iv. Hong Kong

On February 5, 2016, the Hong Kong Securities and Futures Commission and the Hong Kong Monetary Authority jointly published conclusions to a consultation paper proposing mandatory clearing for certain interest rate swaps.<sup>27</sup> The Legislative Council adopted final rules to implement a clearing mandate for transactions between certain local and foreign-incorporated entities<sup>28</sup> covering fixed-to-floating interest rate swaps and basis swaps denominated in USD, GBP, EUR, JPY, and HKD, as well as OIS denominated in USD, GBP, and EUR.<sup>29</sup> The clearing mandate rules became effective on September 1, 2016. Although mandatory clearing for the designated products has not yet commenced, the first calculation period for determining which counterparties have an obligation to clear has begun.<sup>30</sup> During the calculation period, certain market participants have to count their transactions toward the clearing threshold to determine whether they will be subject to Hong Kong's clearing mandate.<sup>31</sup> The first compliance date for a Hong Kong market participant to comply with the Hong Kong authorities' clearing mandate will be on July 1, 2017.<sup>32</sup>

As a result of this clearing requirement determination, the classes of swaps required to be cleared under Commission regulation 50.4(a) are

<sup>27</sup> Consultation Conclusions and Further Consultation on Introducing Mandatory Clearing and Expanding Mandatory Reporting, available at: <http://www.sfc.hk/edistributionWeb/gateway/EN/consultation/conclusion?refNo=15CP4>.

<sup>28</sup> The Securities and Futures (OTC Derivative Transactions—Clearing and Record Keeping Obligations and Designation of Central Counterparties) Rules impose a clearing obligation on transactions between prescribed persons, including local and foreign (i) licensed corporations, (ii) authorized financial institutions, and (iii) approved money brokers, that have reached the clearing threshold of USD 20 billion during the applicable three month calculation period. In addition, any transactions between such a prescribed person and a financial services provider must also be cleared. Financial services providers are designated by the Hong Kong Securities and Futures Commission, with the consent of the Hong Kong Monetary Authority.

<sup>29</sup> *Id.* See also Securities and Futures (OTC Derivative Transactions—Clearing and Record Keeping Obligations and Designation of Central Counterparties) Rules, The Government of the Hong Kong Special Administrative Region Gazette, available at: <http://www.gld.gov.hk/egazette/pdf/20162005/es22016200528.pdf>.

<sup>30</sup> Securities and Futures (OTC Derivative Transactions—Clearing and Record Keeping Obligations and Designation of Central Counterparties) Rules, The Government of the Hong Kong Special Administrative Region Gazette, available at: <http://www.gld.gov.hk/egazette/pdf/20162005/es22016200528.pdf>.

<sup>31</sup> *Id.*

<sup>32</sup> *Id.*

expanded to include HKD-denominated fixed-to-floating interest rate swaps that will be required to be cleared by the Hong Kong Securities and Futures Commission and the Hong Kong Monetary Authority.

## v. Mexico

In 2015, Banco de México, the Mexican central bank, published a clearing mandate to require that certain Mexican financial institutions<sup>33</sup> clear MXN-denominated fixed-to-floating interest rate swaps having a termination date range of approximately two months to 30 years and that reference the Mexican "Interbank Equilibrium Interest Rate" (TIEE).<sup>34</sup> The first compliance date for a Mexican market participant to comply with the Banco de México's clearing mandate was on April 1, 2016.<sup>35</sup>

As a result of this clearing requirement determination, the classes of swaps required to be cleared under Commission regulation 50.4(a) are expanded to include MXN-denominated fixed-to-floating interest rate swaps that are required to be cleared by the Banco de México.

## vi. Singapore

In 2015, the Monetary Authority of Singapore (MAS) published proposed regulations that would require financial institutions<sup>36</sup> to clear SGD-denominated fixed-to-floating interest rate swaps referencing the Swap Offer Rate (SOR) and USD-denominated fixed-to-floating interest rate swaps referencing LIBOR.<sup>37</sup>

As a result of this clearing requirement determination, the classes of swaps required to be cleared under Commission regulation 50.4(a) are expanded to include SGD-denominated fixed-to-floating interest rate swaps that are likely to be the subject of final

<sup>33</sup> Banco de México's Rules for Derivatives Transactions (Circular 4/2012) limit the clearing mandate to transactions between local banks, brokerage firms, and institutional investors. The Banco de México's Rules also contemplate an exemption for small entities with notional amounts outstanding below the specified threshold of 10 billion unidades de inversión.

<sup>34</sup> Rules for Derivatives Transactions (Circular 4/2012), Banco de México, available at: <http://www.banxico.org.mx/disposiciones/circulares/%7BD7250B17-13A4-B0B7-F4E5-04AF29F37014%7D.pdf>.

<sup>35</sup> *Id.*

<sup>36</sup> Under MAS' proposal, the clearing mandate applies to transactions between banks that exceed the SGD 20 billion gross notional outstanding derivatives contract threshold for each of the previous four calendar quarters.

<sup>37</sup> Summary published by MAS available at: <http://www.mas.gov.sg/News-and-Publications/Media-Releases/2015/MAS-Consults-on-Proposed-Regulations-for-Mandatory-Clearing-of-OTC-Derivatives.aspx>.

regulatory action by MAS establishing a clearing requirement, which will commence in 2017.

## vii. Switzerland

In 2015, the Swiss parliament adopted legislation providing a framework for a swap clearing requirement. A clearing requirement for certain financial counterparties and non-financial counterparties<sup>38</sup> is expected to be phased in from 2016.<sup>39</sup> It is not yet known exactly which products such a clearing requirement would cover, but based on the criteria required to be considered by the Swiss Financial Market Supervisory Authority (Finma), Finma may determine that the CHF-denominated fixed-to-floating interest rate swaps referencing LIBOR should be included.<sup>40</sup>

As a result of this clearing requirement determination, the classes of swaps required to be cleared under Commission regulation 50.4(a) are expanded to include CHF-denominated fixed-to-floating interest rate swaps that may be subject to a clearing requirement in 2017.

## D. Submissions From DCOs

CME and LCH provided the Commission with regulation 39.5(b) submissions relating to: Fixed-to-floating interest rate swaps denominated in the nine additional currencies; AUD-denominated basis swaps; and USD-, EUR-, and GBP-denominated OIS with termination dates of up to 30 years. CME and LCH provided § 39.5(b) submissions pertaining to the FRAs and OIS listed in Table 1, below. CME and

<sup>38</sup> According to guidance from the Swiss Financial Market Supervisory Authority, derivatives transactions executed by and among financial counterparties and non-financial counterparties that meet the threshold requirements will be subject to the clearing requirement. Financial counterparties meet the threshold if their rolling averages for gross positions in outstanding derivatives transactions (over 30 working days) are at or above CHF 8 billion. Non-financial counterparties meet the threshold if their rolling averages for gross positions in outstanding derivatives transactions (over 30 working days) are at or above amounts specific to each product (e.g., CHF 3.3 billion in interest rate derivatives transactions).

<sup>39</sup> Financial Stability Board, OTC Derivatives Market Reforms, Eleventh Progress Report on Implementation, Appendix C (Implementation timetable: Central clearing of standardised transactions) (Aug. 26, 2016), available at: [www.fsb.org/2016/08/otc-derivatives-market-reforms-eleventh-progress-report-on-implementation/](http://www.fsb.org/2016/08/otc-derivatives-market-reforms-eleventh-progress-report-on-implementation/).

<sup>40</sup> See Swiss Financial Market Supervisory Authority (FINMA), Guidance 01/2016 Financial Market Infrastructure Act: FINMA's next steps (July 6, 2016), available at: <https://www.finma.ch/en/-/media/finma/dokumente/dokumentencenter/myfinma/4dokumentation/finma-aufsichtsmittelungen/20160707-finma-aufsichtsmittelung-01-2016.pdf?la=en>.

SGX provided submissions relating to MXN- and SGD-denominated fixed-to-floating interest rate swaps, respectively. Eurex provided a submission relating to CHF-denominated fixed-to-floating interest rate swaps and OIS denominated in

USD, EUR, and GBP with terms up to 30 years plus 10 business days.<sup>41</sup> LCH will begin offering MXN-denominated fixed-to-floating interest rate swaps in early October 2016.<sup>42</sup> Based on representations made by CME to the Commission, the Commission believes

that CME will begin offering AUD- and CAD-denominated OIS before the end of 2016.<sup>43</sup>

Table 1 summarizes the relevant interest rate swaps submitted by CME, Eurex, LCH, and SGX.

TABLE 1—SUMMARY OF INTEREST RATE SWAP SUBMISSIONS UNDER REGULATION 39.5(b)

Currency	Floating rate index	Maximum stated termination date	CME	Eurex	LCH	SGX
<b>Fixed-to-Floating Interest Rate Swaps</b>						
AUD .....	BBSW .....	30 years .....	Yes .....	No .....	Yes .....	*No. No.
CAD .....	CDOR .....	30 years .....	Yes .....	No .....	Yes .....	No.
CHF .....	LIBOR .....	30 years .....	Yes .....	Yes .....	Yes .....	No.
HKD .....	HIBOR .....	10 years .....	Yes .....	No .....	Yes .....	No.
MXN .....	TIIE-BANXICO .....	21 years .....	Yes .....	No .....	Yes <sup>44</sup> .....	No.
NOK .....	NIBOR .....	10 years .....	Yes .....	No .....	Yes .....	No.
PLN .....	WIBOR .....	10 years .....	Yes .....	No .....	Yes .....	No.
SGD .....	SOR-VWAP .....	10 years .....	Yes .....	No .....	Yes .....	Yes.
SEK .....	STIBOR .....	30 years .....	Yes .....	No .....	Yes .....	No.
<b>Basis Swaps</b>						
AUD .....	BBSW .....	30 years .....	Yes .....	No .....	Yes .....	No.
<b>Overnight Index Swaps</b>						
USD .....	FedFunds .....	30 years .....	Yes .....	Yes .....	Yes .....	No.
EUR .....	EONIA .....	30 years .....	Yes .....	Yes .....	Yes .....	No.
GBP .....	SONIA .....	30 years .....	Yes .....	Yes .....	Yes .....	No.
AUD .....	AONIA-OIS .....	5.5 years .....	No <sup>45</sup> .....	No .....	Yes .....	No.
CAD .....	CORRA-OIS .....	2 years .....	No <sup>46</sup> .....	No .....	Yes .....	No.
<b>Forward Rate Agreements</b>						
AUD .....	BBSW .....	3 years .....	Yes .....	No .....	No .....	No.
NOK .....	NIBOR .....	2 years .....	Yes .....	No .....	Yes .....	No.
PLN .....	WIBOR .....	2 years .....	Yes .....	No .....	Yes .....	No.
SEK .....	STIBOR .....	3 years .....	Yes .....	No .....	Yes .....	No.

The Commission notes that these interest rate swaps are all single currency swaps without optionality, as defined by the applicable DCO.

The submissions from CME, Eurex, LCH, and SGX provided the information required by regulation 39.5(b)(3)(i)–(viii), which, along with other information, has assisted the Commission in making a quantitative and qualitative assessment that these swaps should be subject to a clearing requirement determination.<sup>47</sup> In making

this clearing requirement determination, the Commission considered the ability of CME, Eurex, LCH, and SGX to clear a given swap, as well as data supplied cumulatively from each DCO for these swaps.<sup>48</sup> The Commission also reviewed the existing rule frameworks and risk management policies of each DCO.

Additionally, the Commission considered industry data<sup>49</sup> as well as other publicly available data sources, specifically data published by the Bank for International Settlements (BIS), and

information that has been made publicly available pursuant to part 43 of the Commission's regulations (part 43 Data).<sup>50</sup>

This final rulemaking also reflects consultation with the staff of the Securities and Exchange Commission, U.S. prudential regulators, and international regulatory authorities. This consultation occurred prior to the approval of the NPRM, as well as prior to the approval of this final rulemaking by the Commission. The Commission

<sup>41</sup> The 39.5(b) submissions are available on the Commission's Web site at: <http://www.cftc.gov/IndustryOversight/IndustryFilings/index.htm>. Submission materials that a submitting DCO marked for confidential treatment are not available for public review, pursuant to Commission regulations 39.5(b)(5) and 145.9(d).

<sup>42</sup> LCH has filed a regulation 39.5(b) submission with the Commission as of September 23, 2016 for this swap.

<sup>43</sup> Prior to offering these swaps for clearing, CME will need to file §§ 40.6 and 39.5(b) submissions with the Commission.

<sup>44</sup> Based on its regulation 39.5(b) submission, LCH will offer clearing of MXN-denominated fixed-to-floating interest rate swaps in early October 2016.

<sup>45</sup> CME plans to offer clearing of AUD-denominated OIS interest rate swaps before the end of 2016.

<sup>46</sup> CME plans to offer clearing of CAD-denominated OIS interest rate swaps before the end of 2016.

<sup>47</sup> In their submissions, CME and LCH stated that they had provided notice of the submissions to members as required by regulation 39.5(b)(3)(viii). SGX stated that its § 39.5(b) submission was published on its Web site. Eurex stated that it would forward its § 39.5(b) submission to its members so that they could comment.

<sup>48</sup> CME, Eurex, LCH, and SGX are eligible to clear interest rate swaps under regulation 39.5(a).

<sup>49</sup> The Commission considered FIA SEF Tracker data and ISDA SwapsInfo data.

<sup>50</sup> The Commission notes that it also has access to data pursuant to part 45 of the Commission's regulations (part 45 Data), which is used in the cost benefit considerations in section V. However, for the purposes of this determination, the Commission decided to use the part 43 Data in its determination analysis in section II.B to enable commenters to review the same data that the Commission reviewed in making the determination. In the future, the Commission may analyze part 45 Data and provide the public with aggregated and anonymized summaries of such data when considering whether other swaps should be subject to the clearing requirement. The Commission also may refer to other non-public data sources, as available.

has benefitted from this close communication with its fellow authorities throughout this rulemaking process.

Finally, the Commission considered the ten public comments received in response to the NPRM.

#### *E. Commission Processes for Review and Surveillance of DCOs*

##### *i. Part 39 Regulations Set Forth Standards for Compliance*

Section 5b(c)(2) of the CEA sets forth 18 core principles with which DCOs must comply to be registered and to maintain registration. The core principles address numerous issues, including financial resources, participant and product eligibility, risk management, settlement procedures, default management, system safeguards, reporting, recordkeeping, public information, and legal risk.

Each of the DCOs that submitted the interest rate swaps subject to this rulemaking is registered with the Commission. The DCOs' regulation 39.5(b) submissions discussed herein identify swaps that the DCOs are currently clearing and are eligible to clear under regulation 39.5(a). Consequently, the Commission has been reviewing and monitoring compliance by the DCOs with the core principles for clearing the submitted swaps.

The primary objective of the Commission's supervisory program is to ensure compliance with applicable provisions of the CEA and implementing regulations, and, in particular, the core principles applicable to DCOs. A primary concern of the program is to monitor and mitigate potential risks that can arise in derivatives clearing activities for the DCO, its members, and entities using the DCO's services. Accordingly, the Commission's supervisory program takes a risk-based approach, and pays particular attention to the risks posed by stressed market conditions, and major market events, as well as market participants' reactions to such conditions and events.

In addition to the core principles set forth in section 5b(c)(2) of the CEA, section 5c(c) governs the procedures for review and approval of new products, new rules, and rule amendments submitted to the Commission by DCOs. Part 39 of the Commission's regulations implements sections 5b and 5c(c) of the CEA by establishing specific requirements for compliance with the core principles, as well as procedures for registration, for implementing DCO rules, and for clearing new products. Part 40 of the Commission's regulations

sets forth additional provisions applicable to a DCO's submission of rule amendments and new products to the Commission.

The Commission has means to enforce compliance, including the Commission's ability to sue the DCO in federal court for civil monetary penalties,<sup>51</sup> issue a cease and desist order,<sup>52</sup> or suspend or revoke the registration of the DCO.<sup>53</sup> In addition, any deficiencies or other compliance issues observed during ongoing monitoring or an examination are frequently communicated to the DCO and various measures are used by the Commission to ensure that the DCO appropriately addresses such issues, including escalating communications within the DCO management and requiring the DCO to demonstrate, in writing, timely correction of such issues.

##### *ii. Initial Registration Application Review and Periodic In-Depth Reviews*

Section 5b of the CEA requires a DCO to register with the Commission. In order to do so, an organization must submit an application demonstrating that it complies with the core principles. During the review period, the Commission generally conducts an on-site review of the prospective DCO's facilities, asks a series of questions, and reviews all documentation received. The Commission may ask the applicant to make changes to its rules to comply with the CEA and the Commission's regulations.

After registration, the Commission conducts examinations of DCOs to determine whether each DCO is in compliance with the CEA and Commission regulations. Each examination begins with a planning phase where staff reviews information the Commission has to determine whether the information raises specific issues and to develop an examination plan. The examination team participates in a series of meetings with the DCO at its facility. Commission staff also communicates with relevant DCO staff, including senior management, and reviews documentation. Data produced by the DCO is independently tested. Finally, when relevant, walk-through testing is conducted for key DCO processes.

Commission staff also reviews DCOs that are systemically important (SIDCOs) at least once a year. Of the DCOs discussed in this rulemaking,

only CME has been determined to be a SIDCO.

##### *iii. Commission Daily Risk Surveillance*

Commission risk surveillance staff monitors the risks posed to and by DCOs, clearing members, and market participants, including market risk, liquidity risk, credit risk, and concentration risk. The analysis includes review of daily, large trader reporting data obtained from market participants, clearing members, and DCOs, which is available at the trader, clearing member, and DCO levels. Relevant margin and financial resources information also is included within the analysis.

Commission staff regularly conducts back testing to review margin coverage at the product level and follows up with the relevant DCO regarding any exceptional results. Independent stress testing of portfolios is conducted on a daily, weekly, and ad hoc basis. The independent stress tests may lead to individual trader reviews and/or futures commission merchant (FCM) risk reviews to gain a deeper understanding of a trading strategy, risk philosophy, risk controls and mitigants, and financial resources at the trader and/or FCM level. The traders and FCMs that have a higher risk profile are then reviewed during the Commission's on-site review of a DCO's risk management procedures.

Given the importance of DCOs within the financial system and the heightened scrutiny as more transactions are moved into central clearing, the goal of the Commission risk surveillance staff is: (1) To identify positions in cleared products subject to the Commission's jurisdiction that pose significant financial risk; and (2) to confirm that these risks are being appropriately managed. Commission risk surveillance staff undertakes these tasks at the trader level, the clearing member level, and the DCO level. That is, staff identifies both traders that pose risks to clearing members and clearing members that pose risks to the DCO. Staff then evaluates the financial resources and risk management practices of traders, clearing members, and DCOs in relation to those risks. Commission risk surveillance staff routinely monitors conditions in assigned markets throughout the day. Because of the work done in identifying accounts of interest, analysts are able to focus their efforts on those traders whose positions warrant heightened scrutiny under current market conditions.

To gain insight into how markets operate during stressed market conditions, an essential technique in

<sup>51</sup> See section 6c of the CEA.

<sup>52</sup> See section 6b of the CEA.

<sup>53</sup> See section 5e of the CEA.

evaluating risk is the use of stress testing. Stress testing is the practice of determining the potential loss (or gain) to a position or portfolio based on a hypothetical price change or a hypothetical change in a price input such as option volatility. Commission risk surveillance staff conducts a wide array of stress tests. Some stress tests are based on the greatest price move over a specified period of time such as the last five years or the greatest historical price change. Another stress testing technique is the use of “event based” stress testing that replicates the price changes on a particular date in history, such as September 11, 2001, or the date that Lehman Brothers filed for bankruptcy in 2008. Other specific events might include Hurricane Katrina, the U.S. Board of Governors of the Federal Reserve System’s implementation of the Commercial Paper Funding Facility as a liquidity backstop, or, most recently, the United Kingdom (U.K.)’s vote to exit from the European Union. Price changes can be measured as a dollar amount or a percentage change. This flexibility can be helpful when price levels have changed by a large amount over time. For example, the actual price changes in equity indices in October 1987 are not particularly large at today’s market levels but the percentage changes are meaningful.

The general standard in designing stress tests is to use “extreme but plausible” market moves. After identifying accounts at risk and estimating the size of the risk, the third step is to compare that risk to the assets available to cover it. Because stress testing, by definition, involves extreme moves, hypothetical results will exceed initial margin requirements on a product basis, *i.e.*, the price moves will be in the 1% tail. Many large traders, however, carry portfolios of positions with offsetting characteristics. In addition, many traders and clearing members deposit excess initial margin in their accounts. Therefore, even under stressed conditions, in many instances the total initial margin available may exceed potential losses or the shortfall may be relatively small.

Each DCO maintains a financial resources package that protects the DCO against clearing member defaults. If a clearing member defaults on its obligations, the first layer of protection against a DCO default is the defaulting clearing member’s initial margin, as well as the defaulting clearing member’s guaranty fund contribution. The second layer of protection against a DCO default, after the defaulting clearing member’s initial margin and guaranty fund contribution, is the DCO’s capital

contribution. The third layer of protection against a DCO default is the DCO’s mutualized resources, which often include guaranty fund contributions of non-defaulting clearing members and assessments of non-defaulting clearing members. These layers of protection comprise the DCO’s financial resources package.

Commission risk surveillance staff compares the level of risk posed by clearing members to a DCO’s financial resources package on an ongoing basis. Pursuant to Commission regulation 39.11(a), a DCO must have sufficient financial resources to cover a default by the clearing member posing the largest risk to the DCO. Pursuant to Commission regulation 39.33(a), a SIDCO<sup>54</sup> must have sufficient financial resources to cover defaults by the clearing members posing the two largest risks to the DCO. Commission risk surveillance staff periodically compares stress test results with DCOs to assess their financial capacity.

Commission risk surveillance staff frequently discusses the risks of particular accounts or positions with relevant DCOs. For example, as a follow-up to a trader review, Commission risk surveillance staff might compare its stress test results with those of the DCO. As also noted above, in the case of FCMs, there have been instances where, as a result of Commission risk surveillance staff comments or inquiries, DCOs have taken action to revise their stress tests and/or financial resources package to align with Commission risk surveillance staff’s recommendations.

## II. Comments on the Notice of Proposed Rulemaking

### A. Overview of Comments Received

The Commission received 10 comment letters during the 30-day public comment period following publication of the NPRM.<sup>55</sup>

<sup>54</sup> DCOs that elect to be covered under subpart C of part 39 of the Commission’s regulations also are subject to this requirement.

<sup>55</sup> Comment letters received in response to the NPRM may be found on the Commission’s Web site at: <http://comments.cftc.gov/PublicComments/CommentList.aspx?id=1711>. The following organizations submitted comment letters: Asset Management Group of the Securities Industry and Financial Markets Association (SIFMA AMG); ASX Clear (Futures) Pty Limited (ASX); Better Markets Inc. (Better Markets); Citadel LLC (Citadel); CME Group Inc. (CME Group); International Swaps and Derivatives Association, Inc. (ISDA); Japanese Bankers Association (JBA); LCH Group Limited (LCH Group); the Managed Funds Association (MFA); and Scotiabank Inverlat, S.A. (Scotiabank).

### i. Majority of Commenters Express Support for Proposal

Seven commenters (Better Markets, Citadel, CME Group, ISDA, LCH Group, MFA, and SIFMA AMG) voiced support for the proposed expansion of the clearing requirement and agreed with the Commission’s analysis that the expanded clearing requirement would enhance financial stability by reducing systemic risk, improving market integrity, or increasing transparency in the swap market. Two commenters, Scotiabank and ASX, provided clarifying comments with respect to product specifications, but did not express explicit support for the proposal overall. One commenter, JBA, requested that the Commission reconsider its proposal to expand the interest rate swaps clearing requirement in light of the increasing number of clearing brokers withdrawing from the swaps clearing business due to rising costs.

### ii. Substantive Issues Related to Product Specifications

One commenter, Scotiabank, discussed the specifications of the MXN-denominated fixed-to-floating interest rate swaps included in the Commission’s proposed expanded fixed-to-floating interest rate swap class.<sup>56</sup> Another commenter, ASX, addressed the Commission’s proposed inclusion of AUD-denominated FRAs in the expanded FRA class.<sup>57</sup>

### iii. Implementation and Harmonization

Most commenters responded to the NPRM’s request for comment concerning the advantages and disadvantages of a simultaneous effective date versus a series of compliance dates that would coordinate implementation with clearing requirements issued by non-U.S. jurisdictions.<sup>58</sup>

Six commenters, CME Group, Citadel, ISDA, LCH Group, MFA, and SIFMA AMG all supported the Commission’s goal of harmonizing its clearing requirement with those of non-U.S. jurisdictions. Citadel commented that such harmonization would lead to the benefit of eliminating regulatory arbitrage. LCH Group stated that such harmonization would promote certainty for market participants. SIFMA AMG commented that such harmonization would improve the functioning of swaps markets and reduce operational

<sup>56</sup> See discussion of Scotiabank’s comment letter in section III.

<sup>57</sup> See discussion of ASX’s comment letter in sections II and III.

<sup>58</sup> See discussion of implementation issues and related comment letters in section IV.



complexity. ISDA commented that harmonization is crucial to effective and efficient implementation of all of the reforms of the derivatives markets sought by the G20. MFA commented that the Commission's approach to harmonizing its clearing requirement with those of other jurisdictions would increase transparency and market integrity. MFA also suggested that if the Commission proceeds with the expanded clearing requirement, then other jurisdictions will follow.

#### iv. Data Considered by the Commission

One commenter, Citadel, complimented the Commission for assessing the extent of outstanding notional exposures of the swaps covered by the NPRM using multiple sources of data.<sup>59</sup> Another commenter, ISDA, suggested that the Commission review data indicating the impact of the proposed expanded clearing requirement on market participants in particular jurisdictions.<sup>60</sup>

#### v. Clarification

Two commenters, JBA and Scotiabank, requested clarification as to whether the expanded clearing requirement would only apply to new swaps entered into after the applicable compliance date and whether previously executed swaps would be required to be "backloaded" to clearing.<sup>61</sup>

#### vi. Access to DCOs and Clearing Members

One commenter, JBA, raised concerns about market participants needing to establish a clearing relationship with a new DCO in order to comply with the expanded clearing requirement.<sup>62</sup> Another commenter, CME Group, raised concerns about the ability of relatively small market participants to establish an account with a clearing member.<sup>63</sup>

#### vii. Trade Execution Requirement

Three comment letters discussed the possibility of a trade execution requirement applying to some or all of the interest rate swaps subject to this rulemaking.<sup>64</sup>

### B. Determination Analysis

#### i. Background Information on Interest Rate Swaps

Interest rate swaps generally are agreements wherein counterparties agree to exchange payments based on a series of cash flows over a specified period of time, typically calculated using two different rates, multiplied by a notional amount. As of June 2015, according to an estimate by BIS, there was approximately \$435 trillion in outstanding notional of interest rate swaps, which represents approximately 79% of the total outstanding notional of all derivatives.<sup>65</sup>

Section 2(h)(2)(A)(i) of the CEA provides that the Commission shall review each swap, or any group, category, type, or class of swaps to make a determination as to whether the swap or group, category, type, or class of swaps should be required to be cleared. This final rulemaking adds to the four classes of interest rate swaps that the Commission defined in the First Clearing Requirement Determination:

1. Fixed-to-floating swaps: Swaps in which the payment or payments owed for one leg of the swap is calculated using a fixed rate and the payment or payments owed for the other leg are calculated using a floating rate.

2. Basis swaps: Swaps for which the payments for both legs are calculated using floating rates.

3. Forward rate agreements: Swaps in which payments are exchanged on a pre-determined date for a single specified period and one leg of the swap is calculated using a fixed rate and the other leg is calculated using a floating rate that is set on a pre-determined date.

4. Overnight index swaps: Swaps for which one leg of the swap is calculated using a fixed rate and the other leg is calculated using a floating rate based on a daily overnight rate.

Interest rate swaps within the classes described above are currently required to be cleared pursuant to regulation 50.4(a) if they meet certain specifications: (i) Currency in which notional and payment amounts of a

swap are specified; (ii) floating rate index referenced in the swap; and (iii) stated termination date of the swap. The Commission also included the following three "negative" specifications:<sup>66</sup> (i) No optionality; (ii) no dual currencies; and (iii) no conditional notional amounts.<sup>67</sup> This clearing requirement determination analyzes the additional interest rate swaps submitted by CME, Eurex, LCH, and SGX according to these classifications and specifications.

#### ii. Consistency With Core Principles for Derivatives Clearing Organizations

Section 2(h)(2)(D)(i) of the CEA requires the Commission to determine whether a clearing requirement determination would be consistent with the core principles for registered DCOs set forth in section 5b(c)(2) of the CEA and implemented in part 39 of the Commission's regulations.<sup>68</sup> CME, Eurex, LCH, and SGX, each a registered DCO, already clear the swaps identified in the regulation 39.5(b) submissions described above.<sup>69</sup> Accordingly, CME, Eurex, LCH, and SGX already are required to comply with the DCO core principles with respect to the interest rate swaps subject to this final rulemaking. Moreover, each of these DCOs has been, and is, subject to the

<sup>66</sup> The negative specifications are product specifications that are explicitly excluded from the clearing requirement. All specifications are listed in regulation 50.4(a).

<sup>67</sup> The First Clearing Requirement Determination described the term "conditional notional amount" as "notional amounts that can change over the term of a swap based on a condition established by the parties upon execution such that the notional amount of the swap is not a known number or schedule of numbers, but may change based on the occurrence of some future event. This term does not include what are commonly referred to as 'amortizing' or 'roller coaster' notional amounts for which the notional amount changes over the term of the swap based on a schedule of notional amounts known at the time the swap is executed. Furthermore, it would not include a swap containing early termination events or other terms that could result in an early termination of the swap if a DCO clears the swap with those terms." See 77 FR at 74302 n. 108.

<sup>68</sup> The core principles address numerous issues, including financial resources, participant and product eligibility, risk management, settlement procedures, default management, system safeguards, reporting, recordkeeping, public information, and legal risk. See sections 5b(c)(2)(A)–(R) of the CEA and 17 CFR part 39, subparts B and C.

<sup>69</sup> Currently, CME is the only registered DCO offering MXN-denominated fixed-to-floating interest rate swaps for clearing. As noted above, LCH has filed a § 39.5(b) submission regarding this swap and will begin offering MXN-denominated fixed-to-floating interest rate swaps for clearing beginning in early October 2016. Similarly, LCH is the only registered DCO clearing AUD- and CAD-denominated OIS at this time. CME has confirmed that it intends to file § 39.5(b) submissions regarding these swaps before the end of 2016, and it is not likely to need to change its risk management framework to do so.

<sup>59</sup> See section III.B.iii.a.

<sup>60</sup> See discussion of ISDA's comment letter in section II.C.ii.

<sup>61</sup> See discussion of JBA's and Scotiabank's comment letters in section III.

<sup>62</sup> See discussion of JBA's comment letter in sections II.B.iii.d and V.C.

<sup>63</sup> See discussion of CME Group's comment letter in section II.C.i and section V.C.

<sup>64</sup> See discussion of Citadel's, ISDA's, and SIFMA AMG's comment letters in section II.C.iii.

<sup>65</sup> Semi-Annual OTC Derivatives Statistics at End-June 2015, published December 2015 available at: [https://www.bis.org/statistics/d5\\_1.pdf](https://www.bis.org/statistics/d5_1.pdf). The BIS data provides the broadest market-wide estimates of interest rate swap activity available to the Commission. The Commission receives swaps market information pursuant to parts 43 and 45 of the Commission's regulations. See also Swap Data Recordkeeping and Reporting Requirements, 77 FR 2136 (Jan. 13, 2012); Real-Time Public Reporting of Swap Transaction Data, 77 FR 1182 (Jan. 9, 2012). However, this data only includes swaps subject to the Commission's jurisdiction, i.e., those swaps subject to the CEA. The BIS data represents the broader swaps market, some of which is not reportable to the Commission under the CEA.



Commission's review and surveillance procedures, as discussed above, with respect to these swaps.

For the purposes of reviewing whether the regulation 39.5(b) submissions are consistent with the DCO core principles, the Commission has relied on both the information received in the regulation 39.5(b) submissions and, as discussed above, its ongoing review and risk surveillance programs.

The Commission concludes that CME, Eurex, LCH, and SGX are capable of maintaining compliance with the DCO core principles following the adoption of this clearing requirement determination. The Commission has not found any evidence to conclude that subjecting any of the interest rates swaps identified herein to a clearing requirement would adversely affect compliance by CME, Eurex, LCH, or SGX with the DCO core principles. In response to the NPRM, LCH Group commented on this topic, stating that it does not believe that the clearing requirement would adversely impact its ability to comply with the DCO core principles. Accordingly, the Commission believes that each of the regulation 39.5(b) submissions discussed herein is consistent with section 5b(c)(2) of the CEA.

### iii. Consideration of the Five Statutory Factors for Clearing Requirement Determinations

Section 2(h)(2)(D)(i)-(V) of the CEA identifies five factors that the Commission must "take into account" in making a clearing requirement determination.<sup>70</sup> In regulation 39.5(b), the Commission developed a process for reviewing DCO swap submissions to determine whether such swaps should be subject to a clearing requirement determination. The following is the Commission's consideration of the five factors as they relate to: (1) Fixed-to-

floating interest rate swaps denominated in the nine additional currencies; (2) AUD-denominated basis swaps; (3) NOK-, PLN-, and SEK-denominated FRAs; and (4) USD-, EUR-, and GBP-denominated OIS with termination dates of up to three years; and AUD- and CAD-denominated OIS, as submitted by CME, Eurex, LCH, and/or SGX pursuant to regulation 39.5(b).

As it reviewed the five statutory factors for this clearing requirement, the Commission considered the effect a new clearing mandate will have on a DCO's ability to withstand stressed market conditions. The post-financial crisis reforms that have increased the use of central clearing also have increased the importance of ensuring that central counterparties are resilient, particularly in times of market stress. The Commission has been working with other domestic and international regulators to make sure that adequate measures are taken to address the potential financial stability risks posed by central counterparties.<sup>71</sup> The Commission is focused on the financial stability of DCOs and is committed to monitoring all potential risks they face, including those related to increased clearing due to a new clearing requirement determination. Accordingly, how DCOs manage risk during times of market stress, as well as whether DCOs could manage the incremental risk in stressed market conditions that may result from the Commission requiring that these swaps be cleared, are critical factors that the Commission considered in issuing this final rulemaking.

#### a. Factor (I)—Outstanding Notional Exposures, Trading Liquidity, and Adequate Pricing Data

The first of the five factors requires the Commission to consider "the existence of significant outstanding notional exposures, trading liquidity, and adequate pricing data" related to "a submission made [by a DCO]." <sup>72</sup> As explained in the proposal for the First Clearing Requirement Determination, there is no single source of data for notional exposures and trading liquidity for individual products within the

global interest rate swap market.<sup>73</sup> Despite significant progress with regard to trade reporting over the years since the 2008 financial crisis, this remains true. Nonetheless, the Commission has considered multiple sources of data <sup>74</sup> on the interest rate swap market that provide the information the Commission needs to evaluate the first factor, including: (1) Publicly available real time data disseminated by DTCC Data Repository (U.S.) LLC (DDR), a provisionally-registered swap data repository (SDR),<sup>75</sup> pursuant to part 43 Data; (2) data from CME, Eurex, LCH, and SGX collected in their capacities as DCOs; (3) data from the BIS; (4) data from ISDA; and (5) data from the Futures Industry Association (FIA).<sup>76</sup>

<sup>73</sup> See 77 FR 47170, 47193 and n. 100 (Aug. 7, 2012) (citing Bank of England, "Thoughts on Determining Central Clearing Eligibility of OTC Derivatives," Financial Stability Paper No. 14, March 2012, at 11, available at: [http://www.bankofengland.co.uk/financialstability/Documents/fpc/fspapers/fs\\_paper14.pdf](http://www.bankofengland.co.uk/financialstability/Documents/fpc/fspapers/fs_paper14.pdf).) As discussed above, the Commission receives data regarding swaps subject to its jurisdiction pursuant to parts 43 and 45 of the Commission's regulations. The Commission also receives regular reporting from registered DCOs, as well as its registered entities.

<sup>74</sup> The Commission reviews part 43 Data, as well as data from CME, Eurex, LCH, and SGX, on an ongoing basis. Although the part 43 Data that is included in section II.B.iii is dated as of the second quarter 2015, Commission staff has not observed significant changes in the level of trading activity that would cause the Commission to change its finding that there is regular trading activity in these markets, as well as a measurable amount of data, such that there are significant outstanding notional exposures and trading liquidity in the swaps subject to this determination. In addition, although the data from DCOs presented in section II.B.iii is dated as of the second quarter 2015, Commission staff has not observed significant changes in the notional amounts outstanding or the aggregate notional values of swaps being cleared that would cause the Commission to change its finding that there are significant outstanding notional exposures and trading liquidity in the swaps subject to this final rulemaking. No commenters raised concerns about this data or offered additional data.

<sup>75</sup> CME SDR and BSDLR LLC, each a provisionally-registered SDR, accept data regarding interest rate swaps, but have not collected sufficient data relevant to the time periods considered by this determination. ICE Trade Vault, LLC, another provisionally-registered SDR, did not accept interest rate swap data during the time periods relevant to this final rulemaking.

<sup>76</sup> In the First Clearing Requirement Determination, the Commission also considered (i) market data published weekly by TriOptima that covered swap trade information submitted voluntarily by 14 large derivatives dealers and (ii) trade-by-trade data provided voluntarily by the 14 dealers to the OTC Derivatives Supervisors Group (ODSG). See 77 FR at 74307. The Commission is not using these sources for the determination adopted today because TriOptima no longer collects its data, and the ODSG data was a one-time exercise conducted between June and August 2010.

<sup>70</sup> The factors are:

(1) The existence of significant outstanding notional exposures, trading liquidity, and adequate pricing data;

(2) The availability of rule framework, capacity, operational expertise and resources, and credit support infrastructure to clear the contract on terms that are consistent with the material terms and trading conventions on which the contract is then traded;

(3) The effect on the mitigation of systemic risk, taking into account the size of the market for such contract and the resources of the DCO available to clear the contract;

(4) The effect on competition, including appropriate fees and charges applied to clearing; and

(5) The existence of reasonable legal certainty in the event of the insolvency of the relevant DCO or one or more of its clearing members with regard to the treatment of customer and swap counterparty positions, funds, and property.

<sup>71</sup> The Commission's Market Risk Advisory Committee hosted a meeting on June 27, 2016, to discuss central counterparty coordination in default management, global systemically important bank resolution, and central counterparty resolution, webcast available at: <http://www.cftc.gov/Exit/index.htm?https://youtu.be/fxQDh5lnh9c>. See CFTC Press Release PR7386-16, announcing the meeting agenda (June 16, 2016), available at: <http://www.cftc.gov/PressRoom/PressReleases/pr7391-16>.

<sup>72</sup> See section 2(h)(2)(D)(ii) of the CEA.

### Outstanding Notional Exposures and Trading Liquidity: Fixed-to-Floating Interest Rate Swaps Denominated in the Nine Additional Currencies

In assessing the extent of outstanding notional exposures and trading liquidity for a particular swap, the Commission reviews various data series to ascertain whether there is an active market for the swap, including whether the swap is traded on a regular basis as reflected by trade count and whether there is a measurable amount of notional exposures, such that a DCO can adequately risk manage the swap. In particular, the Commission reviewed the aggregate notional exposure and the trade count data from a number of sources for each swap subject to this determination. While there is no defined standard for an active market,<sup>77</sup> the Commission believes the data indicates that there are sufficient outstanding notional exposures and trading liquidity for fixed-to-floating interest rate swaps denominated in the nine additional currencies to support a clearing requirement determination. The Part 43 Data presented in Table 2 generally demonstrates that there is significant activity in new fixed-to-floating interest rate swap trades denominated in each of the nine additional currencies. Table 2 presents aggregate notional values and trade counts of fixed-to-floating interest rate swaps denominated in these currencies that were executed during the three-month period from April 1 to June 30, 2015.<sup>78</sup>

<sup>77</sup> A line of economic research papers analyzing the impact of central clearing on liquidity in over-the-counter derivatives have used three or more alternative methods of calculating liquidity based on academic research. These transaction-based methods for measuring liquidity are informative for assessing and understanding what constitutes an active market. See Loon, Y. C. and Zhong, Z. K., The impact of central clearing on counterparty risk, liquidity, and trading: Evidence from the credit default swap market. *Journal of Financial Economics*, 112 (1), 91–115 (2014) at 98, available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2176561](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2176561). See also Loon, Y. C. and Zhong, Z. K., Does Dodd-Frank affect OTC transaction costs and liquidity? Evidence from real-time CDS trade reports. *Journal of Financial Economics*, 119 (3), 645–672 (2016) at 647, available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2443654](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2443654).

<sup>78</sup> The data on notional amounts the Commission receives for interest rate swaps pursuant to part 43 is subject to caps, which vary based on currency, reference rate, swap class (e.g., FRA vs. OIS), and maturity of the underlying swap. As a result, the data in Table 2 will underestimate the amount of notional outstanding for the reported trades, as around 25% of the trades contained capped notional amounts. See 17 CFR 43.4(h). According to the adopting release accompanying part 43, the Commission caps notional amounts to ensure the anonymity of the parties to a large swap and maintain the confidentiality of business transactions and market positions. See Real-Time

The Commission notes the market for any swap is global. Even if the bulk of the activity in a particular swap occurs between counterparties located in a single jurisdiction, Table 2 demonstrates that there is significant participation by U.S. persons in each of the swaps covered by this determination.<sup>79</sup> Because Table 2 is based on Part 43 Data, it should include only data related to those swaps for which at least one counterparty is a U.S. person.<sup>80</sup>

**TABLE 2—PART 43 DATA FIXED-TO-FLOATING INTEREST RATE SWAPS AGGREGATE NOTIONAL AMOUNTS AND TRADE COUNTS REPORTED SECOND QUARTER 2015**<sup>81</sup>

Currency	Aggregate notional (USD)	Trade count
MXN .....	\$403,621,757,132	15,492
CAD .....	318,497,173,863	4,125
AUD .....	322,042,446,624	4,898
SEK .....	82,092,397,444	1,779
PLN .....	47,267,162,195	1,463
NOK .....	23,974,272,144	659
SGD .....	45,618,398,397	995
CHF .....	48,986,953,725	899
HKD .....	21,704,787,338	469

Table 3.1 demonstrates the outstanding notional amounts of fixed-to-floating interest rate swaps,

Public Reporting of Swap Transaction Data, 77 FR 1182, 1213 (Jan. 9, 2012). The rules were amended in May 2013 as they relate to caps. See Procedures to Establish Appropriate Minimum Block Sizes for Large Notional Off-Facility Swaps and Block Trades, 78 FR 32866 (May 31, 2013).

<sup>79</sup> See also further discussion of this topic in response to a comment from ISDA at section II.C.ii.

<sup>80</sup> Under the Commission's general policy, neither part 43 reporting nor the clearing requirement apply to a swap where neither counterparty is a U.S. person (although these requirements generally would apply, with the possibility of substituted compliance, to certain swaps involving foreign branches of U.S. SDs or major swap participants (MSPs), or non-U.S. persons that are guaranteed by or affiliate conduits of U.S. persons). See Interpretive Guidance and Policy Statement Regarding Compliance With Certain Swap Regulations, 78 FR 45292, 45369–70 (July 26, 2013). Therefore, part 43 reporting applies whenever at least one counterparty to a swap is a U.S. person.

<sup>81</sup> This table reflects data that was publically disseminated by DDR and reported to it by the reporting counterparty, a swap execution facility (SEF), or designated contract market (DCM) pursuant to part 43. As such, the Commission did not independently verify the accuracy of the swap data. The transactions disseminated to the public were rounded pursuant to regulation 43.4(g). As a result, this table may underestimate the amount of notional outstanding for the reported trades. This table does not include cancelled and corrected swaps that counterparties reported under part 43. The Commission converted the notional amounts to USD according to the exchange rates of June 30, 2015. Three other SDRs provisionally-registered with the Commission, CME SDR, BSDR LLC, and ICE Trade Vault LLC also accept information pursuant to part 43. During the second quarter of 2015, none of those SDRs collected sufficient information regarding the interest rate swaps subject to this rulemaking.

denominated in each of the nine additional currencies except for MXN, cleared at LCH as of July 17, 2015.<sup>82</sup>

**TABLE 3.1—LCH DATA FIXED-TO-FLOATING INTEREST RATE SWAPS OUTSTANDING NOTIONAL AMOUNTS AS OF JULY 17, 2015**<sup>83</sup>

Currency	Outstanding notional (USD)
CAD .....	\$3,479,830,407,148
AUD .....	3,311,898,621,627
CHF .....	1,110,123,528,868
SEK .....	942,508,451,280
SGD .....	735,450,982,935
PLN .....	500,992,688,256
NOK .....	402,746,575,455
HKD .....	385,067,416,327

Table 3.2 describes the aggregate notional values and trade counts of fixed-to-floating interest rate swaps denominated in these currencies that were cleared at LCH during the three-month period from April 1 to June 30, 2015.

**TABLE 3.2—LCH DATA FIXED-TO-FLOATING INTEREST RATE SWAPS AGGREGATE NOTIONAL AMOUNTS CLEARED AND TRADE COUNTS**<sup>84</sup> SECOND QUARTER 2015

Currency	Aggregate notional <sup>85</sup> (USD)	Trade count
AUD .....	\$747,580,867,222	11,675
CAD .....	591,935,914,049	8,097
SEK .....	192,434,187,521	5,827
SGD .....	188,573,379,738	4,872
CHF .....	175,203,370,522	3,659
PLN .....	99,184,390,887	4,249
NOK .....	72,569,065,080	2,855
HKD .....	65,655,762,520	1,868

<sup>82</sup> As mentioned above, LCH will commence clearing fixed-to-floating interest rate swaps denominated in MXN in October 2016.

<sup>83</sup> Data includes zero coupon swaps and variable notional swaps and excludes basis swaps, FRAs, and OIS. LCH converted values to USD. All data from LCH cited in this rulemaking is “single-sided,” which means that the outstanding notional amounts correspond to the notional amounts of swaps submitted for clearing. Single-sided reporting from LCH, as well as data reported by CME and SGX, refers to the same concept insofar as all modes of reporting reflect the total notional amounts outstanding at the DCO based on the swaps submitted for clearing. When two counterparties submit a swap to the clearinghouse for clearing through novation, the clearinghouse becomes the new counterparty to each of the original counterparties. This novation process results in double-counting, and single-sided reporting reflects the actual number of trades submitted to a clearinghouse for clearing. See note 85 for an explanation of CME's single-sided data. LCH publishes outstanding notional amounts of the swaps it has cleared. See LCH's Web site, available at: <http://www.swapclear.com/what/clearing-volumes.html>.

Table 4.1 demonstrates the outstanding notional amounts of fixed-to-floating interest rate swaps, denominated in each of the nine additional currencies, cleared at CME as of July 17, 2015.

**TABLE 4.1—CME DATA FIXED-TO-FLOATING INTEREST RATE SWAPS OUTSTANDING NOTIONAL AMOUNTS<sup>86</sup> AS OF JULY 17, 2015<sup>87</sup>**

Currency	Outstanding notional (USD)
CAD .....	\$295,213,937,641
MXN .....	283,989,842,748
AUD .....	192,208,979,188
SEK .....	30,834,434,233
NOK .....	25,396,100,018
CHF .....	18,322,872,584
PLN .....	4,157,627,521
HKD .....	1,937,495,645
SGD .....	1,014,201,616

Table 4.2 describes the aggregate notional values and trade counts of fixed-to-floating interest rate swaps denominated in these currencies that were cleared at CME during the three-month period from April 1 to June 30, 2015.

**TABLE 4.2—CME DATA FIXED-TO-FLOATING INTEREST RATE SWAPS AGGREGATE NOTIONAL AMOUNTS CLEARED AND TRADE COUNTS SECOND QUARTER 2015**

Currency	Aggregate notional (USD)	Trade count
MXN .....	\$193,941,151,671	7,749
AUD .....	51,591,005,387	1,194
CAD .....	91,523,261,511	2,995
SEK .....	9,712,957,726	998
NOK .....	5,298,232,932	422
CHF .....	2,665,840,791	173

<sup>84</sup> Like the outstanding notional data, this data includes zero coupon swaps and variable notional swaps.

<sup>85</sup> The aggregate notional amounts cleared at LCH will appear to be greater than that reflected in the part 43 Data because the part 43 Data captures only swap data subject to the CEA, while LCH, an entity organized in the United Kingdom, clears swaps for entities that may not be subject to the Commission's jurisdiction. The fact that LCH's notional amounts are higher supports this clearing requirement determination because it suggests that there may be greater liquidity in these swaps outside the U.S., of which DCOs could take advantage in order successfully to risk manage and price these swaps.

<sup>86</sup> CME uses the term "open interest" to refer to outstanding notional amounts. Both terms—"open interest" and "outstanding notional amounts"—refer to the same concept. CME converted the values to USD. As noted above, like the LCH data cited in this rulemaking, all data from CME is "single-sided," which means that the outstanding notional amounts correspond to the notional amounts of swaps submitted for clearing.

<sup>87</sup> Data excludes basis swaps, FRAs, and OIS. CME publishes open interest amounts of the swaps it has cleared. See CME's Web site, available at: <http://www.cmegroup.com/trading/interest-rates/cleared-otc/#data>.

**TABLE 4.2—CME DATA FIXED-TO-FLOATING INTEREST RATE SWAPS AGGREGATE NOTIONAL AMOUNTS CLEARED AND TRADE COUNTS SECOND QUARTER 2015—Continued**

Currency	Aggregate notional (USD)	Trade count
PLN .....	1,097,490,552	577
SGD .....	355,136,534	32
HKD .....	211,815,688	16

As of July 17, 2015, the outstanding notional amount of SGD-denominated fixed-to-floating interest rate swaps cleared at SGX was \$58.5 billion.<sup>88</sup>

As another data source, the Commission looked to BIS data. BIS' 2013 triennial central bank survey for interest rate swaps describes the daily average notional values of interest rate swaps, including fixed-to-floating interest rate swaps, on a worldwide basis, denominated in each of the nine additional currencies.

**TABLE 5—EXCERPT FROM BIS TRIENNIAL CENTRAL BANK SURVEY 2013<sup>89</sup> OVER-THE-COUNTER SINGLE CURRENCY INTEREST RATE DERIVATIVES TURNOVER**

Currency	Daily average notional of swaps (including fixed-to-floating), worldwide (USD) <sup>90</sup>
AUD .....	\$62,854,000,000
CAD .....	26,794,000,000
SEK .....	14,618,000,000
MXN .....	9,285,000,000
CHF .....	5,335,000,000
SGD .....	3,349,000,000
NOK .....	2,560,000,000
PLN .....	2,138,000,000
HKD .....	1,992,000,000

More recently, BIS has published statistics showing significant outstanding notional amounts for CAD-, CHF-, and SEK-denominated interest rate swaps: Approximately \$10.3 trillion CAD-denominated, approximately \$3.2 trillion CHF-denominated, and approximately \$2.4 trillion SEK-denominated.<sup>91</sup>

<sup>88</sup> SGX converted this value from SGD to USD. This figure is "single-sided," which means that the outstanding notional amount corresponds to the notional amounts of swaps submitted for clearing. SGX publishes outstanding notional amounts on its Web site, available at: <http://www.sgx.com>.

<sup>89</sup> BIS Triennial Central Bank Survey, Interest Rate Derivatives Market Turnover in 2013, Tables 1 and 2.1–2.6 (December 2013), available at: <http://www.bis.org/publ/rpfx13irt.pdf>.

<sup>90</sup> Data as of April 2013. BIS converted the figures to USD.

<sup>91</sup> Interest rate derivatives by instrument, counterparty, and currency. Notional amounts outstanding, expressed in USD, at end June 2015, available at: <http://stats.bis.org/statx/srs/table/d7?p=20151&c=>. This report does not provide data

On a daily basis, using data collected from DDR, ISDA's "SwapsInfo" report publishes the notional value and trade counts of fixed-to-floating interest rate swaps denominated in four of the nine additional currencies.<sup>92</sup> For example, Table 6 shows the aggregate notional values and trade counts of such swaps entered into on September 15, 2015.

**TABLE 6—EXCERPT FROM ISDA SWAPSINFO INTEREST RATE DERIVATIVES—PRICE/TRANSACTION DATA FIXED-TO-FLOATING INTEREST RATE SWAPS**

Currency	Approximate aggregate notional amount executed on September 15, 2015 (USD) <sup>93</sup>	Aggregate trade count executed on September 15, 2015
AUD .....	\$2,143,376,093	51
CAD .....	1,515,366,916	30
MXN .....	283,339,847	142
PLN .....	141,249,743	19

The Commission also reviewed data published by the FIA, in its "SEF Tracker" report,<sup>94</sup> consisting of weekly aggregate notional values of interest rate swaps, including FRAs, denominated in various currencies, including five of the nine additional currencies, which have been transacted on 12 SEFs that are now registered with the Commission.<sup>95</sup> Table 7 shows the aggregate notional values of interest rate swaps denominated in AUD, CAD, MXN, PLN, and SEK executed on SEFs during the week of May 25, 2015, as well as such swaps denominated in CHF, HKD, and NOK.<sup>96</sup>

specific to interest rate swaps denominated in all nine additional currencies.

<sup>92</sup> SwapsInfo provides data from two SDRs—DDR and BSDR LLC—that is "required to be disclosed under U.S. regulatory guidelines." SwapsInfo does not provide information specific to interest rate swaps denominated in all nine additional currencies. The SwapsInfo referenced in Table 6 only includes information from DDR. See SwapsInfo Web site, available at: <http://www.swapsinfo.org/charts/derivatives/price-transaction>.

<sup>93</sup> The Commission converted the values to USD as of Sept. 18, 2015. ISDA SwapsInfo does not provide data for CHF-, HKD-, NOK-, SEK-, or SGD-denominated interest rate swaps.

<sup>94</sup> SEF Tracker is published periodically on FIA's Web site, available at: <https://fia.org/sef-tracker>.

<sup>95</sup> The SEFs include: BGC Derivatives Markets, L.P.; Bloomberg SEF LLC; DW SEF LLC; GFI Swaps Exchange LLC; Javelin SEF, LLC; ICAP SEF (US) LLC; ICAP Global Derivatives Limited; LatAm SEF, LLC; Tradition SEF, Inc.; trueEx LLC; tpSEF Inc.; and TW SEF LLC. The Commission recognizes that under section 2(h)(8) of the CEA and Commission regulations 37.10 and 38.12, the Commission could in the future act to adopt a trade execution requirement for some or all of the interest rate swaps subject to the clearing requirement adopted in this rulemaking. The adoption of a clearing requirement determination is a prerequisite for any subsequent trade execution requirement. See also note 76.

<sup>96</sup> The published report does not contain information for CHF-, HKD-, and NOK-denominated

TABLE 7—FIA DATA WEEKLY NOTIONAL VOLUME OF INTEREST RATE SWAPS (INCLUDING FRAS) BY CURRENCY<sup>97</sup>

Currency	Aggregate weekly notional executed on SEFs week of May 25, 2015 (USD) <sup>98</sup>
AUD .....	\$36,194,670,000
MXN .....	19,526,810,000
CAD .....	12,527,450,000
CHF .....	6,686,971,251
SEK .....	5,958,000,000
PLN .....	1,420,000,000
NOK .....	1,403,918,860
HKD .....	51,589,605

In summary, the data indicates varying levels of activity, measured by outstanding notional amounts and trade counts, in fixed-to-floating interest rate swaps denominated in the nine additional currencies. The Commission acknowledges that the data comes from various, limited periods of time that do not explicitly include periods of market stress. However, the Commission concludes that the data demonstrates sufficient regular trading activity and outstanding notional exposures in the fixed-to-floating interest rate swaps denominated in the nine additional currencies to provide the liquidity necessary for DCOs to successfully risk manage these products and to support the adoption of a clearing requirement. Accordingly, the Commission concludes that there is sufficient regular trading activity and outstanding notional exposures for all fixed-to-floating swaps subject to this rulemaking.

## 2. Outstanding Notional Exposures and Trading Liquidity: AUD-Denominated Basis Swaps

The First Clearing Requirement Determination required the clearing of certain USD-, EUR-, GBP-, and JPY-denominated basis swaps. As part of this clearing requirement determination, the Commission is expanding the basis swap class to include AUD-denominated basis swaps, as proposed.

According to part 43 Data, 366 new AUD-denominated basis swaps were executed during the three-month period from April 1 to June 30, 2015. The aggregate notional amount of these

interest rate swaps. FIA provided figures for those swaps to the Commission. According to FIA, no SGD-denominated interest rate swaps were transacted on SEFs during the week of May 25, 2015. During the week of July 26, 2015, the aggregate notional amount of SGD-denominated interest rate swaps executed on SEFs was \$7,305,402.

<sup>97</sup> May 2015 edition of FIA SEF Tracker, available at: <https://fia.org/articles/fia-releases-sef-tracker-report-may>.

<sup>98</sup> FIA converted the values to USD.

swaps was \$32,559,762,900.<sup>99</sup> Also, during this period, there was no volume of AUD-denominated basis swaps cleared at CME, but the outstanding notional amount in such swaps cleared at CME as of June 30, 2015 was \$69,662,645,400. During the second quarter of 2015, 786 new AUD-denominated basis swaps were cleared at LCH. The aggregate notional amount of these swaps was \$74,012,261,949. As of July 17, 2015, the outstanding notional amount of AUD-denominated basis swaps cleared at CME and LCH was \$183,995,548,759 and \$443,819,944,145, respectively.<sup>100</sup>

While the data considered above comes from limited periods of time that do not explicitly include periods of market stress, the Commission concludes that the data demonstrates sufficient regular trading activity and outstanding notional exposures in AUD-denominated basis swaps to provide the liquidity necessary for DCOs to successfully risk manage these products and to support the adoption of a clearing requirement, as proposed. Accordingly, the Commission concludes that there is sufficient regular trading activity and outstanding notional exposures for AUD-denominated basis swaps subject to this rulemaking.

## 3. Outstanding Notional Exposures and Trading Liquidity: NOK-, PLN-, and SEK-Denominated FRAs

The First Clearing Requirement Determination required the clearing of certain USD-, EUR-, GBP-, and JPY-denominated FRAs. As part of the clearing requirement determination issued today, the Commission has decided to amend the FRA class to include only the NOK-, PLN-, and SEK-denominated FRAs proposed.

At this time, the Commission has decided not to include AUD-denominated FRAs as part of its expanded clearing requirement. This decision is based on several factors. First, the Australian authorities have postponed required clearing of AUD-

denominated FRAs until July 2018.<sup>101</sup> Second, ASX commented that it would not be prudent for the Commission to finalize a clearing requirement for this product in light of the delay in the Australian clearing requirement for this product. Finally, ASX stated that it has observed a general trend in the Australian domestic market away from FRAs and towards single-period swaps instead.<sup>102</sup> While there is currently a date certain on which Australian authorities will require clearing in AUD-denominated FRAs, the Commission is electing not to finalize its proposal with regard to AUD-denominated FRAs, will continue to monitor the market for AUD-denominated FRAs, and may take further action with regard to this product as appropriate.

Table 8 presents aggregate notional amounts and trade counts of NOK-, PLN-, and SEK-denominated FRAs executed during the second quarter of 2015, collected by DDR.

TABLE 8—PART 43 DATA FRAS AGGREGATE NOTIONAL AMOUNTS AND TRADE COUNTS REPORTED SECOND QUARTER 2015<sup>103</sup>

Currency	Aggregate notional (USD)	Trade count
SEK .....	\$183,646,587,508	514
NOK .....	105,087,098,253	397
PLN .....	14,455,487,594	103

Table 9.1 presents the outstanding notional amounts of NOK-, PLN-, and SEK-denominated FRAs cleared at LCH as of July 17, 2015.

<sup>101</sup> See ASIC Derivative Transaction Rules (Clearing) 2015, at 9, available at <https://www.comlaw.gov.au/Details/F2015L01960>.

<sup>102</sup> See also Aaron Woolner, "Australian clearing volumes steady despite new mandate," Risk.net, Apr. 27, 2016, <http://www.risk.net/asia-risk/news/2456034/australian-clearing-volumes-steady-despite-new-mandate> (explaining that Australian dollar FRAs present clearinghouses with an operational challenge insofar as AUD-denominated FRAs settle and fix on the same day, which creates problems for clearinghouses because their end-of-day process will not complete until the start of the next Asia-Pacific trading day) (article on file with the Commission and available upon request).

<sup>103</sup> This table reflects data that was publically disseminated by DDR and reported to it by the reporting counterparty, a SEF, or DCM pursuant to part 43. As such, the Commission did not independently verify the accuracy of the swap data. The transactions disseminated to the public were rounded pursuant to regulation 43.4(g). As a result, this table may underestimate the amount of notional outstanding for the reported trades. This table does not include cancelled and corrected swaps that counterparties reported under part 43. The Commission converted the notional amounts to USD according to the exchange rates of June 30, 2015.

<sup>99</sup> This figure comes from data that was publically disseminated by DDR and reported to it by the reporting counterparty, a SEF, or a DCM pursuant to part 43. As such, the Commission did not independently verify the accuracy of the swap data. The transactions disseminated to the public were rounded pursuant to regulation 43.4(g). As a result, this figure may underestimate the amount of notional outstanding for the reported trades. This figure does not include cancelled and corrected swaps that counterparties reported under part 43. The Commission converted the aggregate notional amount to USD according to the exchange rates of June 30, 2015.

<sup>100</sup> CME and LCH converted these figures to USD.

TABLE 9.1—LCH DATA FRAS OUTSTANDING NOTIONAL AMOUNTS AS OF JULY 17, 2015

Currency	Outstanding notional (USD)
SEK .....	\$706,370,365,302
NOK .....	544,670,239,925
PLN .....	274,120,726,256

Table 9.2 presents the aggregate notional values and trade counts of NOK-, PLN-, and SEK-denominated FRAs cleared at LCH during the second quarter of 2015.

TABLE 9.2—LCH DATA FRAS AGGREGATE NOTIONAL AMOUNTS CLEARED AND TRADE COUNTS SECOND QUARTER 2015

Currency	Aggregate notional (USD)	Trade count
SEK .....	\$369,900,226,814	1,600
NOK .....	348,764,102,890	1,874
PLN .....	232,246,791,831	1,029

Table 10.1 presents the outstanding notional amounts of NOK-, PLN-, and SEK-denominated FRAs cleared at CME as of July 17, 2015.

TABLE 10.1—CME DATA FRAS OUTSTANDING NOTIONAL AMOUNTS AS OF JULY 17, 2015

Currency	Outstanding notional (USD)
SEK .....	\$1,448,168,085
PLN .....	360,386,524
NOK .....	122,512,986

Table 10.2 presents the aggregate notional amounts and trade counts of NOK-, PLN-, and SEK-denominated FRAs cleared at CME during the second quarter of 2015.

TABLE 12—LCH DATA 2–3 YEAR OIS OUTSTANDING NOTIONAL AMOUNTS, AGGREGATE NOTIONAL AMOUNTS CLEARED, AND TRADE COUNTS <sup>108</sup>

Currency	Outstanding notional as of July 17, 2015 (USD)	Aggregate notional cleared second quarter 2015 (USD)	Trade count second quarter 2015
EUR .....	\$456,729,830,424	\$369,018,669,593	1,252

<sup>104</sup> Although there was no clearing activity in NOK- or PLN-denominated FRAs during the second quarter of 2015, CME continues to offer clearing of these products.

<sup>105</sup> In analyzing the volume and liquidity of NOK-, PLN-, and SEK-denominated fixed-to-floating interest rate swaps and FRAs, ESMA concluded that there was greater volume and liquidity in products denominated in these three currencies than in fixed-to-floating interest rate swaps and FRAs denominated in three other currencies (Czech koruna (CZK), Danish kroner (DKK), and Hungarian forint (HUF)). Therefore, ESMA included the NOK-, PLN-, and SEK-denominated products in its

TABLE 10.2—CME DATA FRAS AGGREGATE NOTIONAL AMOUNTS CLEARED AND TRADE COUNTS SECOND QUARTER 2015 <sup>104</sup>

Currency	Aggregate notional (USD)	Trade count
SEK .....	\$1,504,300,488	6
NOK .....	0	0
PLN .....	0	0

The Commission recognizes that the part 43 Data provided in Table 8 comes from a limited period of time that does not explicitly include periods of market stress. The Commission also notes the absence of any clearing activity at CME in NOK- or PLN-denominated FRAs during the second quarter of 2015. However, the Commission concludes that the part 43 Data provided in Table 8, together with the LCH data provided in Tables 9.1 and 9.2, demonstrate sufficient regular trading activity and outstanding notional exposures in NOK-, PLN-, and SEK-denominated FRAs to provide the liquidity necessary for DCOs to successfully risk manage these products and to support the adoption of a clearing requirement. Moreover, the Commission notes that like the other products subject to this determination, these FRAs are subject to a clearing requirement issued by another jurisdiction, in this case the European Union.<sup>105</sup> Accordingly, the Commission concludes that there is sufficient regular trading activity and outstanding notional exposures for all FRAs subject to this rulemaking.

clearing obligation but not the CZK-, DKK-, and HUF-denominated products. In other words, ESMA ultimately determined that three currencies should be subject to the EU clearing obligation and three currencies should not be, a decision with which the European Commission concurred. See ESMA Final Report—Draft technical standards on the clearing obligation—interest rate OTC derivatives in additional currencies (ESMA/2015/1629, Nov. 10, 2015), available at: [https://www.esma.europa.eu/sites/default/files/library/2015/11/esma-2015-1629\\_-\\_final\\_report\\_clearing\\_obligation\\_irs\\_other\\_currencies.pdf](https://www.esma.europa.eu/sites/default/files/library/2015/11/esma-2015-1629_-_final_report_clearing_obligation_irs_other_currencies.pdf).

<sup>106</sup> See discussion of the pending European Union Clearing Obligation in section I.C.

4. Outstanding Notional Exposures and Trading Liquidity: OIS With Termination Dates of Up to Three Years; and AUD- and CAD-Denominated OIS

The First Clearing Requirement Determination required the clearing of certain USD-, EUR- and GBP-denominated OIS with a stated termination date range of seven days to two years. As part of this clearing requirement determination, the Commission is amending the maximum termination date to three years for USD-, EUR- and GBP-denominated OIS that have been required to be cleared pursuant to the First Clearing Requirement Determination. This will make the Commission's OIS clearing requirement consistent with that in effect in the European Union.<sup>106</sup>

Table 11 presents aggregate notional values and trade counts of USD-, EUR-, and GBP-denominated OIS with terms of two to three years executed during the second quarter of 2015, collected by DDR.

TABLE 11—PART 43 DATA 2–3 YEAR OIS AGGREGATE NOTIONAL AMOUNTS AND TRADE COUNTS REPORTED <sup>107</sup> SECOND QUARTER 2015

Currency	Aggregate notional (USD)	Trade count
EUR .....	\$7,582,189,400	47
USD .....	4,611,000,000	32
GBP .....	1,377,942,400	15

Tables 12 and 13 present the outstanding notional amounts outstanding, the aggregate notional values cleared and trade counts, of USD-, EUR-, and GBP-denominated OIS with terms of two to three years.

<sup>107</sup> This table reflects data that was publically disseminated by DDR and reported to it by the reporting counterparty, SEF, or DCM pursuant to part 43. As such, the Commission did not independently verify the accuracy of the swaps. The transactions disseminated to the public were rounded pursuant to regulation 43.4(g). As a result, this table may underestimate the amount of notional outstanding for the reported trades. This table does not include cancelled and corrected swaps that counterparties reported under part 43. The Commission converted the notional amounts to USD according to the exchange rates of June 30, 2015.

TABLE 12—LCH DATA 2–3 YEAR OIS OUTSTANDING NOTIONAL AMOUNTS, AGGREGATE NOTIONAL AMOUNTS CLEARED, AND TRADE COUNTS <sup>108</sup>—Continued

Currency	Outstanding notional as of July 17, 2015 (USD)	Aggregate notional cleared second quarter 2015 (USD)	Trade count second quarter 2015
GBP .....	91,417,244,109	64,071,802,837	187
USD .....	90,058,657,103	46,523,581,500	120

TABLE 13—CME DATA 2–3 YEAR OIS OUTSTANDING NOTIONAL AMOUNTS, AGGREGATE NOTIONAL AMOUNTS CLEARED, AND TRADE COUNTS <sup>109</sup>

Currency	Outstanding notional as of July 17, 2015 (USD)	Aggregate notional cleared second quarter 2015 (USD)	Trade count second quarter 2015
EUR .....	\$53,456,578,566	\$6,888,346,279	12
USD .....	151,923,747,195	9,334,544,737	6
GBP .....	27,764,067,455	857,520,000	4

As part of this clearing requirement determination, the Commission also is adding AUD- and CAD-denominated OIS to the OIS class included in regulation 50.4(a). This will make the

Commission's OIS clearing requirement consistent with the requirements that will begin to take effect in Australia in October 2016 and in Canada in 2017.<sup>110</sup>

Table 14 presents aggregate notional amounts and trade counts of AUD- and CAD-denominated OIS executed during the second quarter of 2015 collected by DDR.

TABLE 14—PART 43 DATA AUD- AND CAD-OIS AGGREGATE NOTIONAL AMOUNTS AND TRADE COUNTS REPORTED <sup>111</sup> SECOND QUARTER 2015

Currency	Aggregate notional (USD)	Trade count
AUD .....	\$307,048,016,016	537
CAD .....	51,645,589,883	107

Tables 15.1 and 15.2 present the outstanding notional amounts

outstanding, as well as aggregate notional values cleared and trade

counts, of AUD- and CAD-denominated OIS cleared at LCH.<sup>112</sup>

TABLE 15.1—LCH DATA AUD-DENOMINATED OIS OUTSTANDING NOTIONAL AMOUNT, AGGREGATE NOTIONAL AMOUNT CLEARED, AND TRADE COUNT <sup>113</sup>

Currency	Outstanding notional as of January 15, 2016 <sup>114</sup> (USD)	Aggregate notional cleared January 4–15, 2016 (USD)	Trade count January 4–15, 2016
AUD .....	\$25,739,497,700	\$26,199,691,300	25

TABLE 15.2—LCH DATA CAD-DENOMINATED OIS OUTSTANDING NOTIONAL AMOUNT, AGGREGATE NOTIONAL AMOUNT CLEARED, AND TRADE COUNT <sup>115</sup>

Currency	Outstanding notional as of July 17, 2015 (USD)	Aggregate notional cleared second quarter 2015 (USD)	Trade count second quarter 2015
CAD .....	\$506,221,411,997	\$216,524,096,571	260

<sup>108</sup> LCH converted the EUR and GBP values to USD.

<sup>109</sup> CME converted the EUR and GBP values to USD.

<sup>110</sup> See discussion of the Australian and Canadian swap clearing requirements in section I.C.

<sup>111</sup> This table reflects data that was publically disseminated by DDR and reported to it by the reporting counterparty, SEF, or DCM pursuant to

part 43. As such, the Commission did not independently verify the accuracy of the swaps. The transactions disseminated to the public were rounded pursuant to regulation 43.4(g). As a result, this table may underestimate the amount of notional outstanding for the reported trades. This table does not include cancelled and corrected swaps that counterparties reported under part 43. The Commission converted the notional amounts to

USD according to the exchange rates of June 30, 2015.

<sup>112</sup> As discussed above, CME intends to begin offering to clear AUD- and CAD-denominated OIS before the end of 2016.

<sup>113</sup> LCH converted the AUD values to USD.

<sup>114</sup> LCH began clearing AUD-denominated OIS on January 4, 2016.

The fact that Australian and Canadian regulators have included AUD- and CAD-denominated OIS, respectively, in their clearing requirements demonstrates that they believe that these swaps represent an important part of the derivatives portfolios of Australian and Canadian banks. The part 43 Data cited in Table 14 demonstrates that there is also meaningful participation by U.S. swap market participants in these swaps. For example, U.S. SDs and their affiliated entities play an important role in the global swaps market, including in Australia and Canada. The Commission therefore believes that it is prudent for its clearing requirement to be consistent with those issued by other jurisdictions, even with respect to swaps that are relatively less frequently traded than other swaps.<sup>115</sup>

While the Commission recognizes that the data considered above comes from limited periods of time that do not explicitly include periods of market stress, the Commission concludes that the data demonstrates sufficient regular trading activity and outstanding notional exposures in USD-, GBP-, and EUR-denominated OIS with a termination date range of two to three years, as well as AUD- and CAD-denominated OIS, to provide the necessary liquidity for DCOs to successfully risk manage these products and to support the adoption of a clearing requirement. Accordingly, the Commission concludes that there is sufficient regular trading activity and outstanding notional exposures for all OIS subject to this rulemaking.

**5. Pricing Data: Fixed-to-Floating Swaps Denominated in the Nine Additional Currencies; AUD-Denominated Basis Swaps; NOK-, PLN-, and SEK-Denominated FRAs; USD-, GBP, and EUR-OIS With Termination Dates of up to Three Years; and AUD- and CAD-OIS**

The Commission regularly reviews pricing data on the interest rate swaps subject to this rulemaking and has found that these swaps are capable of being priced off of deep and liquid markets. Commission staff receives and reviews margin model information from CME, Eurex, LCH, and SGX that addresses how such DCOs would follow particular procedures to ensure that market liquidity exists in order to exit a position in a stressed market, including the products subject to this determination. In particular,

Commission staff analyzes the level of liquidity in the specific product markets and assesses the time required to determine a price. Based on this information, the Commission staff has no reason to believe that there is, or will be, difficulty pricing the products subject to this determination in a stressed environment.

Because of the stability of access to pricing data from these markets, the pricing data for non-exotic interest rate swaps that are currently being cleared is generally viewed as reliable. In addition, CME, Eurex, LCH, and SGX provided information that supports the Commission's conclusion that there is adequate pricing data to warrant a clearing requirement for the swaps subject to this rulemaking. LCH and CME believe there is adequate pricing data for risk and default management. CME stated that its interest rate swap valuations are fully transparent and rely on pricing inputs obtained from wire service feeds. In its § 39.5(b) submission, SGX asserted that the valuation rate sources it uses, and the manner in which it determines mark-to-market prices, are in alignment with industry practices. CME, Eurex, LCH, and SGX obtain daily prices from third-party data providers, clearing members, and/or major banks.

As discussed above, the Commission reviews margin models and related pricing data submitted by CME, Eurex, LCH, and SGX. One source of information that they use to determine adequate pricing data is a regular survey of swap traders that asks the traders to estimate what it would cost to liquidate positions of different sizes in different currencies. The information obtained during these market participant surveys is incorporated into each of CME, Eurex, LCH, and SGX's internal margin models so that each is confident that it will be able to withstand stressed market conditions. Establishing accurate pricing data is one component of each of CME, Eurex, LCH, and SGX's ability to risk manage their interest rate swaps offered for clearing. The Commission believes that the methods used by these DCOs provide information on pricing that is accurate and demonstrates the ability to price the products subject to this determination successfully. Accordingly, the Commission concludes that there is adequate pricing data to support an extension of the clearing requirement to the swaps subject to this rulemaking.

#### **6. Comments Received Regarding Factor (I)**

In response to the NPRM, three commenters, Better Markets, Citadel,

and CME Group agreed with the Commission's analysis of the first factor under section 2(h)(2)(D)(ii). That is, these commenters agreed that there is sufficient outstanding notional exposures in all of the swaps covered by the NPRM for DCOs successfully to risk manage such swaps and that this supports a clearing requirement determination. In its comment letter, Citadel complimented the Commission for assessing the extent of outstanding notional exposures using multiple sources of data. Citadel noted further that the various sources of data the Commission referenced in discussing the extent of outstanding notional exposures demonstrate the variety of sources a DCO may rely on to access price data for risk and default management purposes. In addition, Better Markets, Citadel, and MFA commented that there is sufficient trading activity and liquidity in the swaps subject to this rulemaking to support a clearing requirement. MFA highlighted the fact that, as noted in the NPRM, a significant percentage of the market already clears the swaps voluntarily at Commission-registered DCOs. Citadel commented that the clearing requirement would enhance liquidity in cleared instruments to the benefit of investors. Similarly, SIFMA AMG commented that clearing improves market liquidity.

With respect to pricing data, in their comment letters, CME Group and LCH Group agreed with the Commission that there is sufficient pricing data available for the swaps subject to this rulemaking such that CME Group and LCH Group can adequately manage the risks that would arise from the default of a clearing member. The Commission received no other comments related to the level of outstanding notional exposures and trading liquidity or adequacy of pricing data for the swaps subject to this rulemaking.

For the reasons described above and in light of the comments received, the Commission reaffirms its conclusion stated in the NPRM that there are sufficient outstanding notional exposures and trading liquidity, as well as adequate pricing data, to expand the clearing requirement to include the swaps subject to this rulemaking, which are referenced in revised regulation 50.4(a).

#### **b. Factor (II)—Availability of Rule Framework, Capacity, Operational Expertise and Resources, and Credit Support Infrastructure**

Section 2(h)(2)(D)(ii)(II) of the CEA requires the Commission to take into account the availability of rule

<sup>115</sup> LCH converted the CAD values to USD.

<sup>116</sup> See section II.C.ii for a more lengthy discussion and analysis of BIS data with regard to U.S.-based market participants' activity in global interest rate swap markets.



framework, capacity, operational expertise and resources, and credit support infrastructure to clear the swaps subject to this rulemaking on terms that are consistent with the material terms and trading conventions on which they are now traded. The Commission believes that CME, Eurex, LCH, and SGX have developed rule frameworks, capacity, operational expertise and resources, and credit support infrastructure to clear the interest rate swaps that they currently clear, including those products subject to this determination, on terms that are consistent with the material terms and trading conventions on which those swaps are being traded.

### 1. Background

The Commission subjects CME, Eurex, LCH, and SGX to ongoing review and risk surveillance programs to ensure compliance with the core principles for the submitted swaps.<sup>117</sup> As discussed above, as part of a registered DCO's initial registration review and periodic in-depth reviews thereafter, the Commission reviews the DCO's rule framework, capacity, and operational expertise and resources to clear the submitted swaps. The Commission may request that the DCO or DCO applicant change its rules to comply with the CEA and Commission regulations.

After registration, the Commission conducts examinations of DCOs to determine whether the DCO is in compliance with the CEA and Commission regulations. Moreover, Commission risk surveillance staff monitors the risks posed to and by the DCO, in ways that include regularly conducting back testing to review margin coverage at the product level and following up with the DCO and its clearing members regarding any exceptional results.

CME, Eurex, LCH, and SGX have procedures pursuant to which they regularly review their clearing of the interest rate swaps subject to this rulemaking in order to confirm, or make adjustments to, margins and other risk management tools. When reviewing CME, Eurex, LCH, and SGX's risk management tools, the Commission considers whether the DCO is able to

manage risk during stressed market conditions to be one of the most significant considerations.

CME, Eurex, LCH, and SGX have developed detailed risk management practices, including a description of the risk factors considered when establishing margin levels such as historical volatility, intraday volatility, seasonal volatility, liquidity, open interest, market concentration, and potential moves to default, among other risks.<sup>118</sup> The Commission reviews and oversees CME's, Eurex's, LCH's, and SGX's risk management practices and development of margin models. Margin models are further refined by stress testing and daily back testing. When assessing whether CME, Eurex, LCH, and SGX can clear swaps safely during stressed market conditions, stress testing and back testing are key tools the Commission considers as well.

CME, Eurex, LCH, and SGX design stress tests to simulate "extreme but plausible" market conditions based on historical analysis of product movements and/or based on hypothetical forward-looking scenarios that are created with the assistance of market experts and participants. Commission staff monitors and oversees the use and development of these stress tests. CME, Eurex, LCH, and SGX conduct stress tests daily. In addition, CME, Eurex, LCH, and SGX conduct reverse stress testing to ensure that their default funds are sized appropriately. Reverse stress testing uses plausible market movements that could deplete guaranty funds and cause large losses for top clearing members.<sup>119</sup> These four

DCOs analyze the results of stress tests and reverse stress tests to determine if any changes to their financial resources or margin models are necessary. Commission risk surveillance staff also monitors markets in real-time, performs stress tests against the DCOs' margin models as an additional level of oversight, and may recommend changes to a margin model.

CME, Eurex, LCH, and SGX conduct back testing on a daily basis to ensure that the margin models capture market movements for member portfolios. Back testing serves two purposes: It tests margin models to determine whether they are performing as intended and it checks whether the margin models produce margin coverage levels that meet the DCO's established standards. CME conducts daily back testing for each major asset class, and SGX performs daily back testing on a contract level to examine margin models in more detail. LCH may call additional margin from clearing members if back testing demonstrates margin erosion. The back testing process helps CME, Eurex, LCH, and SGX determine whether their clearing members satisfy the required margin coverage levels and liquidation time frame.

Before offering a new product for clearing, such as the interest rate swaps subject to this rulemaking, CME, Eurex, LCH, and SGX take stress tests and back testing results into account to determine whether the clearinghouse has sufficient financial resources to offer new clearing services. In addition, the Commission reviews margin models and default resources to ensure that the DCOs can risk manage their portfolio of products offered for clearing. The Commission believes that this combination of stress testing and back testing in anticipation of offering new products for clearing provides CME, Eurex, LCH, and SGX with greater certainty that new product offerings will be risk-managed appropriately. The process of stress testing and back testing also gives the DCOs practice incorporating the new product into their models.

In addition to the Commission's surveillance and oversight, CME, Eurex, LCH, and SGX continue to monitor and test their margin models over time so that they can operate effectively in stressed and non-stressed market environments. CME, Eurex, LCH, and SGX review and validate their margin models regularly and in the case of CME and SGX, no less than annually. To risk manage their margin coverage levels for interest rate swaps denominated in

horizons, and simultaneous pressures in funding and asset markets.

<sup>118</sup> Each of CME, Eurex, LCH, and SGX has published a document outlining its compliance with the Principles for Financial Market Infrastructures (PFMIs) published by the Committee on Payments and Market Infrastructures (CPMI formerly CPSS) and the International Organization of Securities Commissions (IOSCO). See CME Clearing: Principles for Financial Market Infrastructures Disclosure, available at: <http://www.cmegroup.com/clearing/risk-management/files/cme-clearing-principles-for-financial-market-infrastructures-disclosure.pdf>. See Assessment of Eurex Clearing AG's compliance against the CPSS-IOSCO Principles for financial market infrastructures (PFMI) and disclosure framework associated to the PFMIs, available at: [http://www.eurexclearing.com/blob/148684/58e6fe89e3f54ebe169e530ac2235b43/data/cpss-iosco-pfmi-assessment\\_2014\\_en.pdf](http://www.eurexclearing.com/blob/148684/58e6fe89e3f54ebe169e530ac2235b43/data/cpss-iosco-pfmi-assessment_2014_en.pdf). See LCH's CPMI-IOSCO Self Assessment 2014, available at: [http://www.lchclearnet.com/documents/731485/762558/CPMI-IOSCO\\_Assessment\\_of\\_LCH+ClearnetLtd+2014.pdf/45876bd6-3818-4b76-a463-2952a613c326](http://www.lchclearnet.com/documents/731485/762558/CPMI-IOSCO_Assessment_of_LCH+ClearnetLtd+2014.pdf/45876bd6-3818-4b76-a463-2952a613c326). See SGX PFMI Disclosure Documents, available at: [http://www.sgx.com/wps/portal/sgxweb/home/clearing/derivatives/pfmi\\_disclosure](http://www.sgx.com/wps/portal/sgxweb/home/clearing/derivatives/pfmi_disclosure).

<sup>119</sup> For example, CME, Eurex, LCH, and SGX may use scenarios for stress testing and reverse stress testing that capture, among other things, historical price volatilities, shifts in price determinants and yield curves, multiple defaults over various time

<sup>117</sup> Section 5c(c) of the CEA governs the procedures for review and approval of new products, new rules, and rule amendments submitted to the Commission by DCOs. Parts 39 and 40 of the Commission's regulations implement section 5c(c) by: (i) Establishing specific requirements for compliance with the core principles as well as procedures for registration, implementing DCO rules, and clearing new products; and (ii) establishing provisions for a DCO's submission of rule amendments and new products to the Commission.

various currencies, CME and LCH also regularly survey traders to estimate what it would cost to liquidate positions of different sizes in different currencies and then incorporate those costs into the amount of initial margin that a clearing member is required to post, and tailor their margin models to account for several attributes specific to various currencies.

Finally, aside from margin coverage requirements, CME, Eurex, LCH, and SGX can monitor and manage credit risk exposure by asset class, clearing member, account, or even by individual customers. They manage credit risk by establishing position and concentration limits based on product type or counterparty. The Commission recognizes that these limits reduce potential market risks so that DCOs are better able to withstand stressed market conditions. CME, Eurex, LCH, and SGX monitor exposure concentrations and may require additional margin deposits for clearing members with weak credit scores, with large or concentrated positions, with positions that are illiquid or exhibit correlation with the member itself, and/or where the member has particularly large exposures under stress scenarios. The ability to call for any additional margin, on top of collecting initial and variation margin, to meet the current DCO exposure is another tool that CME, Eurex, LCH, and SGX may use to protect against stressed market conditions.

In support of its ability to clear the products subject to this rulemaking, CME's § 39.5(b) submissions cite to its rulebook to demonstrate the availability of rule framework, capacity, operational expertise and resources, and credit support infrastructure to clear interest rate swap contracts on terms that are consistent with the material terms and trading conventions on which the contracts are then traded. LCH's submissions state that LCH has the capability and expertise not only to manage the risks inherent in the current book of interest rate swaps cleared, but also to manage the increased volume that a clearing requirement for additional currently clearable products could generate. SGX's submission states that SGD-denominated fixed-to-floating interest rate swaps are cleared under an established rule framework and operational infrastructure that has been accepted by SGX's clearing members. SGX asserted further that it has the appropriate risk management, operations, and technology capabilities in place to ensure that it is able to liquidate positions in these swaps in an orderly manner should a default occur. Similarly, Eurex's submission states that

it clears interest rate swaps pursuant to its well-developed rule framework and support infrastructure.

Importantly, the Commission notes that CME, Eurex, LCH, and SGX each developed their interest rate swap clearing offerings in conjunction with market participants and in response to the specific needs of the marketplace. In this manner, CME's, Eurex's, LCH's, and SGX's clearing services are designed to be consistent with the material terms and trading conventions of a bilateral, uncleared market.

When assessing whether CME, Eurex, LCH, and SGX can clear the swaps subject to this rulemaking safely during times of market stress, the Commission reviewed the public disclosures published by CME, Eurex, LCH, and SGX. In addition, the Commission reviewed the risk management practices used by these DCOs, and the Commission has determined that the application of such practices to the products subject to this clearing requirement determination should ensure that the products can be cleared safely during times of market stress. Accordingly, the Commission concludes that at each of the four DCOs discussed above, there is an available rule framework, capacity, operations expertise and resources, and credit support infrastructure to clear the swaps subject to this rulemaking on terms that are consistent with the material terms and trading conventions on which they are now traded.

## 2. Comments Received Regarding Factor (II)

In response to the NPRM, Citadel agreed with the Commission's conclusion that the existing DCO rule frameworks and infrastructure are satisfactory for clearing the swaps subject to the determination. Citadel commented that the already significant amount of voluntary clearing of these swaps demonstrates the suitability of the DCOs' frameworks and infrastructures. LCH Group commented that its rule framework, capacity, operational expertise, resources, and credit support structure are adequate to clear the swaps covered by the rulemaking, including during times of market stress. Similarly, CME Group commented that it is capable of offering uninterrupted clearing services of these swaps, even during times of market stress. Finally, Better Markets commented that the second factor under section 2(h)(2)(D)(ii) is satisfied because registered DCOs are already clearing the swaps subject to the NPRM in compliance with the DCO core principles. Better Markets also urged the

Commission strictly to surveil DCOs' risk management procedures.

The Commission received no other comments related to the existence of satisfactory DCO rule frameworks and infrastructure to support this expanded clearing requirement determination.

For the reasons described above and in light of the comments received, the Commission reaffirms its conclusion stated in the NPRM that there are available rule frameworks, capacity, operations expertise and resources, as well as credit support infrastructures consistent with material terms and current trading conventions, to expand the clearing requirement to include the swaps subject to this rulemaking, which are referenced in revised regulation 50.4(a).

## c. Factor (III)—Effect on the Mitigation of Systemic Risk

Section 2(h)(2)(D)(ii)(III) of the CEA requires the Commission to take into account the effect of the clearing requirement on the mitigation of systemic risk, taking into account the size of the market for such contract and the resources of the DCO available to clear the contract. The Commission believes that the market for the swaps covered by this determination is significant and that mitigating counterparty risk through clearing likely will reduce systemic risk in that market generally. Data collected by SDRs demonstrates that Commission-registered SDs are counterparties to an overwhelming majority of swaps reported to the Commission. Because only SDs with a significant volume of swaps activity are required to register with the Commission,<sup>120</sup> by expanding the swap clearing requirement, a greater percentage of an SD's swap activity will be centrally cleared and risk managed. For example, central clearing reduces the interconnectedness of the swap positions of SDs, and other swap market participants, because the DCO, an independent third party that takes no market risk, guarantees the collateralization of swap counterparties' exposures. Mitigating counterparty credit risk for SDs with systemically important swap positions through clearing likely would reduce systemic risk in the swap market and the financial system as a whole.<sup>121</sup>

<sup>120</sup> See definition of SD, codified in Commission regulation 1.3(ggg).

<sup>121</sup> In its regulation 39.5(b) submission, SGX asserts that central clearing reduces counterparty credit risk because the central counterparty interposes itself between the initial buyer and seller and because clearing creates efficiencies through the consolidation of collateral management.

In addition to managing counterparty credit risk, centrally clearing the swaps covered by this rulemaking through a DCO will reduce systemic risk through the following means: Providing counterparties with daily mark-to-market valuations and exchange of variation margin pursuant to a risk management framework; requiring posting of initial margin to cover potential future exposures in the event of a default; offering multilateral netting to substantially reduce the number and notional amount of outstanding bilateral positions; reducing swap counterparties' operational burden by consolidating collateral management and cash flows; eliminating the need for novations or tear-ups because clearing members may offset opposing positions; and increasing transparency.

The Commission recognizes that the new margin requirements for uncleared swaps for SDs and MSPs require some market participants to post and collect margin for those swaps not subject to the Commission's clearing requirement.<sup>122</sup> Neither the Commission's nor the prudential regulators' uncleared margin requirement was finalized at the time the Commission issued the First Clearing Requirement Determination. As a result, the Commission considered the clearing requirement in light of existing market practice. Going forward, the requirement to margin uncleared swaps in certain instances will mitigate the accumulation of risk between counterparties in a manner similar to that of central clearing.

However, the Commission believes that central clearing, including required clearing such as that described herein, offers greater risk mitigation than bilateral margining for swaps that are sufficiently standardized and meet the Commission's other requirements for suitability. First, absent any applicable exception or exemption,<sup>123</sup> the clearing requirement applies to all transactions

in swaps identified in regulation 50.4, whereas, generally speaking, the new uncleared margin requirements apply only to swaps executed between SDs and MSPs, and between an SD or MSP and its counterparty that is a "financial end-user."<sup>124</sup> Second, this clearing requirement requires all swap counterparties to post initial margin with a DCO, whereas under the uncleared swap margin regulations, for certain swaps, specifically those between an SD or MSP and a financial end-user, initial margin is required to be posted and collected only if the financial end-user (together with its affiliates) has over \$8 billion in gross notional exposures for uncleared swaps.<sup>125</sup> Third, swaps transacted through a DCO are secured by the DCO's guaranty fund and other available financial resources, which are intended to cover extraordinary losses that would not be covered by initial margin ("tail risk"), whereas swaps subject to the uncleared margin requirements are not secured by a guaranty fund or other financial resources available to the DCO but covered by unencumbered assets of the counterparty.

#### 1. DCO Mitigation of Risk and Concentration of Risk

In their § 39.5(b) submissions, CME, Eurex, and LCH stated that subjecting interest rate swaps to central clearing helps mitigate systemic risk. According to LCH, if all clearable swaps were required to be cleared at a small number of central counterparties rather than being held bilaterally by a much larger group of swap counterparties, the robust risk management frameworks of clearinghouses, such as that operated by LCH, would serve to reduce operational and systemic risk in the interest rate swap market. CME stated that the 2008 financial crisis demonstrated the potential for systemic risk arising from the interconnectedness of over-the-counter (OTC) derivatives market participants and asserted that centralized clearing will reduce systemic risk.

While a clearing requirement removes a large portion of the interconnectedness of current OTC markets that leads to systemic risk, the Commission notes that central clearing, by its very nature, concentrates risk in a handful of entities. Similarly, SGX, in its § 39.5(b) submission, noted that the

risk reducing and other benefits of central clearing must be weighed against the concentration of risk in a few clearinghouses. However, the Commission observes that central clearing was developed and designed to handle such concentration of risk. Moreover, as discussed at length above, the Commission's review and risk surveillance programs monitor and attempt to mitigate potential risks that can arise in derivatives clearing activities for the DCO, its members, and other entities using the DCO's services.

Part of a DCO's risk management framework includes procedures for responding in stressed circumstances, such as a clearing member's default on its obligations. As discussed below, each of CME, Eurex, LCH, and SGX has a procedure for closing out and/or transferring a defaulting clearing member's positions and collateral.<sup>126</sup> Transferring customer positions to solvent clearing members in the event of a default is critical to reducing systemic risk. DCOs are designed to withstand defaulting positions and to prevent a defaulting clearing member's loss from spreading further and triggering additional defaults. If the introduction of this expanded clearing requirement for interest rate swaps increases the number of clearing members and market participants in the swap market, then DCOs may find it easier to transfer positions from defaulting clearing members to other clearing members because there may be a larger pool of potential clearing members to receive the positions. If this were to occur, then this expanded interest rate swap clearing requirement would help to reduce systemic risk by increasing the number of clearing members and market participants in these swaps, which would be expected to provide DCOs with additional recipients for defaulting clearing members' positions in the event of a default.

Each DCO has experience risk managing interest rate swaps, and the Commission has determined that each of CME, Eurex, LCH, and SGX has the necessary resources available to clear the swaps that are the subject of its submission. Accordingly, the Commission concludes that it has considered the effect of the expanded clearing requirement on the mitigation of systemic risk and found that mitigating counterparty risk through required central clearing likely will

<sup>122</sup> Margin Requirements for Uncleared Swaps for SDs and MSPs, 81 FR 636 (Jan. 6, 2016) (codified in subpart E of part 23 of the Commission's regulations) (establishing initial and variation margin requirements for certain SDs and MSPs for which there is no prudential regulator); and Margin and Capital Requirements for Covered Swap Entities, 80 FR 74840 (Nov. 30, 2015) (establishing minimum margin and capital requirements for certain registered SDs, MSPs, security-based swap dealers, and major security-based swap participants regulated by one of the Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Farm Credit Administration or the Federal Housing Finance Agency). See also section V for further discussion of this issue.

<sup>123</sup> The exception and exemptions to the clearing requirement are codified in subpart C to part 50 of the Commission's regulations.

<sup>124</sup> See Commission regulation 23.151 (defining financial end user). See also Margin and Capital Requirements for Covered Swap Entities, 80 FR at 74900 (defining financial end user for rules that are applicable to SDs and MSPs that have a prudential regulator).

<sup>125</sup> Commission regulation 23.152.

<sup>126</sup> For further discussion of treatment of customer and swap counterparty positions, funds and property in the event of a the insolvency of a DCO or one or more of its clearing members, please see Factor (V)—Legal certainty in the event of insolvency. See section II.B.iii.

generally reduce systemic risk in the swaps markets for the products subject to this determination.

## 2. Comments Received Regarding Factor (III)

Several comment letters agreed with the Commission's conclusion that the clearing requirement would reduce systemic risk. Citadel commented that it believes that clearing reduces systemic risk by promoting open, efficient, and transparent markets and by reducing interconnectedness. In its comment letter, Citadel agreed with the Commission that central clearing does more to mitigate systemic risk than bilateral margining requirements. Citadel noted that unlike bilateral margining requirements, clearing eliminates the complex web of interconnected bilateral counterparty credit exposures. Citadel also commented that it believes that market participants benefit from the risk and default management frameworks that clearinghouses provide, including margin collection, end-of-day pricing, multilateral netting and compression, and a guaranty fund.

SIFMA AMG commented that clearing promotes market integrity. Better Markets commented that increased clearing may reduce systemic risk because of a potential increase in the number of DCO-clearing members. LCH Group commented that its risk management framework is calibrated to the particular characteristics of the swaps covered by the NPRM. LCH Group commented further that it is capable of handling any increased risk that could result from the clearing requirement, including during stressed market conditions.

The Commission received no other comments related to the effect of the expanded clearing requirement on the mitigation of systemic risk.

For the reasons described above and in light of the comments received, the Commission reaffirms its conclusion, stated in the NPRM that CME, Eurex, LCH, and SGX would be able to manage the risks posed by clearing the additional swaps that will be required to be cleared by virtue of the expanded clearing requirement. In addition, the Commission believes that the required central clearing of the interest rate swaps subject to this rulemaking will serve to mitigate counterparty credit risk, and might increase the number of clearing members and market participants in these swaps, thereby potentially reducing systemic risk. Thus, the Commission has decided to expand the clearing requirement so that it includes the swaps subject to this

rulemaking, which are referenced in revised regulation 50.4(a).

## d. Factor (IV)—Effect on Competition

Section 2(h)(2)(D)(ii)(IV) of the CEA requires the Commission to take into account the effect on competition, including appropriate fees and charges applied to clearing. As discussed above, of particular concern to the Commission is whether this determination would harm competition by creating, enhancing, or entrenching market power in an affected product or service market, or facilitating the exercise of market power. Market power is viewed as the ability to raise prices, including clearing fees and charges, reduce output, diminish innovation, or otherwise harm customers as a result of diminished competitive constraints or incentives.

### 1. Competition Analysis

In the NPRM, the Commission identified one putative service market as potentially affected by this clearing requirement determination: A DCO service market encompassing those clearinghouses that currently clear, or could reasonably be expected to clear, the types of interest rate swaps subject to this rulemaking, *i.e.*, CME, Eurex, LCH, and SGX. Without defining the precise contours of this market, the Commission recognizes that, depending on the interplay of several factors, this clearing requirement determination potentially could impact competition within the affected market.<sup>127</sup> Several factors may influence whether any impact on competition is, overall, positive or negative. Of particular importance are: (1) Whether the demand for these clearing services and swaps is sufficiently elastic that a small but significant increase above competitive levels would prove unprofitable because users of the interest rate swaps and DCO clearing services would substitute other clearing services co-existing in the same market(s); and (2) the potential for new entry into this market. The availability of substitute clearing services to compete with those encompassed by this determination, and the likelihood of timely, sufficient new entry in the event that prices do increase above competitive levels, each operate independently to constrain anticompetitive behavior.

Any competitive import from this determination likely would stem from the fact that it removes the alternative of not clearing for interest rate swaps subject to this rulemaking. On the other hand, this clearing requirement

determination does not change who may or may not compete to provide clearing services for the interest rate swaps subject to this rulemaking (as well as those not required to be cleared).

Removing the alternative of not clearing is not determinative of negative competitive impact. Other factors—including the availability of other substitutes within the market or potential for new entry into the market—may constrain market power. The Commission does not foresee that this determination constructs barriers that would deter or impede new entry into a clearing services market.<sup>128</sup> Indeed, there is some basis to expect that the determination could foster an environment conducive to new entry. For example, this clearing requirement determination, and the prospect that more may follow, is likely to reinforce, if not encourage, growth in demand for clearing services. Demand growth, in turn, can enhance the sales opportunity, a condition hospitable to new entry.<sup>129</sup>

The Commission notes further, that while Eurex and SGX each clear only one of the interest rate swaps subject to this rulemaking, they are generally eligible to clear interest rate swaps under Commission regulation under § 39.5(a) and may decide to add to their interest rate swap offerings in light of this rulemaking.

<sup>128</sup> That said, the Commission recognizes that to the extent the clearing services market for the interest rate swaps subject to this rulemaking, after removing the alternative of not clearing such swaps, would be (1) limited to a concentrated few participants with highly aligned incentives, and (2) insulated from new competitive entry through barriers—*e.g.*, high sunk capital cost requirements; high switching costs to transition from embedded incumbents; and access restrictions—this clearing requirement determination could have a negative competitive impact by increasing market concentration. However, no commenters agreed with this specific argument as articulated in the NPRM.

<sup>129</sup> See, *e.g.*, U.S. Dep't. of Justice & Fed. Trade Comm'n, Horizontal Merger Guidelines (2010) section 9.2 (entry likely if it would be profitable which is in part a function of "the output level the entrant is likely to obtain"). In addition, the Commission notes that there are clearing organizations that clear the swaps subject to this rulemaking that are not Commission-registered DCOs: (1) OTC Clearing Hong Kong, which the Commission has exempted from DCO registration and clears HKD-denominated interest rate swaps; (2) ASX, which the Commission also has exempted from DCO registration and clears AUD-denominated interest rate swaps; and (3) Asigna (Mexico), which clears MXN-denominated interest rate swaps. The Commission observes that each of these clearing organizations would be eligible to apply for registration as a DCO if the organization were interested in offering client clearing to U.S. customers. Exemptions from registration are conditioned on clearing only for U.S. proprietary accounts.

<sup>127</sup> See section II.C.ii for a further discussion of the market for interest rate swaps.

## 2. Comments Received Regarding Factor (IV)

Better Markets, Citadel, and MFA commented that the clearing requirement would have a positive effect on competition. According to both Citadel and Better Markets, central clearing of swaps generally increases the range of execution counterparties, increases liquidity and price competition, narrows bid-ask spreads, and improves access to best execution. Similarly, MFA commented that the clearing requirement would increase competition among potential trading counterparties and liquidity providers by reducing counterparty credit and operational risk and by allowing market participants to trade with a wider range of execution counterparties. Better Markets also commented that the clearing requirement could promote competition because it could remove barriers to entry to the market and suggested that the clearing requirement could enhance the ability of relatively small SDs and other relatively small swap participants to compete with larger dealers and participants.

Citadel commented that by eliminating bilateral counterparty credit exposure and trading documentation, clearing can lead to market structure innovations such as trading solutions that allow investors to trade directly with one another instead of through intermediaries.

Citadel also commented that clearing lowers execution costs in addition to increasing liquidity. Citadel cited academic research published in 2016 indicating that the Commission's existing IRS clearing requirement, together with trading reforms, have enabled swap market participants to save as much as \$20 million to \$40 million per day, with between \$7 million and \$13 million of the savings by market participants being attributed to market participants that do not act as dealers in the swaps market.<sup>130</sup>

Two commenters, JBA and Citadel, voiced contrasting views concerning the effects of only one DCO offering a swap subject to a clearing requirement. JBA stated that when only one DCO offers a swap for clearing, costs might increase for market participants to join that DCO or enter into new client clearing arrangements with clearing members of that DCO. JBA also commented that there may be lower liquidity for swaps newly offered at a particular DCO.

By contrast, Citadel commented that the possibility of only one DCO offering to clear a particular swap would not

have adverse effects because swap market participants generally prefer to clear swaps at one DCO instead of at multiple DCOs in order to reduce costs by maximizing netting, compression, and margin offsets. Citadel also commented that fees charged by FCMs, rather than fees charged by DCOs, are the major source of clearing costs.<sup>131</sup> Moreover, according to Citadel, the fees charged by FCMs depend primarily on the portfolio the customer wishes to clear rather than on the number of DCOs offering to clear a particular swap. Finally, Citadel commented that the clearing requirement could lead a DCO or FCM to expand its clearing offerings because of the increased clearing volumes that may result from the clearing requirement. As more DCOs and/or FCMs enter the market or expand clearing offerings, price competition would increase and costs for customers would be expected to decrease.

With regard to JBA's comment, in light of the fact that there are only three swaps covered by the determination that are currently offered for clearing by solely one DCO (MXN-denominated fixed-to-floating interest rate swaps, currently offered for clearing only at CME; and AUD- and CAD-denominated OIS, currently offered for clearing only at LCH), and LCH and CME have indicated that they intend to begin offering to clear each of these swaps, respectively, before the end of 2016, the Commission believes that JBA's competitive concerns about only one DCO offering a particular swap will be largely addressed.

While not explicitly addressing the fourth factor under section 2(h)(2)(D)(ii) of the CEA, ISDA expressed concern about how the clearing requirement for AUD- and HKD-denominated interest rate swaps might affect competition due to the fact that the Commission exempted ASX and OTC Clearing Hong Kong from DCO registration, meaning that they may clear these swaps for U.S. proprietary accounts but not for U.S. customer accounts.<sup>132</sup> As stated in note 127 above, the Commission notes that these entities could apply to the Commission for DCO registration in order to clear for U.S. customer accounts should they decide to pursue that line of business at any time in the future.

Citadel's comments suggest that extinguishing bilateral counterparty credit exposure and eliminating

complex bilateral trading documentation for swaps subject to a clearing requirement enables market participants to access a wider range of execution counterparties and encourages the entry of new liquidity providers.<sup>133</sup> In Citadel's view, competition among FCMs is more relevant to ensuring that the overall fees and charges applied to clearing are set at a reasonable level. In addition, the imposition of a clearing requirement may itself create the commercial rationale for another DCO or FCM to launch or expand its clearing offering. Under this view, price competition tends to increase, execution costs for investors and customers tend to decrease, and overall market liquidity would therefore improve for the swaps subject to the clearing requirement.<sup>134</sup>

For the reasons described above and in light of the comments received, the Commission concludes that it has considered the effect of the expanded clearing requirement on competition and found that it potentially could impact competition within the affected market, but anticompetitive behavior is likely to be constrained and demand for clearing services is expected to grow. Accordingly, the Commission reaffirms its conclusion stated in the NPRM that its consideration of competitiveness is sufficient to expand the clearing requirement to include the swaps subject to this rulemaking, which are referenced in revised regulation 50.4(a).

## e. Factor (V)—Legal Certainty in the Event of Insolvency

Section 2(h)(2)(D)(ii)(V) of the CEA requires the Commission to take into account the existence of reasonable legal certainty in the event of the insolvency of the relevant DCO or one or more of its clearing members with regard to the treatment of customer and swap counterparty positions, funds, and property. The Commission is issuing this clearing requirement based on its view that, as stated in the NPRM, there is reasonable legal certainty with regard to the treatment of customer and swap counterparty positions, funds, and property in connection with cleared

<sup>133</sup> Commission regulation 39.12(b)(6) requires a DCO to establish rules providing that upon acceptance of a swap for clearing, the original swap is extinguished and replaced by an equal and opposite swap between the DCO and each clearing member acting as principal for a house trade or acting as agent for a customer trade. This process extinguishes counterparty credit risk between the original executing counterparties.

<sup>134</sup> See section V for additional discussion on the implications of clearing fees. In the aggregate clearing fees may go up, but clearing fees as measured by per unit cost may go down after the implementation of a new clearing requirement determination.

<sup>130</sup> See Citadel letter for further discussion of academic papers and possible cost savings.

<sup>131</sup> FCMs provide their customers with access to DCOs in their capacity as DCO clearing members.

<sup>132</sup> Commission regulation 1.3(y) defines proprietary account, and Commission regulation 1.3(gggg) defines customer account.

swaps, namely the fixed-to-floating interest rate swaps, basis swap, OIS, and FRAs subject to this determination, in the event of the insolvency of the relevant DCO or one or more of the DCO's clearing members.<sup>135</sup>

### 1. Applicable Legal Regime—U.S.

The Commission concludes that, in the case of a clearing member insolvency at CME, where the clearing member is the subject of a proceeding under the U.S. Bankruptcy Code, subchapter IV of Chapter 7 of the U.S. Bankruptcy Code (11 U.S.C. 761–767) and parts 22 and 190 of the Commission's regulations would govern the treatment of customer positions.<sup>136</sup> Pursuant to section 4d(f) of the CEA, a clearing member accepting funds from a customer to margin a cleared swap must be a registered FCM. Pursuant to 11 U.S.C. 761–767 and part 190 of the Commission's regulations, the customer's interest rate swap positions, carried by the insolvent FCM, would be deemed "commodity contracts."<sup>137</sup> As a result, neither a clearing member's bankruptcy nor any order of a bankruptcy court could prevent CME from closing out/liquidating such positions. However, customers of clearing members would have priority over all other claimants with respect to customer funds that had been held by the defaulting clearing member to margin swaps, such as the interest rate swaps subject to this rulemaking.<sup>138</sup> Thus, customer claims would have priority over proprietary claims and general creditor claims. Customer funds would be distributed to swap customers, including interest rate swap customers, in accordance with Commission regulations and section 766(h) of the Bankruptcy Code. Moreover, the Bankruptcy Code and the Commission's

rules thereunder (in particular 11 U.S.C. 764(b) and 17 CFR 190.06) permit the transfer of customer positions and collateral to solvent clearing members.

Similarly, 11 U.S.C. 761–767 and part 190 would govern the bankruptcy of a DCO where the DCO is the subject of a proceeding under the U.S. Bankruptcy Code, in conjunction with DCO rules providing for the termination of outstanding contracts and/or return of remaining clearing member and customer property to clearing members.

### 2. Applicable Legal Regime—U.K.

With regard to LCH, the Commission understands that the default of a clearing member of LCH would be governed by LCH's rules. LCH, a DCO based in the U.K., has represented that pursuant to European Union law, LCH's rules would supersede English insolvency laws.<sup>139</sup> Under its rules, LCH would be permitted to close out and/or transfer positions of a defaulting clearing member that is an FCM pursuant to the U.S. Bankruptcy Code and part 190 of the Commission's regulations. According to LCH's submission, the insolvency of LCH itself would be governed by English insolvency law, which protects the enforceability of the default-related provisions of LCH's rulebook, including in respect of compliance with applicable provisions of the U.S. Bankruptcy Code and part 190 of the Commission's regulations. LCH has obtained, and shared with the Commission, legal opinions that support the existence of such legal certainty in relation to the protection of customer and swap counterparty positions, funds, and property in the event of the insolvency of one or more of its clearing members.<sup>140</sup>

The Commission also considered the implications of the U.K.'s recent referendum vote to withdraw from the European Union. The terms of any such withdrawal cannot be known at this time. Negotiations have not begun, and the U.K. has not yet given notice under Article 50 of the Treaty on the European Union to begin the withdrawal process. Thus, there is no indication at this time that there will be changes to the U.K.'s financial regulation regime that is based on European Union law. On June 24,

2016, the day after the vote, the Bank of England Governor Mark Carney indicated that the Bank of England's responsibilities for monetary and financial stability were unchanged by the referendum's result.<sup>141</sup> In addition, the U.K.'s Financial Conduct Authority issued a statement confirming that U.K. financial regulation derived from European Union legislation would "remain applicable until any changes are made."<sup>142</sup>

LCH has advised the Commission that it does not anticipate proposing any changes to its rulebook in light of the referendum, nor does it anticipate any changes to applicable law at this time. The Commission therefore expects LCH's legal opinions related to insolvency to remain valid until further notice and expects that a default of a clearing member of LCH will continue to be governed by LCH's rules. The Commission will continue to monitor developments related to the U.K. referendum.

### 3. Applicable Legal Regime—Singapore

With regard to SGX, the Commission understands that the default of an SGX clearing member, or SGX itself, would be governed by Singapore law, except for certain SGX rules relating to cleared swaps customer collateral, as part 22 of the Commission's regulations defines that term, which are governed by U.S. law. Like LCH, SGX has obtained, and shared with the Commission, a legal opinion that support the existence of such legal certainty.<sup>143</sup>

### 4. Comments Received

Better Markets and Citadel commented that they agree with the Commission that reasonable legal certainty exists in the event of an insolvency of a DCO or one or more of its clearing members with respect to the interest rate swaps covered by the NPRM. Citadel noted that the legal framework set forth in the CEA, the U.S. Bankruptcy Code, and Commission regulations applies equally to any swap cleared by a DCO. Citadel believes that the implementation of the Dodd-Frank Act has strengthened this legal framework. The Commission received no other comments related to legal certainty in the event of insolvency.

<sup>135</sup> In this case, the relevant DCOs are CME, LCH, and SGX. The Commission is not discussing Eurex in terms of this factor because Eurex's DCO registration order does not currently permit Eurex to clear for customers. See Eurex DCO registration order, available at: <http://www.cftc.gov/ido/groups/public/@otherif/documents/ifdocs/orgdcoeurexclrorder212016.pdf>.

<sup>136</sup> The Commission observes that an FCM or DCO also may be subject to resolution under Title II of the Dodd-Frank Act to the extent it would qualify as a covered financial company (as defined in section 201(a)(8) of the Dodd-Frank Act). Under Title II, different rules would apply to the resolution of an FCM or DCO. Discussion in this section relating to what might occur in the event an FCM or DCO defaults or becomes insolvent describes procedures and powers that exist in the absence of a Title II receivership.

<sup>137</sup> If an FCM also is registered as a broker-dealer, certain issues related to its insolvency proceeding also would be governed by the Securities Investor Protection Act.

<sup>138</sup> Claims seeking payment for the administration of customer property would share this priority.

<sup>139</sup> The U.K. is bound by European Union legislation, including the Settlement Finality Directive (Council Directive 98/26/EC). The U.K.'s implementing legislation (The Financial Markets and Insolvency (Settlement Finality) Regulations 1999) acts to disapply, in certain instances, national U.K. insolvency law in favor of the rules of a designated system, and LCH has been so designated.

<sup>140</sup> Letters of counsel on file with the Commission.

<sup>141</sup> Bank of England, Governor Mark Carney's statement following EU referendum result (June 24, 2016), available at: <http://www.bankofengland.co.uk/publications/Documents/news/2016/056.pdf>.

<sup>142</sup> U.K. Financial Conduct Authority, Statement on European Union referendum result (June 24, 2016), available at: <https://www.fca.org.uk/news/european-union-referendum-result-statement>.

<sup>143</sup> Letter of counsel on file with the Commission.

For the reasons described above and in light of the comments received, the Commission reaffirms its conclusion stated in the NPRM that reasonable legal certainty exists in the event of the insolvency of each of the relevant DCOs or one or more of their clearing members with regard to the treatment of customer and swap counterparty positions, funds, and property to expand the clearing requirement so that it includes the swaps subject to this rulemaking, which are referenced in revised regulation 50.4(a).

### C. Generally Applicable Comments

The Commission received a number of generally applicable comments that are separated into three broad topics for discussion below: (i) Access to DCOs, (ii) additional data considered by the Commission in response to ISDA's request, and (iii) the Commission's trade execution requirement.

#### i. Access to DCOs

JBA raised concerns about possibly needing to establish a clearing relationship with a new DCO in order to comply with the proposed expanded clearing requirement.<sup>144</sup> In light of the fact that there are only three swaps covered by the determination that currently are offered for clearing by solely one DCO (MXN-denominated fixed-to-floating interest rate swaps, currently offered for clearing only at CME; and AUD- and CAD-denominated OIS, currently offered for clearing only at LCH), and LCH and CME have indicated that they intend to begin offering to clear each of these swaps, respectively, before the end of 2016, the Commission believes that JBA's concerns about a swap market participant having to establish a new clearing arrangement even if the participant already has a clearing arrangement in place at CME or LCH will be largely addressed. For certain products, if market participants do not have clearing arrangements in place at CME or LCH, they may need to establish

a new clearing arrangement (either as a clearing member or as a customer of a clearing member) at one of those DCOs.

CME Group raised concerns about market participants being able to establish an account with a clearing member. In response to comments about access to DCOs, the Commission notes, as it did in the First Clearing Requirement Determination, that any market participant may petition for relief under Commission regulation 140.99 if the entity is unable to find an FCM to clear its swaps or if it needs additional time to complete requisite documentation.<sup>145</sup>

#### ii. Additional Data Considered by the Commission

One commenter, ISDA, raised an issue about the type of data and analysis included in the NPRM. In its comment letter, ISDA said that based on the data presented in the NPRM, "it is difficult to determine the impact that the [clearing requirement expansion] would have on market participants," particularly for "market participants in an individual jurisdiction." ISDA requested data on (1) the volume of transactions entered into by entities subject to the CFTC's new clearing requirement that currently enter into swaps subject to this rulemaking on an uncleared basis, and (2) the percentage of each swap subject to this rulemaking that is cleared voluntarily, on a jurisdiction-by-jurisdiction basis.

The Commission notes that ISDA's suggested data analysis is not specifically required under the five statutory factors that the Commission must consider when making a clearing requirement determination, as outlined in sections 2(h)(2)(D)(ii)(I)–(V) of the CEA.<sup>146</sup> Furthermore, the Commission observes that it is difficult to determine with precision, at this point in time,

what effect a new, expanded clearing requirement will have on market participants because some may choose to clear their transactions for the risk-reducing benefits of clearing, regardless of whether the Commission adopts a new clearing requirement for such swaps.<sup>147</sup> Nonetheless, the Commission considered relevant, publicly available data and conducted an analysis in order to address, and respond to, the concerns expressed in ISDA's comment letter. This data and analysis is described below.

#### a. Data Analysis

Recognizing that the interest rate swaps market is global and market participants are interconnected, the Commission reviewed worldwide data collected in the BIS triennial central bank survey for interest rate derivatives<sup>148</sup> to consider further the effect that the expanded clearing requirement could have on market participants (data from this survey also is presented in Table 5 above). Table 16 shows the daily average turnover of OTC single currency interest rate derivatives, in each of the nine additional currencies, by currency and by country.<sup>149</sup>

<sup>147</sup> It is also possible that some market participants would respond to the new clearing requirement by decreasing their use of such swaps. See also the discussion in section V.B.ii.

<sup>148</sup> BIS data refers to interest rate derivatives transactions, which include forward rate agreements, interest rate swaps, and interest rate options. For the purposes of this discussion on BIS data, the Commission uses the term "interest rate derivatives" because that is the terminology used by BIS to describe the interest rate swaps market. A description of the instruments included in the BIS' Triennial Survey results is included in the BIS Triennial Bank Survey, OTC interest rate derivatives turnover in April 2013: preliminary global results (Sept. 2013), at 14, available at <http://www.bis.org/publ/rpfx13ir.pdf>.

<sup>149</sup> ISDA requested data based on "jurisdiction" and the BIS reports its data by "country." For purposes of this analysis and discussion, the terms "country" and "jurisdiction" can be understood to mean the same thing. Furthermore, a market for a swap denominated in a particular currency can be understood to include both trading in the home country for that currency and trading outside of the home country for that currency.

<sup>144</sup> See also discussion of JBA's comment in section II.B.iii.

<sup>145</sup> First Clearing Requirement Determination, 77 FR at 74320. See also further discussion of this issue in the cost benefit consideration section below.

<sup>146</sup> The Commission's analysis and data used to support its assessment of each of the five factors is discussed in section II.B.iii.



Table 16  
BIS Triennial Central Bank Survey 2013 Data<sup>150</sup>  
Geographical Breakdown of OTC Single Currency  
Interest Rate Derivatives, Daily Average Turnover<sup>151</sup>

	OTC Interest Rate Derivatives (IRD) Turnover April 2013	A Total for the Country (in millions of USD)	B Percent- age of domestic currency of total for the country	C Daily average turnover by currency (in millions of USD)								
				AUD	CAD	HKD	MXN	NOK	PLN	SGD	SEK	CHF
D	Australia	\$66,184	83%	\$54,744	\$15	\$2	...	...	...	\$119	...	...
	Canada	\$33,975	48%	\$493	\$16,337	...	\$46	...	...	...	...	\$2
	Hong Kong	\$27,897	6%	\$7,342	...	\$1,773	...	...	...	\$568	...	\$9
	Mexico	\$2,390	94%	...	...	...	\$2,255	\$1	...	...	...	...
	Norway	\$5,651	80%	...	\$2	...	...	\$4,536	\$11	...	\$133	...
	Poland	\$3,038	96%	...	...	...	...	...	\$2,916	...	...	\$82
	Singapore	\$37,143	9%	\$8,879	\$23	\$283	...	\$1	...	\$3,255	\$7	...
	Sweden	\$16,998	78%	...	...	...	...	\$778	...	...	\$13,228	...
	Switzerland	\$32,618	10%	\$234	...	...	...	\$246	\$0	...	\$394	\$3,132
E	Percentage in domestic country			53%	46%	64%	18%	39%	32%	70%	30%	18%
F	United States	\$628,153	...	\$3,535	\$17,834	\$263	\$9,074	\$118	\$140	\$318	\$360	\$276
G	Percentage of the U.S. IRD market	...	...	0.56%	2.84%	0.04%	1.44%	0.02%	0.02%	0.05%	0.06%	0.04%
H	Percentage turnover in the U.S.	...	...	3%	51%	10%	74%	1%	2%	7%	1%	2%
I	Total IRD Swaps per Currency (all countries)	...	...	\$102,405	\$35,261	\$2,752	\$12,337	\$11,706	\$9,244	\$4,650	\$44,257	\$17,025

In addition to the data on a jurisdiction-by-jurisdiction basis, Table 16 includes calculations by Commission staff<sup>152</sup> presented in order to convey the relative amount of swaps activity taking place in each jurisdiction, as compared to other jurisdictions and the U.S.<sup>153</sup> As this BIS data demonstrates, the turnover

in each of the nine additional currencies represents a small percentage of the overall interest rate derivatives turnover in the U.S. market, especially as compared with the USD-denominated swaps subject to the First Clearing Requirement Determination.<sup>154</sup> The data also shows that for most of these currencies, a significant percentage of the activity in the derivatives

denominated in a particular currency occurs in the home country that issues that currency.

According to Row E in Table 16, anywhere from 18% to 70% of the interest rate derivatives denominated in a particular currency are transacted in the home country that issued the currency. The percentage of activity that occurs in the home country supports the decision made by each domestic authority to establish a clearing mandate for particular interest rate swaps denominated in that currency. But in each case, there also is measurable trading activity taking place outside of the home country jurisdiction.

In terms of which market participants are trading in particular markets, the BIS data available does not categorize the daily average turnover by transactions entered into by U.S. or non-

<sup>150</sup> BIS Triennial Central Bank Survey, Interest Rate Derivatives Market Turnover in 2013, Tables 3.1–3.6 (Dec. 2013), available at: <http://www.bis.org/publ/rpfx13irt.pdf>; CFTC staff calculations.

<sup>151</sup> Data as of April 2013. BIS converted the figures to USD.

<sup>152</sup> Commission staff calculated percentages reflected in column B and rows E, G, and H.

<sup>153</sup> The Commission notes that similar BIS data was presented in ESMA's Consultation Paper on the Clearing Obligation under EMIR (no.4), at 26, available at: [https://www.esma.europa.eu/sites/default/files/library/2015/11/esma-2015-807\\_-\\_consultation\\_paper\\_no\\_4\\_on\\_the\\_clearing\\_obligation\\_irs\\_2.pdf](https://www.esma.europa.eu/sites/default/files/library/2015/11/esma-2015-807_-_consultation_paper_no_4_on_the_clearing_obligation_irs_2.pdf).

<sup>154</sup> Based on the same data from the BIS Triennial Central Bank Survey, Interest Rate Derivatives Market Turnover in 2013, the following represent percentages of turnover for each of the currencies that were subject to the Commission's First Clearing Requirement Determination: Turnover of USD-denominated interest rate derivatives represented 86.96% of the U.S. market; turnover of EUR-denominated interest rate derivatives represented 4.31% of the U.S. market; turnover of GBP-denominated interest rate derivatives represented 0.50% of the U.S. market; and turnover of JPY-denominated interest rate derivatives represented 0.69% of the U.S. market.

U.S. market participants. As a result, the Commission cannot estimate *precisely* what portion of these transactions would be subject to this clearing requirement determination based on the BIS data. However, the estimated overall percentage of activity in the U.S. is shown in Rows G and H. In April 2013, the interest rate derivatives denominated in the currencies subject to this rulemaking represented between 0.02% and 2.84% of the total U.S.-based interest rate derivatives market (*i.e.*, the amount of daily average turnover that BIS estimated was taking place in the U.S.). The Commission recognizes that the interest rate derivatives transacted in the nine additional currencies do not represent a large percentage of the overall U.S. market for interest rate swaps, but the levels transacted are significant in the specific market for each currency.<sup>155</sup>

#### b. Policy Considerations

Foreign jurisdictions have expressed concern that potential market dislocation and competitive disadvantage may result if there is no U.S. clearing requirement covering the same swaps that are mandated to be cleared by non-U.S. jurisdictions. This concern is driven by the fact that a market participant's choice in counterparty may be influenced by the existence or absence of a clearing requirement. Similarly, from the U.S. perspective, distortion of market participants' choices could be competitively detrimental to the extent that U.S. market participants are subject to a clearing requirement under U.S. law, but their competitors in a foreign jurisdiction are not. Recognizing this concern, international authorities agreed to harmonize clearing mandates across jurisdictions to the extent practicable and as appropriate.<sup>156</sup>

<sup>155</sup> For example, daily average turnover in MXN-denominated interest rate derivatives in the U.S. represented only 1.44% of the daily average turnover of all interest rate derivatives in the U.S. during April 2013 but represented 74% of the MXN-denominated interest rate derivatives market globally.

<sup>156</sup> See, e.g., Report of the OTC Derivatives Regulators Group (ODRG) to G20 Leaders on Cross-Border Implementation Issues, November 2015, available at: [http://www.cftc.gov/odc/groups/public/@internationalaffairs/documents/file/odrgreportg20\\_1115.pdf](http://www.cftc.gov/odc/groups/public/@internationalaffairs/documents/file/odrgreportg20_1115.pdf) ("ODRG members previously agreed to a framework for consulting one another on mandatory clearing determinations, with the aim of harmonizing mandatory clearing determinations across jurisdictions to the extent practicable and as appropriate, subject to jurisdictions' determination procedures. Inconsistent clearing mandates across jurisdictions may create the potential for regulatory arbitrage. ODRG members are considering ways to enhance the existing framework for such cooperation.")

Another variable that likely is affecting decisions made by both U.S. and non-U.S. market participants vis-à-vis central clearing is the imposition of margin for uncleared swaps. The new uncleared margin regulations began phasing in on September 1, 2016.<sup>157</sup> To the extent that market participants have a choice of counterparties, and perceive the costs of maintaining uncleared transactions to be lower than the costs of clearing, market participants may choose to transact with counterparties that are not subject to mandatory clearing. Conversely, if market participants view the costs of clearing as less than the costs of margining their uncleared swaps then there will be an incentive to clear regardless of whether it is required under CFTC regulations or not.

The Commission cannot predict exactly how market participants will be affected by the implementation of an analogous clearing requirement in the U.S., particularly in the current environment where multiple, changing factors, including new margin requirements, may influence a market participant's decision about whether to clear a swap. The Commission and its staff are committed to monitoring market activity in order to assess the impact of its regulations on market behavior. In its ongoing work, the Commission intends to rely on publicly available data, such as the forthcoming BIS triennial survey, as well as the data market participants report to SDRs under part 45 of the Commission's regulations.

#### iii. Trade Execution Requirement

Three comment letters discussed the possibility of a trade execution requirement concerning some or all of the interest rate swaps subject to this rulemaking.<sup>158</sup> ISDA expressed concern that an expanded clearing requirement could lead to new trade execution requirements for swaps that have limited liquidity. Consequently, ISDA urged the Commission to take any available steps to ensure that a trade execution requirement applies only to swaps with sufficient trading liquidity. Finally, ISDA expressed particular concern about the interpretation of the

<sup>157</sup> See section V.C.ii for a discussion about the costs related to collateralization of cleared swaps positions compared to the costs of complying with the uncleared swap margin regulations.

<sup>158</sup> Pursuant to section 2(h)(8) of the CEA, once a swap is subject to a Commission-issued clearing requirement, then a market participant must execute the swap on a SEF or DCM, if a SEF or DCM makes the swap available to trade ("made-available-to-trade"). The Commission issued regulations 37.10 and 38.12 to implement the trade execution requirement.

term "U.S. person" described in the Commission's cross-border guidance concerning swaps regulations,<sup>159</sup> which ISDA asserted could lead to a potentially detrimental impact on trading liquidity outside the U.S., including possible market fragmentation.

SIFMA AMG commented that the Commission should temporarily suspend acceptance of "made-available-to-trade" submissions, under Commission regulations 37.10 and 38.12, for swaps covered by the expanded clearing requirement until amendments to the made-available-to-trade process have been adopted. SIFMA AMG provided five specific comments on how the made-available-to-trade regulations should be amended.

Finally, Citadel commented that the Commission should proceed with finalizing the expanded clearing requirement despite the ongoing discussions regarding a revised made-available-to-trade process.

As the Commission stated in the NPRM, pursuant to section 2(h)(8) of the CEA and Commission regulations 37.10 and 38.12, a trade execution requirement could, in the future, apply to some or all of the interest rate swaps covered by this rulemaking.<sup>160</sup> The process for determining which swaps are subject to the trade execution requirement is separate from the clearing requirement determination process. Therefore, it is beyond the scope of this rulemaking for the Commission to address the suitability of particular swaps for a trade execution requirement or to address issues related to the "made-available-to-trade" process.

### III. Expanded and Amended Regulation 50.4(a)

The Commission promulgated regulation 50.4 in 2012 when it issued the First Clearing Requirement Determination, which applied to certain interest rate swaps and credit default swaps.<sup>161</sup> Regulation 50.4 sets forth the basic specifications of the classes of swaps that the Commission requires to be cleared in order to allow counterparties contemplating entering into a swap to quickly determine whether or not the particular swap may be subject to a clearing requirement.<sup>162</sup> Paragraph (a) of regulation 50.4 sets forth the four classes of interest rate

<sup>159</sup> Interpretive Guidance and Policy Statement Regarding Compliance with Certain Swap Regulations, 78 FR 45292 (July 26, 2013).

<sup>160</sup> 81 FR at 39516, n. 66.

<sup>161</sup> First Clearing Requirement Determination, 77 FR 74284 (Dec. 13, 2012).

<sup>162</sup> *Id.*

swaps that are currently required to be cleared.

For the reasons discussed above, the Commission has decided to expand regulation 50.4(a) as proposed, with the exception of not adopting a requirement to clear AUD-denominated FRAs. Thus the Commission is adopting amendments to regulation 50.4(a) as follows: (i) Adding fixed-to-floating interest rate swaps denominated in the nine additional currencies; (ii) adding AUD-denominated basis swaps; (iii) adding NOK-, PLN-, and SEK-denominated FRAs; (iv) changing the maximum stated termination date for USD-, GBP-, and EUR-denominated OIS to three years from two years; and (v) adding AUD- and CAD-denominated OIS. The specifications of the swaps set forth in revised regulation 50.4(a) are consistent with those that are the subject of clearing requirements proposed or issued by other jurisdictions.<sup>163</sup>

In its comment letter, Scotiabank suggested that four of the specifications in proposed regulation 50.4(a) describing MXN-denominated fixed-to-floating interest rate swaps should be finalized differently from the specifications proposed. For the reasons described below, the Commission has decided to finalize the specifications as proposed.

First, Scotiabank suggested that the floating rate index should be described as “TIE 28” instead of “TIE”<sup>164</sup> because the Mexican clearing requirement covers swaps referencing the 28-day average Mexican interbank interest rate. The Commission agrees that “TIE 28” is the rate referenced in the Mexican clearing requirement, and it is also the rate to which amended regulation 50.4(a) is intended to refer. The Commission understands that (1) the 28-day average is the rate referenced by the MXN-denominated fixed-to-floating interest rate swaps accepted for clearing at CME; and (2) the 28-day average is the rate specified in the MXN-denominated fixed-to-floating interest rate swaps that will be offered for clearing at LCH. Therefore, the Commission intends for “TIE–BANXICO” in amended regulation 50.4(a) to refer to the 28-day TIE.<sup>165</sup>

<sup>163</sup> See discussion of clearing requirements in other jurisdictions in section I.C.

<sup>164</sup> “TIE” refers to the Mexican interbank equilibrium interest rate.

<sup>165</sup> In this final rulemaking, regulation 50.4(a) is amended to specify the “TIE–BANXICO” rate instead of “TIE,” as was proposed in the NPRM. CME’s regulation 39.5(b) submission specified the “TIE–BANXICO” rate. LCH’s offering in MXN-denominated fixed-to-floating swaps will reference this same rate. The Commission observes that “TIE” and “TIE–BANXICO” both refer to the same

However, the Commission is opting to finalize the description of that rate without specifying the particular version of floating rates because it has not done so with regard to the other rates referenced in regulation 50.4(a), such as 3-month LIBOR or 6-month LIBOR.

Second, Scotiabank commented that the maximum termination date range for MXN-denominated fixed-to-floating interest rate swaps covered by expanded regulation 50.4(a) should be 30 years in order to match the exact product specifications of the Mexican clearing requirement, instead of 21 years, as the Commission proposed. The Commission notes that CME, the only registered DCO currently offering to clear these swaps, offers to clear swaps having a maximum term of 21 years. Therefore, the Commission is finalizing the termination date range as proposed.

Third, Scotiabank suggested that MXN-denominated fixed-to-floating interest rate swaps subject to the Commission’s clearing requirement should cover only swaps having notional amounts in multiples of MXN 100,000 because Asigna, a Mexican clearinghouse, offers to clear only swaps having such notional amounts.<sup>166</sup> However, because CME’s product specifications do not limit clearing MXN-denominated fixed-to-floating interest rate swaps to notional amounts in multiples of MXN 100,000, the Commission does not believe that it is necessary to limit regulation 50.4(a) in this manner.

Fourth, Scotiabank suggested that the MXN-denominated fixed-to-floating interest rate swaps subject to the Commission’s clearing requirement should contain an exception for counterparties having “low net exposure,” in order to match the Mexican clearing requirement. As an initial matter, section 2(h) of the CEA defines the participant scope of the Commission’s clearing requirement: All swap market participants are expected to comply with a Commission-issued clearing requirement, except for certain non-financial end-users.<sup>167</sup> The Commission has implemented this statutory exception, along with other limited exemptions, in subpart C of part 50. This statutory and regulatory framework does not contemplate exclusions based on level of market activity, and the Commission believes it would not be appropriate to deviate

rate; “BANXICO” simply refers to the Banco de Mexico, which calculates the “TIE.”

<sup>166</sup> Asigna is not a Commission-registered DCO, and the Commission has not exempted Asigna from registration under section 5b(h) of the CEA.

<sup>167</sup> Section 2(h)(7) of the CEA.

from this framework for the MXN-denominated fixed-to-floating interest rate swaps subject to this rulemaking.

In their comment letters, JBA and Scotiabank requested confirmation that a market participant subject to the expanded clearing requirement would be required to clear swaps subject to this final rulemaking that are executed on or after the effective date of the final rulemaking, but not be required to backload swaps executed prior to that date. In response to this comment, the Commission confirms, as it did in the First Clearing Requirement Determination, that market participants will not be required to clear swaps subject to this rulemaking that are executed prior to the effective date of this final rulemaking.<sup>168</sup> In addition, the Commission will not require the backloading of swaps subject to this rulemaking that are executed after the effective date but before the applicable compliance date for this final rulemaking.

#### IV. Implementation Schedule

In the NPRM, the Commission stated that it did not intend to rely upon its schedule for phasing-in the clearing requirement by market participant type, as codified in Commission regulation 50.25 and relied upon for the First Clearing Requirement Determination. The Commission further proposed two alternative methods for establishing a CFTC clearing requirement compliance date.

The Commission received comments on four aspects of the overall proposed implementation schedule. First, commenters discussed whether the Commission should offer a compliance date phase-in by market participant type. The Commission addresses these comments in section IV.A below. Second, commenters discussed whether the Commission should adopt a single compliance date for all products subject to this determination, or whether the Commission should adopt compliance dates based on the effective date of a non-U.S. jurisdiction’s clearing mandate. The Commission addresses these comments in section IV.B below. Third, commenters requested clarifications on a number of discrete points related to the implementation schedule. The Commission addresses these comments in section IV.C below. Finally, commenters discussed whether

<sup>168</sup> See Commission regulation 50.5(b) (exempting from required clearing those swaps that are entered into *after* July 21, 2010 (the enactment date of the Dodd-Frank Act) but “*before* the application of the clearing requirement for a particular class of swaps under §§ 50.2 and 50.4 of this part”). See also implementation schedule described in section IV.

the Commission should change the scope of its clearing requirement to match the categories of market participants that are required to clear the products under a non-U.S. jurisdiction's clearing requirement. The Commission addresses these comments in section IV.D below.

#### *A. No Compliance Date Phase-In by Type of Market Participant*

The Commission proposed adopting one compliance date for all market participant types, rather than rely on the phase-in schedule codified in regulation 50.25.<sup>169</sup> The Commission has decided that because many market participants are currently clearing the products subject to this determination and because the Commission previously adopted a clearing requirement determination for the class of interest rate swaps subject to this final rulemaking, there is no need to phase-in the compliance dates by type of market participant.<sup>170</sup> A number of commenters agreed with the Commission's position and advocated for a compliance date without a phase-in by market participant type.

#### *i. Comments Received*

MFA supported the Commission's proposal not to phase-in the compliance date by market participant type and agreed that market participants are ready, willing, and able to clear the swaps subject to this rulemaking. Citadel agreed with the Commission's position that the phase-in by counterparty type is not necessary. Citadel pointed out that because market participants, in most cases, have established clearing arrangements with DCOs and are familiar with the process of central clearing, there is no need to delay compliance dates by including a phase-in by market participant type. LCH Group commented that while the use of a compliance date phase-in by market participant type was successful in connection with the Commission's First Clearing Requirement Determination, it would not be equally beneficial in this context.

Of the two commenters that requested a compliance date phase-in by market

participant type, one thought that market participants would be unable to comply with the clearing requirement in the time frame established. ISDA urged the Commission to adopt an implementation schedule that incorporates the 270-day phase-in schedule outlined in Commission regulation 50.25. ISDA expressed concern about the consequences for entities that currently may not be subject to an analogous clearing mandate outside of the U.S. in terms of addressing legal, documentation, operational, and other considerations. SIFMA AMG also recommended that the Commission use a phase-in schedule by market participant type, but did not specify a reason for this recommendation.

The Commission recognizes that the compliance date phase-in by market participant type was beneficial in the context of the First Clearing Requirement Determination. However, because market participants are experienced in clearing USD, EUR, GBP, and/or JPY-denominated interest rate swaps and there is a substantial amount of voluntary clearing activity in the swaps subject to this rulemaking, the Commission has decided that there is no need to phase-in the compliance dates for this clearing requirement by market participant type in accordance with regulation 50.25 or otherwise. Regulation 50.25 provides the Commission with the discretion to phase in compliance. Regulation 50.25(b) provides that upon issuing a clearing requirement determination under section 2(h)(2) of the CEA, the Commission *may* determine, based on the group, category, type, or class of swaps subject to such determination, that the specified schedule for compliance with the requirements of section 2(h)(1)(A) of the CEA shall apply.

A broad cross-section of market participants, including both direct clearing members and their clients or customers, has experience clearing the four classes of interest rate swaps under regulation 50.4(a) and has been clearing certain swaps subject to this final rulemaking on a voluntary basis. The Commission believes that most market participants that would be subject to the expanded clearing requirement already clear, or have clearing service arrangements in place to clear, the types of interest rate swaps subject to the existing clearing requirement. The Commission does not expect that these types of market participants, for the most part, would need to establish connectivity to DCOs, document new client clearing arrangements, or

otherwise prepare themselves and/or their customers in order to comply with this clearing requirement determination as they may have needed to do in order to comply with the First Clearing Requirement Determination. The Commission will consider carefully any concerns raised by market participants that cannot gain access to a DCO in order to clear swaps subject to this rulemaking before an applicable compliance date.

The Commission received similar comments concerning the difficulty market participants may have in accessing DCOs and establishing relationships with FCMs at the time it was considering the First Clearing Requirement Determination. In response to those comments, the Commission noted that "any market participant may petition for relief under regulation 140.99 if that entity is unable to find an FCM to clear its swaps or if it needs additional time to complete requisite documentation."<sup>171</sup> If a market participant is unable to find an FCM to clear its swaps, the Commission reaffirms the fact that market participants may petition for relief under regulation 140.99.<sup>172</sup>

#### *B. Compliance Date Tied to a Non-U.S. Jurisdiction Clearing Requirement*

The Commission proposed two alternative implementation scenarios in the NPRM. Under the first scenario, all swaps subject to this rulemaking would be required to be cleared on the same date—60 days after the final rulemaking is published in the **Federal Register** (Scenario I). Under the second scenario, the compliance date for each swap product would be the earlier of: (a) 60 days after the effective date of an analogous clearing mandate adopted by a regulator in a non-U.S. jurisdiction, provided that such requirement would not be effective until at least 60 days after the Commission's final rule is published in the **Federal Register**, and (b) two years after the Commission's final rule is published in the **Federal Register** (Scenario II).

After reviewing comments on the two implementation scenarios proposed, the Commission has determined that it will adopt Scenario II and will tie the CFTC's compliance date for each product to the first compliance date for a market participant in a non-U.S. jurisdiction.

<sup>169</sup> See Swap Transaction Compliance and Implementation Schedule: Clearing Requirement Under Section 2(h) of the CEA, 77 FR 44441 (July 30, 2012), [hereinafter referred to as the Implementation Release].

<sup>170</sup> In the Implementation Release, the Commission stated that the "use of the schedule contained in this [release] is at the Commission's discretion; in situations where the Commission determines that the benefits of delayed implementation do not justify the additional costs of such a delay, the Commission may require immediate compliance. . . ." 77 FR 44441, 44450 (July 30, 2012).

<sup>171</sup> First Clearing Requirement Determination, 77 FR at 74320 and n.172.

<sup>172</sup> Commission regulation 140.99 sets forth the process for addressing requests for exemptive, no-action, and interpretative letters.

## i. Comments Received

The Commission received eight comments on whether to implement Scenario I or Scenario II. MFA supported Scenario I because it would allow the Commission to move forward promptly with expanding the clearing requirement for the products subject to this determination. MFA noted that Scenario II was a reasonable option, but preferred Scenario I. Citadel stated that Scenario I was realistic and concluded that most market participants were prepared for the clearing requirement and had infrastructure in place to comply. Scenario I received support for its simple application and because it would bring the clearing requirement into force for certain products more quickly than under Scenario II. While the Commission agrees with these points, and notes that Scenario I would provide market participants with certainty and simplicity, it has decided to adopt Scenario II.

To the extent practicable, the Commission believes it is important to account for non-U.S. jurisdictions' timelines for mandating clearing when imposing a compliance date for U.S. market participants. The implementation schedule under Scenario II will provide flexibility for market participants, will facilitate compliance by phasing-in the clearing requirement by specific product, and will further the Commission's goals of harmonizing clearing requirements with those abroad.

Six commenters supported adoption of implementation Scenario II. JBA requested that the Commission adopt Scenario II in order to promote market liquidity and stability and to harmonize with clearing requirements issued by non-U.S. jurisdictions. ASX advocated for the Commission to adopt Scenario II to minimize any potential disruptions caused by differences in implementation timing of clearing mandates across jurisdictions. ISDA preferred Scenario II on the grounds that it would promote global harmonization and is consistent with maximizing liquidity and reducing risk. SIFMA AMG recommended Scenario II because it would further the Commission's efforts to harmonize with other jurisdictions. LCH Group agreed with the Commission that Scenario II would provide flexibility and certainty and would foster further international harmonization of adoption of clearing requirements. Finally, CME Group stated that the Commission should work cooperatively with regulators in other jurisdictions and that it supports the extension of the Commission's clearing

requirement determination where it is necessary for global harmonization.

The Commission has determined that Scenario II will be used to determine compliance dates for market participants subject to the Commission's clearing requirements (hereinafter referred to as the Implementation Schedule). Thus, the Commission's clearing requirement compliance date for each interest rate swap product covered by this determination will be the earlier of: (i) The first date that U.S. markets are open 60 calendar days after any person is first required to comply with an analogous clearing requirement that has been adopted by a regulator in a non-U.S. jurisdiction, provided that any such date for any swap covered by the final rule shall not be earlier than the date which is 60 calendar days after the Commission's final rule is published, or (ii) the first date U.S. markets are open two years after the Commission's final rule is published in the **Federal Register**. If the clearing requirement compliance date falls on a Saturday, Sunday, or U.S. federal public holiday, the compliance date shall be the next available business day. No compliance date shall be set on a day when markets are not open in the U.S.

## C. Clarifications to the Implementation Schedule

A number of commenters raised questions about details in the Commission's proposed implementation schedule, as it was described in the NPRM. The Commission responds below to each of the comments and provides clarifications to the Implementation Schedule, as appropriate.

## i. Comments Received—60-Day Delay

SIFMA AMG suggested that the Commission extend the time period that will elapse between a non-U.S. jurisdiction adopting a clearing mandate and the Commission's implementation of a compliance date for swaps subject to amended regulation 50.4(a). Specifically, SIFMA AMG recommended that the Commission wait 180 days after an effective date in a non-U.S. jurisdiction before requiring compliance with this final rulemaking.

The Commission has considered the timeframe necessary for U.S. market participants to prepare for, and comply with, a clearing requirement for the swaps subject to this determination and decided that 60 calendar days will provide enough time for U.S. market participants to comply.<sup>173</sup> As noted

<sup>173</sup> The Commission is clarifying the language in this final release to specify that the 60-day time

above, the Commission does not expect market participants to need significant, additional time to prepare for this expansion of the clearing requirement because a number of market participants clear these products already and/or are familiar with clearing other interest rate swaps products.<sup>174</sup>

## ii. Comments Received—Effective Date is the First Date Upon Which a Product is Required to be Cleared

Citadel asked the Commission to clarify how the Commission would establish the "effective date" in a non-U.S. jurisdiction, which is used to determine the CFTC compliance date. Citadel pointed out that when a non-U.S. jurisdiction's uses of a phased-in compliance schedule it could create ambiguity if the Commission's rule is not clarified.

The Commission recognizes that the term "effective date" can have a different meaning in different jurisdictions based on local law and procedure. Therefore, the Commission is clarifying that the CFTC's clearing requirement will be based on the first date upon which any person in the non-U.S. jurisdiction is initially subject to a clearing mandate for new trades, *i.e.*, any front-loading or back-loading requirements if they take effect earlier would not be relevant for purposes of the Implementation Schedule.

## iii. Comments Received—Two-Year Time Limit

As proposed in the NPRM, Scenario II included a two-year time limit providing that compliance with the expanded clearing requirement would be required no later than two years after the final rule is published in the **Federal Register**. The Commission received five comment letters related to Scenario II's two-year time limit and certainty regarding compliance dates.

MFA commented that, while it preferred Scenario I, Scenario II was a reasonable option because the Commission included a two-year time limit. In its comment letter, Citadel recognized the importance of retaining the two-year time limit and noted that "it is important to retain an outer bound

period will be measured in calendar days; however, the Commission's clearing requirement will begin only on the next available business day. See Projected Compliance Dates in section IV.E. This change was made in response to one commenter's request to the Commission to clarify whether the 60-day delay (between the date on which a non-U.S. jurisdiction's clearing requirement takes effect and the date that compliance will be required with the Commission's clearing requirement) is measured in calendar days or business days. See Scotiabank letter.

<sup>174</sup> See also the discussion in section IV.A.

of two years for when the final Commission rule may become effective in order to provide certainty to market participants regarding implementation.” LCH Group supported Scenario II because “this approach provides flexibility and certainty . . . [that] . . . will foster further international harmonization in the adoption of clearing requirements.”

SIFMA AMG recommended that the Commission revise its proposed implementation schedule to remove the “proviso” that would cause an automatic effective date no later than two years after the date that the final rulemaking is published in the **Federal Register**. SIFMA AMG expressed concern based on the idea that “clearing mandates [are] being imposed on U.S. market participants in the name of harmonization when there is ultimately no foreign clearing mandate with which to harmonize.” JBA noted that some uncertainty would remain even with a schedule that implements all clearing requirements no later than two years after publication, unless non-U.S. regulators align their regulatory actions with the Commission’s implementation schedule.

The Commission observes that since the publication of the NPRM, significant progress has been made with regard to the status of clearing requirements in almost all non-U.S. jurisdictions relevant to this rulemaking. Five of the seven jurisdictions have established compliance dates for their market participants to begin clearing pursuant to their analogous clearing mandates. Only Singapore and Switzerland have not yet finalized their clearing mandates and set compliance dates.

In order to assure market participants that there will be a date certain by which they will be required to comply with the clearing requirement for these swaps, particularly for the SGD-denominated fixed-to-floating and CHF-denominated fixed-to-floating interest rate swaps, the Commission has decided to retain the two-year time limit in the Implementation Schedule. In reaching this conclusion, the Commission is cognizant of its obligations to provide legal certainty under applicable statutory procedures. The Commission also recognizes the importance of providing market participants with certainty about compliance dates so that they can begin operational planning and

preparation for required clearing of all swaps subject to this final rulemaking. To the extent that market participants need adequate time to onboard clients and establish connectivity to eligible DCOs, retaining the two-year time limit is important.

In finalizing this rulemaking, the Commission seeks to balance flexibility with certainty in its Implementation Schedule. In the event that Singapore and Switzerland do not finalize their clearing mandates and set compliance dates within the two-year time limit, the Commission and Commission staff would be open to considering options for modifying the compliance deadline as necessary and appropriate.

#### *D. Scope of Entities Subject to the Implementation Schedule*

The Commission received a number of comments that requested an analysis of the scope of entities subject to the non-U.S. jurisdiction’s clearing requirement and consideration of whether the entities subject to the CFTC’s clearing requirement were “analogous.” ASX suggested that the CFTC’s assessment of analogous clearing requirements in non-U.S. jurisdictions should include an analysis of the classes of counterparties that are subject to such clearing requirements. Scotiabank asked the Commission to consider the fact that the Banco de México’s regulations contain an exception from the clearing mandate for entities with low net derivatives exposure. And ISDA pointed out that the scope of entities subject to a non-U.S. clearing mandate may be narrower than the scope of market participants subject to the Commission’s clearing requirement rules under part 50.

By contrast, in its comment letter, Citadel cautioned that if the Commission were to adopt rules that incorporated the entity scope of each non-U.S. jurisdiction’s clearing mandate, the U.S. framework would “become a confusing patchwork of foreign regulation, compelling U.S. market participants to apply different criteria on a currency-by-currency basis to determine whether (and when) they are in-scope.”

As discussed above, section 2(h)(7) of the CEA sets forth the participant scope for the clearing requirement: It shall be unlawful for any person not to clear a swap if that swap is required to be

cleared, except if one of the counterparties to the swap meets certain conditions enumerated in section 2(h)(7) of the CEA. The Commission has implemented the statutory exception under section 2(h)(7), along with other limited exemptions, in subpart C of part 50 of the Commission’s regulations. Based on this statutory and regulatory framework as well as its consideration of the comments presented, the Commission confirms that this final rulemaking applies to the same scope of market participants to which Commission regulation 50.4(a) currently applies.

#### *E. Projected Compliance Dates*

The Commission has been monitoring, and will continue to follow closely, clearing mandate developments in other jurisdictions that relate to this clearing requirement determination. As discussed above, the Commission’s clearing requirement compliance date is specific to each product and will be calculated by following the Implementation Schedule presented herein. With respect to products that do not yet have a compliance date set for an analogous clearing mandate in a non-U.S. jurisdiction, the Commission is including the date that is two years after the date of publication in the **Federal Register**. If a non-U.S. jurisdiction modifies any existing initial clearing requirement compliance date, or adopts a clearing requirement for either the CHF-denominated fixed-to-floating interest rate swaps or the SGD-denominated fixed-to-floating interest rate swaps that would require a CFTC compliance date for a market participant earlier than two years after the publication date in the **Federal Register**, then the Commission staff will publish a press release on the CFTC’s Web site setting forth the Commission’s clearing requirement compliance date for the relevant interest rate swaps in advance of the date upon which compliance will be required.

Below is a chart identifying the projected compliance date for each of the products subject to this determination.

<sup>175</sup> Section I.C. contains a more detailed discussion of the regulatory regimes and compliance dates for mandatory clearing of these products adopted by non-U.S. regulators.

Product	First clearing requirement compliance date in a non-U.S. jurisdiction <sup>175</sup>	CFTC clearing requirement compliance date
AUD-denominated Fixed-to-floating interest rate swap.	April 4, 2016 .....	60 days after publication of this final rulemaking in the <b>Federal Register</b> .
CAD-denominated Fixed-to-floating interest rate swap.	May 9, 2017 .....	July 10, 2017.
CHF-denominated Fixed-to-floating interest rate swap.	None to date .....	No later than 730 days after publication of this final rulemaking in the <b>Federal Register</b> .
HKD-denominated Fixed-to-floating interest rate swap.	July 1, 2017 .....	August 30, 2017.
MXN-denominated Fixed-to-floating interest rate swap.	April 1, 2016 .....	60 days after publication of this final rulemaking in the <b>Federal Register</b> .
NOK-denominated Fixed-to-floating interest rate swap.	February 9, 2017 .....	April 10, 2017.
PLN-denominated Fixed-to-floating interest rate swap.	February 9, 2017 .....	April 10, 2017.
SEK-denominated Fixed-to-floating interest rate swap.	February 9, 2017 .....	April 10, 2017.
SGD-denominated Fixed-to-floating interest rate swap.	None to date .....	No later than 730 days after publication of this final rulemaking in the <b>Federal Register</b> .
AUD-denominated basis swap .....	April 4, 2016 .....	60 days after publication of this final rulemaking in the <b>Federal Register</b> .
NOK-denominated FRA .....	February 9, 2017 .....	April 10, 2017.
PLN-denominated FRA .....	February 9, 2017 .....	April 10, 2017.
SEK-denominated FRA .....	February 9, 2017 .....	April 10, 2017.
EUR-denominated OIS (2–3 year term)	June 21, 2016 .....	60 days after publication of this final rulemaking in the <b>Federal Register</b> .
GBP-denominated OIS (2–3 year term)	June 21, 2016 .....	60 days after publication of this final rulemaking in the <b>Federal Register</b> .
USD-denominated OIS (2–3 year term)	June 21, 2016 .....	60 days after publication of this final rulemaking in the <b>Federal Register</b> .
AUD-denominated OIS .....	October 3, 2016 .....	60 days after publication of this final rulemaking in the <b>Federal Register</b> .
CAD-denominated OIS .....	May 9, 2017 .....	July 10, 2017.

## V. Cost Benefit Considerations

### A. Statutory and Regulatory Background

Expanded Commission regulation 50.4(a) identifies certain swaps that would be required to be cleared under section 2(h)(1)(A) of the CEA in addition to those currently required to be cleared by existing regulations 50.2 and 50.4(a). This clearing requirement determination is designed to standardize and reduce counterparty risk associated with swaps, and in turn, mitigate the potential systemic impact of such risks and reduce the likelihood for swaps to cause or exacerbate instability in the financial system. As stated in the NPRM, the Commission believes this determination is consistent with one of the fundamental premises of the Dodd-Frank Act and the 2009 commitments adopted by the G20 nations: The use of central clearing can reduce systemic risk.

Regulation 39.5 provides an outline for the Commission's review of swaps for required clearing. Regulation 39.5 allows the Commission to review swaps submitted by DCOs. Under section 2(h)(2)(D) of the CEA, in reviewing swaps for a clearing requirement determination, the Commission must take into account the following factors: (1) Significant outstanding notional exposures, trading liquidity and adequate pricing data; (2) the availability of rule framework, capacity,

operational expertise and credit support infrastructure to clear the contract on terms that are consistent with the material terms and trading conventions on which the contract is then traded; (3) the effect on the mitigation of systemic risk; (4) the effect on competition; and (5) the existence of reasonable legal certainty in the event of the insolvency of the DCO or one or more of its clearing members.<sup>176</sup> Regulation 39.5 also directs DCOs to provide to the Commission other information, such as product specifications, participant eligibility standards, pricing sources, risk management procedures, a description of the manner in which the DCO has provided notice of the submission to its members and any additional information requested by the Commission.<sup>177</sup> This information is designed to assist the Commission in identifying those swaps that are required to be cleared.

The following discussion is a consideration of the costs and benefits of the Commission's action in this rulemaking, pursuant to the regulatory requirements above. The Commission exercises its discretion under section 2(h)(2)(D) of the CEA to determine whether swaps that are submitted for a clearing requirement determination are required to be cleared.

<sup>176</sup> Section 2(h)(2)(D) of the CEA.

<sup>177</sup> Commission regulation 39.5(b)(3)(ii).

### B. Overview of Swap Clearing

#### i. How Clearing Reduces Risk

When a bilateral swap is cleared, the DCO becomes the counterparty to each original counterparty to the swap. This arrangement mitigates counterparty credit risk because the DCO: (1) Monitors and mitigates the risk of a counterparty default; (2) collects sufficient initial margin to cover potential future exposures and regularly collects and pays variation margin to cover current exposures; (3) facilitates netting within portfolios of swaps and among counterparties; and (4) holds collateral in a guaranty fund in order to mutualize the remaining tail risk not covered by initial margin contributions among clearing members. Central clearing mitigates the interconnectedness among swap market participants, insofar as, upon acceptance of a swap for clearing, a DCO becomes the new counterparty to each of the original counterparties and guarantees performance on the contract. Moreover, DCOs are independent third parties that are subject to regulatory oversight—including, among other things, financial resources requirements and risk management requirements. Accordingly, from the perspective of market participants, DCOs pose significantly less counterparty credit risk than their original counterparties.



DCOs have demonstrated resilience in the face of past market stress. DCOs remained financially sound and effectively settled positions in the midst of turbulent financial conditions in 2007–2008 that threatened the financial health and stability of many other types of entities.

The Commission believes that central clearing through DCOs will continue to mitigate systemic risk because DCOs have numerous risk management tools available that are effective in monitoring and managing counterparty credit risk. These tools include the contractual right to: (1) Collect initial and variation margin associated with outstanding swap positions; (2) mark positions to market regularly, usually multiple times per day, and issue margin calls whenever the margin in a clearing member's or customer's account has dropped below predetermined levels set by the DCO; (3) adjust the amount of margin that is required to be held against swap positions in light of changing market circumstances, such as increased volatility in the underlying product; and (4) close out the swap positions of a clearing member or customer that does not meet margin calls within a specified period of time.

Moreover, in the event that a clearing member defaults on its obligations to the DCO, the DCO has numerous remedies available to manage risk, including transferring the swap positions of the defaulted member to another clearing member, and covering any losses that may have accrued with the defaulting member's margin on deposit. In order to transfer the swap positions of a defaulting member and manage the risk of those positions, the DCO has the ability to take a number of steps, including: (1) Hedge the portfolio of positions of the defaulting member to limit future losses; (2) partition the portfolio into smaller pieces; and (3) auction off the pieces of the portfolio, together with their corresponding hedges, to other members of the DCO. In order to cover the losses associated with such a default, the DCO would typically draw from: (1) The initial margin posted by the defaulting member; (2) the guaranty fund contribution of the defaulting member; (3) the DCO's own capital contribution; (4) the guaranty fund contributions of non-defaulting members; and (5) an assessment on the non-defaulting members. These mutualized risk mitigation capabilities are largely unique to clearinghouses and help to ensure that they remain solvent and creditworthy swap counterparties even when clearing members default or there are stressed market circumstances.

## ii. The Clearing Requirement and Role of the Commission

With the passage of the Dodd-Frank Act, Congress gave the Commission the responsibility for determining which swaps would be required to be cleared pursuant to section 2(h)(1)(A) of the CEA. Therefore, the costs and benefits associated with a clearing requirement are attributable to both the CEA, as amended by the Dodd-Frank Act, and the Commission acting in accordance with the CEA. As a result, it is difficult to distinguish between the costs associated with the Dodd-Frank Act itself, and the costs associated with the Commission exercising the authority granted to it by the Dodd-Frank Act.

There also is evidence that the interest rate swaps market has been migrating into clearing for many years in response to market incentives, in anticipation of the Dodd-Frank Act's clearing requirement, and as a result of the First Clearing Requirement Determination. This shift can be seen in the volumes of interest rate swaps currently being cleared by CME and LCH, the two DCOs that submitted a significant portion of the information contained in the NPRM as well as this determination. The open notional value of interest rate swaps cleared at CME has increased from approximately \$2.2 trillion to over \$5.5 trillion between June 10, 2013 and September 10, 2013, two implementation dates for the First Clearing Requirement Determination.<sup>178</sup> Because the volume of interest rate swaps being cleared also has increased voluntarily, it is impossible to precisely determine the extent to which any increased use of clearing would result from statutory or regulatory requirements, as compared to the desire of swap market participants to clear swaps for the risk-mitigating benefits.<sup>179</sup>

For these reasons, the Commission has determined that the costs and benefits related to the required clearing of the interest rate swaps subject to this rulemaking are attributable, in part to (1) Congress's stated goal of reducing systemic risk by, among other things, requiring clearing of swaps and (2) the

Commission's exercise of its discretion in selecting swaps or classes of swaps to achieve those ends. The Commission will discuss the costs and benefits of the overall move from voluntary clearing to required clearing for the swaps subject to this rulemaking below.

In the NPRM, the Commission requested comment concerning its assumption that a shift towards clearing may be due to the Dodd-Frank Act's general clearing requirement or other motivations including independent business reasons and incentives from other regulators, such as prudential authorities. While no commenter answered this question directly, Citadel suggested that a shift towards clearing may be due to cost savings attributable to clearing swaps at central counterparties.<sup>180</sup>

## C. Consideration of the Costs and Benefits of the Commission's Action

### i. CEA Section 15(a)

Section 15(a) of the CEA requires the Commission to consider the costs and benefits of its actions before promulgating a regulation under the CEA or issuing certain orders. Section 15(a) further specifies that the costs and benefits shall be evaluated in light of the following five broad areas of market and public concern: (1) Protection of market participants and the public; (2) efficiency, competitiveness and financial integrity; (3) price discovery; (4) sound risk management practices; and (5) other public interest considerations (collectively referred to herein as the Section 15(a) Factors). Accordingly, the Commission considers the costs and benefits associated with the clearing requirement determination in light of the Section 15(a) Factors.

The Commission notes that the consideration of costs and benefits below is based on the understanding that the markets function internationally, with many transactions involving U.S. firms taking place across international boundaries; with some Commission registrants being organized outside of the United States; with industry members typically conducting operations both within and outside the United States; and with industry members commonly following substantially similar business practices wherever located. Where the

<sup>178</sup> See CME Group comment letter of Sept. 16, 2013 in response to the Commission's notice of proposed rulemaking concerning DCOs and International Standards, 78 FR 50260 (Aug. 16, 2013). The CME Group comment letter is available on the Commission's Web site at: <http://comments.cftc.gov/PublicComments/CommentList.aspx?id=1391>.

<sup>179</sup> It is also possible that some market participants would respond to the rule's requirement that certain interest rate swaps be cleared by decreasing their use of such swaps. This possibility contributes to the uncertainty regarding how the determination will affect the quantity of swaps that are cleared.

<sup>180</sup> According to Citadel's description of academic research, "the implementation of the Commission's clearing and trading reforms in the USD interest rate swap market led to a significant improvement in liquidity and a significant reduction in execution costs." (citations omitted). This comment from Citadel also is discussed in the Commission's analysis of the fourth factor under section 2(h)(2)(D) in section II.B.iii.

Commission does not specifically refer to matters of location, the below discussion of costs and benefits refers to the effects of the final rules on all activity subject to the amended regulations, whether by virtue of the activity's physical location in the United States or by virtue of the activity's connection with or effect on U.S. commerce under section 2(i) of the CEA.

As stated above, the Commission received 10 comment letters following publication of the NPRM, seven of which supported the proposed determination. Some commenters generally addressed the costs and benefits of the current rule.

In the sections that follow, the Commission considers: (1) The costs and benefits of required clearing for the swaps subject to this clearing requirement determination; (2) the alternatives contemplated by the Commission and their costs and benefits; and (3) the impact of required clearing for the swaps subject to this final rulemaking and listed in expanded regulation 50.4(a) in light of the Section 15(a) Factors.

#### ii. Costs and Benefits of Required Clearing Under the Final Rule

Market participants may incur certain costs in order to clear the interest rate swaps included in this adopting release. For example, market participants that are not already clearing interest rate swaps either voluntarily or pursuant to the First Clearing Requirement Determination may incur certain startup and ongoing costs related to developing technology and infrastructure, updating or creating new legal agreements, service provider fees, and collateralization of the cleared positions. The per-entity costs described above are likely to vary widely depending on the needs of each market participant. Such costs likely will be lower for the market participants that have experience clearing the interest rate swaps covered by the First Clearing Requirement Determination and/or that have been clearing the interest rate swaps subject to this clearing requirement determination on a voluntary basis. The opposite likely would be true for market participants that must begin clearing because of this expanded determination. Although these market participants may have otherwise incurred costs associated with margining their uncleared swaps with bilateral counterparties, as well as incurring other costs associated with bilateral uncleared swaps, such as startup or ongoing costs related to developing technology and

infrastructure, and updating or creating new legal agreements related to their uncleared swaps positions. Moreover, operational costs for these market participants would increase based on the number of different counterparties with whom they enter into uncleared swaps. The overall costs of collateralization are likely to vary depending on whether or not an entity is subject to the new margin requirements for uncleared swaps,<sup>181</sup> whether or not an entity is subject to capital requirements, and the differential between the cost of capital for the assets they use as collateral, and the returns realized on those assets.

Market participants that would begin clearing the interest rate swaps subject to this rulemaking also will obtain the benefits associated with clearing. These benefits include reduced and standardized counterparty risk, increased transparency, and easier access to the swap markets. Together, these benefits will contribute significantly to the stability and efficiency of the financial system. However, these benefits are difficult to quantify with any degree of precision, and market participants already clearing these swaps already realize the benefits of clearing.

In the NPRM, the Commission requested comment concerning the costs of clearing, including from both U.S. and non-U.S. swap counterparties that may be affected by the determination. The Commission also requested comment as to the benefits that market participants could realize as a result of the proposed rule. JBA generally commented that it was opposed to the proposed determination because rising costs incurred by clearing brokers, due to capital leverage requirements, for example, have decreased the number of available clearing brokers.<sup>182</sup> By contrast, as mentioned above, Citadel suggested that the clearing requirement would create cost savings for market participants because central clearing, together with execution of swaps on SEFs, has brought down costs significantly.<sup>183</sup>

<sup>181</sup> The Commission's margin requirements for uncleared swaps are codified in subpart E of part 23 of the Commission's regulations. The prudential regulators also established minimum margin and capital requirements for certain registered SDs, MSPs, security-based swap dealers, and major security-based swap participants in November 2015.

<sup>182</sup> See discussion of JBA's comment in section II.A. In its comment letter, CME Group also generally expressed concern about participants being able to access cleared markets in light of capital considerations arising from the calculation of leverage ratio.

<sup>183</sup> See discussion of Citadel's comment letter in sections II.B.iii.d and V.B.

#### a. Technology, Infrastructure, and Legal Costs

Market participants already clearing their swaps may incur costs in making necessary changes to technology systems to support the clearing required by the final rule. Market participants that are not currently clearing swaps may incur costs if they need to implement middleware technology to connect to FCMs that will clear their transactions. Similarly, legal costs will vary depending on the extent to which a market participant is already clearing swaps. The Commission does not have the information necessary to determine either the costs associated with entities that need to establish relationships with one or more FCMs or the costs associated with entities that already have relationships with one or more FCMs but need to revise their agreements.<sup>184</sup> The costs are likely to depend on the specific business needs of each entity and would therefore vary widely among market participants. As a general matter, the Commission would expect that most market participants already will have undertaken the steps necessary to accommodate the clearing of required swaps based on the First Clearing Requirement Determination and that the burden associated with these additional interest rate swaps should be lessened.

In the NPRM, the Commission requested comment, including any quantifiable data and analysis, on the changes that market participants will have to make to their technological and legal infrastructures in order to clear the interest rate swaps that would be subject to the expanded clearing requirement. JBA commented that swap market participants may incur costs as a result of having to become a clearing member of a new DCO, or enter into a new client clearing relationship with a DCO clearing member, if there is only one DCO offering to clear a particular swap

<sup>184</sup> The Commission does not have current information regarding such fees. In the NPRM and in the First Clearing Requirement Determination (77 FR 74284 at 74324), the Commission noted that it had been estimated that it would cost smaller financial institutions between \$2,500 and \$25,000 to review and negotiate legal agreements to establish a new business relationship with an FCM (citing comment letters from Chatham Financial and Webster Bank submitted to the Commission in 2012 in response to the Commission's request for comment concerning the cost benefit analysis regarding a potential clearing exception for certain small financial institutions under the end-user exception, available at: <http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=58077> and <http://comments.cftc.gov/PublicComments/ViewComment.aspx?id=58076>). The Commission received no new information from commenters regarding the costs of establishing a clearing relationship.

subject to the determination, and the swap market participant is not already a clearing member, or customer of a clearing member, of that DCO.<sup>185</sup> As the Commission noted above, in light of the fact that there are three swaps covered by the determination that are currently offered for clearing by only one DCO (MXN-denominated fixed-to-floating interest rate swaps, currently offered for clearing only at CME; and AUD- and CAD-denominated OIS, currently offered for clearing only at LCH), and LCH and CME have indicated that they intend to begin offering to clear each of these swaps, respectively, before the end of 2016, the Commission believes that JBA's concerns about a swap market participant having to establish a new clearing arrangement even if the participant already has a clearing arrangement in place at CME or LCH will be largely addressed.<sup>186</sup> Moreover, Citadel commented that swap market participants generally prefer to clear swaps at one DCO instead of at multiple DCOs in order to reduce costs by maximizing netting, compression, and margin offsets.<sup>187</sup>

#### b. Ongoing Costs Related to FCMs and Other Service Providers

In addition to costs associated with technological and legal infrastructures, market participants transacting in swaps subject to the expanded clearing requirement will face ongoing costs associated with fees charged by FCMs. DCOs typically charge each FCM an initial transaction fee for each cleared interest rate swap its customers enter, as well as an annual maintenance fee for each open position. CME, LCH, Eurex, and SGX offer a variety of fee schedules for clearing interest rate swaps. In general, the schedules depend on the length of a swap's term, the number of swaps cleared per year, and/or a clearing member's initial margin requirement at the DCO. For example, at LCH and Eurex, different fee schedules are available depending on whether a clearing member is clearing for its proprietary account or for a customer account.<sup>188</sup> In the case of customer clearing, fees are generally charged to the clearing member, not the customer.

The Commission understands that FCMs generally pass onto their customers the fees that they have been charged by the DCO. In addition, as noted in the NPRM, the Commission understands that customers that occasionally transact in swaps are typically required by their FCMs to pay a monthly or annual fee to each FCM.<sup>189</sup>

As discussed above, it is difficult to predict precisely how the requirement to clear the additional swaps covered by this final rulemaking will increase the use of swap clearing, as compared to the use of clearing that would occur in the absence of the requirement. The Commission expects that the expanded clearing requirement generally will increase the use of clearing, leading in most cases to an incremental increase in the clearing fees noted above. However, while total clearing fees may increase, it may nonetheless be the case that total costs come down due to offsetting benefits. For instance, market competition could cause swap prices to decrease, and market participants may realize benefits due to netting, compression, offsets, and portfolio margining. The Commission expects that most market participants already will have undertaken the steps necessary to accommodate the clearing of required swaps, and that the burden associated with the additional interest rate swaps should be lessened.

In response to the NPRM, Citadel commented that fees charged by FCMs, rather than fees charged by DCOs, are the major source of clearing costs.<sup>190</sup> Moreover, according to Citadel, the fees charged by FCMs depend primarily on the portfolio the customer wishes to clear rather than on the number of DCOs offering to clear a particular swap. Citadel also commented that the clearing requirement could lead a DCO or FCM to expand its clearing offerings because of the increased clearing volumes that may result from the clearing requirement.

Finally, CME Group generally expressed concern about market participants being able to access clearinghouses due to the general reduction in clearing members' "appetite to provide clearing services

for smaller firms." CME Group referenced an ESMA consultation paper proposing a postponement of the implementation of its clearing mandate on such smaller market participants. The Commission is aware that ESMA released a consultation paper on July 13, 2016, requesting comments on a proposal to extend the phase-in period for the clearing obligation for counterparties in a third category under the European Union's clearing regime.<sup>191</sup> ESMA acknowledges that the participant scope of Europe's clearing obligation regulation is different than in most other jurisdictions because the underlying legislation (EMIR) does not contain the same types of exemptions from mandatory clearing for counterparties with limited activity.<sup>192</sup>

The Commission's statutory authority under Dodd-Frank contains certain enumerated exceptions and exemptions from the clearing requirement.<sup>193</sup> In light of the fact that there are counterparties that qualify for an exception or exemption from the CFTC's clearing requirement, the Commission does not face the same policy considerations as its European counterparts with regard to certain entities under EMIR.<sup>194</sup> As noted above, in response to CME Group's comment, the Commission reiterates, that any market participant may petition for relief under Commission regulation 140.99 if the entity is unable to find an FCM to clear its swaps or if it needs additional time to complete requisite documentation.<sup>195</sup>

#### c. Costs Related to Collateralization of Cleared Swap Positions

Market participants that enter into the interest rate swaps subject to the amended rule will be required to post initial margin at a DCO. The Commission understands that some of the swaps subject to this rulemaking are currently being cleared on a voluntary

<sup>185</sup> See also discussion of JBA's comment in the Commission's analysis of the fourth factor under section 2(h)(2)(D) in section II.B.iii.

<sup>186</sup> *Id.*

<sup>187</sup> See also discussion of Citadel's comment in the Commission's analysis of the fourth factor under section 2(h)(2)(D) in section II.B.iii.

<sup>188</sup> LCH and Eurex their fees schedules on their Web sites, available at: <http://www.lch.com/asset-classes/otc-interest-rate-derivatives/fees> and <http://www.eurexclearing.com/clearing-en/markets-services/eurex-otc-clear/about-eurex-otc-clear>.

<sup>189</sup> The Commission does not have current information regarding such fees. In the NPRM and in the First Clearing Requirement Determination (77 FR 74284 at 74325), the Commission noted that customers that occasionally transact in swaps are typically required to pay a monthly or annual fee to each FCM that ranges from \$75,000 to \$125,000 per year (citing comment letters from Chatham Financial and Webster Bank). The Commission received no new information from commenters regarding these costs.

<sup>190</sup> FCMs provide their customers with access to DCOs in their capacity as DCO-clearing members.

<sup>191</sup> See Consultation Paper: On the clearing obligation for financial counterparties with a limited volume of activity, Jul. 13, 2016, available at: <https://www.esma.europa.eu/press-news/consultations/consultation-clearing-obligation-financial-counterparties-limited-volume>.

<sup>192</sup> *Id.* at 9.

<sup>193</sup> See Section 2(h)(7) of the CEA and subpart C of part 50 of the Commission's regulations.

<sup>194</sup> In particular, ESMA's consultation focuses on financial counterparties, and certain investment funds that qualify as non-financial counterparties, that satisfy the threshold level of derivatives activity (e.g., a gross notional value of EUR 3 billion for interest rate derivatives contracts) but have an outstanding gross notional amount of derivatives below EUR 8 billion for a particular point in time.

<sup>195</sup> First Clearing Requirement Determination, 77 FR at 74320.

basis.<sup>196</sup> In the NPRM, the Commission published the following estimates.

TABLE 17—PART 45 DATA—ESTIMATED PERCENTAGES OF THE INTEREST RATE SWAP MARKET CLEARED VOLUNTARILY  
[Second Quarter 2015]<sup>197</sup>

Product	Percentage of market cleared
AUD-denominated fixed-to-floating interest rate swap .....	65
CAD-denominated fixed-to-floating interest rate swap .....	72
CHF-denominated fixed-to-floating interest rate swap .....	83
HKD-denominated fixed-to-floating interest rate swap .....	49
MXN-denominated fixed-to-floating interest rate swap .....	25
NOK-denominated fixed-to-floating interest rate swap .....	40
PLN-denominated fixed-to-floating interest rate swap .....	66
SEK-denominated fixed-to-floating interest rate swap .....	45
SGD-denominated fixed-to-floating interest rate swap .....	24
AUD-denominated basis swap .....	28
NOK-denominated FRA .....	94
PLN-denominated FRA .....	32
SEK-denominated FRA .....	25
EUR-denominated OIS (2–3 year term) .....	100
GBP-denominated OIS (2–3 year term) .....	100
USD-denominated OIS (2–3 year term) .....	100
AUD-denominated OIS .....	18
CAD-denominated OIS .....	88

With information provided by CME, LCH, and SGX,<sup>198</sup> the Commission has estimated the amounts of initial margin currently on deposit at these three DCOs allocable to the interest rate swaps subject to this rulemaking. Using this information, the Commission estimated

in the NPRM that this clearing requirement determination would require market participants to post the following amounts of additional initial margin with DCOs for each of the interest rate swaps covered by this determination.<sup>199</sup> The amounts in Table

18 below do not, however, account for any additional margin market participants would post to their bilateral counterparties under the new rules for uncleared swap margin.

TABLE 18—AGGREGATE INITIAL MARGIN DUE TO DCOs UNDER CLEARING REQUIREMENT DETERMINATION

Swap	Amount of margin USD equivalent
AUD-denominated Fixed-to-floating interest rate swap .....	\$1,107,287,108
CAD-denominated Fixed-to-floating interest rate swap .....	419,208,078
CHF-denominated Fixed-to-floating interest rate swap .....	105,963,972
HKD-denominated Fixed-to-floating interest rate swap .....	216,677,823
MXN-denominated Fixed-to-floating interest rate swap .....	1,867,370,001
NOK-denominated Fixed-to-floating interest rate swap .....	241,288,835
PLN-denominated Fixed-to-floating interest rate swap .....	84,789,768
SEK-denominated Fixed-to-floating interest rate swap .....	603,185,677
SGD-denominated Fixed-to-floating interest rate swap .....	1,113,041,264
AUD-denominated basis swap .....	612,166,597
NOK-denominated FRA .....	10,746,747
PLN-denominated FRA .....	186,238,075
SEK-denominated FRA .....	942,845,508
EUR-denominated OIS (2–3 year term) .....	0
GBP-denominated OIS (2–3 year term) .....	0
USD-denominated OIS (2–3 year term) .....	0
AUD-denominated OIS .....	84,254,007

<sup>196</sup> See Clarus Newsletter by Chris Barnes (June 14, 2016) available at: <https://www.clarusft.com/the-cftcs-new-clearing-mandate-2016/> (discussing the NPRM, its data, and the percentage of the interest rate swap market already cleared on a voluntary basis).

<sup>197</sup> The Commission used part 45 Data to make these estimates based on swap activity occurring during the second quarter of 2015. Like the part 43 Data referenced above, part 45 Data includes swaps entered into by U.S. persons as well as by certain non-U.S. persons. See Interpretive Guidance and Policy Statement Regarding Compliance With Certain Swap Regulations, 78 FR 45292, 45368–69

(July 26, 2013). The data set used for Table 17 does not include swaps entered into by affiliated counterparties. Data from the third and fourth quarters of 2015 were used to calculate the estimates for EUR-, GBP-, and USD-denominated OIS with terms of two to three years. Data from January 2016 was used to calculate the estimates for AUD- and CAD-denominated OIS.

<sup>198</sup> The Commission is not including margin data from Eurex for purposes of this calculation because it does not affect the overall percentages significantly.

<sup>199</sup> The Commission made these calculations using the following formula:

$$X/Y - X.$$

X = Current value of margin on deposit at DCOs for an interest rate swap denominated in a particular currency.

Y = Percentage of the market for that swap that is currently cleared. This same methodology was used in the First Clearing Requirement Determination as a rough proxy for estimating the total costs of required clearing in terms of initial margin. As discussed above, commission risk surveillance staff has sophisticated tools for assessing risk-based margin methodologies and coverage levels.

TABLE 18—AGGREGATE INITIAL MARGIN DUE TO DCOs UNDER CLEARING REQUIREMENT DETERMINATION—Continued

Swap	Amount of margin USD equivalent
CAD-denominated OIS .....	6,630,342
Total .....	7,601,693,801

As noted in the NPRM, the Commission believes that these estimates may be higher than the actual amounts of initial margin that would need to be posted as a result of this determination because these estimates are based on several assumptions. First, the estimates assume that none of the swaps that are currently executed on an uncleared basis are currently collateralized. By contrast, an ISDA survey reported that as of December 31, 2014, 88.9% of all uncleared fixed income derivative transactions are subject to a credit support annex.<sup>200</sup> Moreover, uncleared swaps between certain SDs, MSPs, and “financial end-users,” will be subject to initial and variation margin requirements pursuant to the Commission’s and the prudential regulators’ margin regulations for uncleared swaps, as discussed further below.<sup>201</sup> Second, the estimates listed in Table 18 are based on the assumption that none of the swaps, when entered into on an uncleared basis, are priced to include implicit contingent liabilities and counterparty risk borne by the counterparty to the swap. Third, not all swaps having the additional denominations or maturities adopted herein will necessarily be eligible for clearing if they are not otherwise covered by the clearing requirement (*i.e.*, the specifications set forth in revised regulation 50.4(a)) or if the swaps have terms that prevent them from being cleared. Finally, certain entities may elect an exception or exemption from the clearing requirement, which would not require such an entity to clear the swaps covered by this determination.<sup>202</sup>

<sup>200</sup> See ISDA Margin Survey 2015 at page 12, Table 6, available at: <http://www2.isda.org/functional-areas/research/surveys/margin-surveys/>. Although it is unclear exactly how many of the derivatives covered by this survey are swaps, it is reasonable to assume that a large part of them are.

<sup>201</sup> Margin Requirements for Uncleared Swaps for Swap Dealers and Major Swap Participants, 81 FR 636 (Jan. 6, 2016) and Margin and Capital Requirements for Covered Swap Entities, 80 FR 74840 (Nov. 30, 2015) (together the “uncleared swap margin regulations”).

<sup>202</sup> See Subpart C of part 50 (Exceptions and Exemptions to the Clearing Requirement). There also is a possibility that the estimates listed in Table 18 are lower than the actual figures because certain market participants with directional portfolios may be unable to benefit from margin offsets that could

The amounts of initial margin that the Commission estimates would be required to be posted due to this rule (listed in Table 18) do not include the costs that some market participants may incur to obtain this collateral. Some entities may have to raise funds to acquire assets that a DCO accepts as initial margin. The greater the funding cost relative to the rate of return on the asset used as initial margin, the greater the cost of procuring this asset. Quantifying this cost with any precision is challenging because different entities may have different funding costs and may choose assets with different rates of return. Moreover, funding costs will vary as interest rates and interest rate spreads vary. One way to estimate the funding cost of procuring assets to be used as initial margin is to compare the rate of return, or yield, on an asset that is usually accepted by a DCO for initial margin with the cost of funding the asset with debt financing. Based on the Commission’s experience and understanding, the Commission has decided to estimate this cost using an average borrowing cost of 3.35%<sup>203</sup> and then subtracting the 1.14% return that a 5-year U.S. Treasury bond yields.<sup>204</sup> This calculation produces an estimated funding cost of 2.21%. By multiplying the total estimated initial margin amount of \$7,601,693,801 (Table 18) by 2.21%, the Commission estimates that the cost of funding the total initial margin that will be required to be posted due to this rule is approximately \$167,997,433. It also should be noted that some entities, such as pension funds and asset managers, may use as initial margin assets that they already own. In these cases, the market participants would not incur a funding cost in order to post initial margin.

The Commission received no comments in response to its question about the cost of funding initial margin or funding costs that market participants

come from clearing. However, the Commission believes that the estimates listed in Table 18 are more likely to overstate the required additional margin amounts than to underestimate them.

<sup>203</sup> Bank of America Merrill Lynch U.S. Corporate BBB effective yield for August 8, 2016.

<sup>204</sup> On August 8, 2016, a 5-year U.S. treasury bond yielded 1.14%.

may face due to interest rates on bonds issued by a sovereign nation.

The Commission recognizes further that the new initial margin amounts that will be required to be posted as a result of this clearing requirement will, for entities required to post initial margin under either the clearing requirement or the uncleared swap margin regulations, replace current bilateral market practice. The new uncleared swap margin regulations require SDs and MSPs to post and collect initial and variation margin for uncleared swaps executed with their counterparties that are other SDs or MSPs or are “financial end-users,” subject to various conditions and limitations.<sup>205</sup>

The Commission expects that the initial margin that will be required to be posted for a cleared swap subject to this determination will typically be less than the initial margin that would be required to be posted for uncleared swaps pursuant to the uncleared swap margin regulations. Whereas the initial margin requirement for cleared swaps must be established according to a margin period of risk of at least five days,<sup>206</sup> under the uncleared swap margin regulations, the minimum initial margin requirement is generally set with a margin period of risk of 10-days or, under certain circumstances, less or no initial margin for inter-affiliate transactions.<sup>207</sup> The uncleared swap margin regulations are being phased in

<sup>205</sup> See Subpart E of part 23 of the Commission’s regulations. Swap clearing requirements under part 50 of the Commission’s regulations apply to a broader scope of market participants than the Commission’s uncleared swap margin rules. For example, under subpart E of part 23, a financial end-user that does not have “material swaps exposure” (as defined by regulation 23.151) is not required to post initial margin, but such an entity may be subject to the swap clearing requirement.

<sup>206</sup> Commission regulation 39.13(g)(2)(ii)(C).

<sup>207</sup> Commission regulations 23.154(b)(2)(i) and 23.159. See also Margin and Capital Requirements for Covered Swap Entities, 80 FR 74840 (Nov. 30, 2015). For an uncleared swap, entered into by an SD or MSP supervised by a prudential regulator, which would be subject to the Commission’s clearing requirement under part 50 but is not cleared due to the election of the exemption for a swap between certain affiliated entities (Commission regulation 50.52), the margin period of risk is at least five days. For an uncleared swap, entered into by an SD or MSP supervised by the Commission, no margin is required if the swap is exempt from the uncleared margin regulations.

between September 1, 2016 and September 1, 2020.

With respect to swaps that will be subject to this clearing requirement determination, but not subject to the uncleared swap margin regulations, the Commission believes that the new initial margin amounts that will be posted at the DCO will be a displacement of a cost that is currently embedded in the prices and fees for transacting the swaps on an uncleared and perhaps uncollateralized basis rather than a new cost.<sup>208</sup> Entering into a swap is costly for any market participant because of the default risk posed by its counterparty, whether the counterparty is a DCO, SD, MSP, or other market participant. When a market participant faces the DCO, the DCO accounts for that counterparty credit risk by requiring collateral to be posted, and the cost of capital for the collateral is part of the cost that is necessary to maintain the swap position. When a market participant faces an SD or other counterparty in an uncleared swap, however, the uncleared swap contains an implicit line of credit upon which the market participant effectively draws when its swap position is out of the money.

Counterparties charge for this implicit line of credit in the spread they offer on uncollateralized, uncleared swaps. It has been argued that the cash flows of an uncollateralized swap (*i.e.*, a swap with an implicit line of credit) are, over time, substantially equivalent to the cash flows of a collateralized swap with an explicit line of credit.<sup>209</sup> And because the counterparty credit risk created by the implicit line of credit is the same as the counterparty risk that would result from an explicit line of credit provided to the same market participant, to a first order approximation, the charge for each

should be the same as well.<sup>210</sup> This means that the cost of capital for additional collateral posted as a consequence of requiring uncollateralized swaps to be cleared takes a cost that is implicit in an uncleared, uncollateralized swap and makes it explicit. This observation applies to capital costs associated with both initial margin and variation margin.

In addition, the rule may result in added operational costs. With uncleared swaps, counterparties may agree not to collect variation margin until certain thresholds of exposure are reached, thus reducing or entirely eliminating the need to exchange variation margin as exposure changes. DCOs, on the other hand, collect and pay variation margin on a daily basis and sometimes more frequently. As a consequence, increased required clearing may increase certain operational costs associated with exchanging variation margin with the DCO (although the exchange of variation margin may be expected to provide the benefit of lowering the build-up of current exposure). On the other hand, increased clearing also could lead to reduced operational costs related to valuation disputes about posted collateral, as parties to cleared swaps agree to post collateral that is less susceptible to valuation disputes.

The rule also may result in additional costs for clearing members in the form of guaranty fund contributions. However, it also could decrease guaranty fund contributions for certain clearing members. Once the expanded clearing requirement takes effect, market participants that currently transact swaps bilaterally must either become clearing members of a DCO or submit such swaps for clearing through an existing clearing member. A market participant that becomes a direct clearing member must make a guaranty fund contribution, while a market participant that clears its swaps through a clearing member may pay higher fees if the clearing member passes the costs of the guaranty fund contribution to its customers. While not certain, the possible addition of new clearing members and/or new customers for existing clearing members may result in

an increase in guaranty fund requirements. However, it should be noted that if (1) any new clearing members are not among the two clearing members used to calculate the guaranty fund and (2) any new customers trading through a clearing member do not increase the size of uncollateralized risks at either of the two clearing members used to calculate the guaranty fund, all else held constant, existing clearing members may experience a decrease in their guaranty fund requirement.

In the NPRM, the Commission requested comment regarding the total amount of additional collateral that would be required due to the proposed clearing requirement. In particular, the Commission sought quantifiable data and analysis.<sup>211</sup> No commenter addressed the quantitative approach laid out by the Commission in the NPRM. Nor did any commenter provide quantifiable data and analysis to support or refute such analysis.

#### d. Benefits of Clearing

As noted above, the benefits of swap clearing are generally significant. The Commission believes that while the requirement to margin uncleared swaps in certain circumstances also will mitigate counterparty credit risk, such risk is mitigated further for swaps that are cleared through a central counterparty. Moreover, as discussed above, the clearing requirement under part 50 of the Commission regulations applies to a larger set of market participants than the uncleared swaps margin regulations.<sup>212</sup> Thus, to the extent that the clearing requirement for additional interest rate swaps leads to increased clearing, these benefits are likely to be realized.

As is the case for the costs noted above, it is impossible to predict the precise extent to which the use of clearing will increase as a result of the final rule, and therefore the benefits of the final rule cannot be precisely quantified. However, the Commission believes that the benefits of increased central clearing resulting from the rule will be substantial, because the additional swaps required to be cleared by the rule have significant volumes within the overall interest rate swap market.

<sup>208</sup> Under part 50 of the Commission's regulations, the clearing requirement applies to all market participants except for those subject to an exception or exemption under subpart C of part 50. Under part 23 of the Commission's regulations, the Commission's uncleared swap margin rules apply only to swaps between Commission-registered SDs and/or MSPs that do not have a prudential regulator and to swaps between such an entity and certain "financial end users." See Commission regulations 23.151 (definition of financial end users), 23.152 (collection and posting of initial margin), and 23.153 (collection and posting of variation margin). Commission-registered SDs and MSPs that have a prudential regulator are subject to uncleared swap margin rules promulgated by those authorities. Thus, part 50 has a broader scope than part 23. See also note 212.

<sup>209</sup> See Antonio S. Mello and John E. Parsons, "Margins, Liquidity, and the Cost of Hedging," MIT Center for Energy and Environmental Policy Research, May 2012, available at: <http://dspace.mit.edu/bitstream/handle/1721.1/70896/2012-005.pdf?sequence=1>.

<sup>210</sup> See *id.*, Mello and Parsons state in their paper: "[h]edging is costly. But the real source of the cost is not the margin posted, but the underlying credit risk that motivates counterparties to demand that margin be posted." *Id.* at 12. They go on to demonstrate that, "[t]o a first approximation, the cost charged for the non-margined swap must be equal to the cost of funding the margin account. This follows from the fact that the non-margined swap just includes funding of the margin account as an embedded feature of the package." *Id.* at 15–16.

<sup>211</sup> 81 FR at 39531.

<sup>212</sup> Section II.B.iii sets forth the Commission's view that central clearing offers greater risk mitigation than bilateral margining for swaps. Included in that section was a summary of Citadel's comment agreeing with the Commission's view. As noted above, the clearing requirement applies to a broader scope of market participants than the Commission's uncleared swap margin rules.

The rule's requirement that certain swaps be cleared is expected to increase the use of central clearing, as well as the number of swap market participants that will benefit from reduced counterparty credit risk and the other risk mitigating tools offered by central clearing through DCOs that are subject to CFTC regulation and supervisory oversight.

As noted above, several commenters praised the Commission's approach to further harmonizing the Commission's swap clearing requirement with requirements issued by non-U.S. jurisdictions.<sup>213</sup> Citadel commented that such harmonization would lead to the benefit of eliminating regulatory arbitrage. LCH Group stated that such harmonization would promote certainty for market participants. SIFMA AMG commented that such harmonization would improve the functioning of swaps markets and reduce operational complexity. ISDA commented that harmonization is crucial to effective and efficient implementation of all of the reforms of the derivatives markets sought by the G20. MFA commented that the Commission's approach to harmonizing its clearing requirement with those of other jurisdictions would increase transparency and market integrity. MFA also suggested that if the Commission proceeds with the expanded clearing requirement, then other jurisdictions will follow.

#### *D. Costs and Benefits of the Commission's Action as Compared to Alternatives*

As noted in the NPRM, this determination is a function of both the market importance of these products and the fact that they already are widely cleared. The Commission believes the interest rate swaps subject to this rulemaking are appropriate to require to be cleared because they are widely used and already have a blueprint for clearing and risk management.

Given the implementation of the Commission's First Clearing Requirement Determination for interest rate swaps, and the widespread use of central clearing for the additional products included in this determination, DCOs, FCMs, and market participants already have experience clearing the types of swaps subject to this rulemaking. The Commission therefore expects that DCOs and FCMs are prepared to handle the increases in volumes and outstanding notional amounts in these swaps that are likely to result from this determination. Because of the widespread use of these

swaps and their importance to the market, and because these swaps are already successfully being cleared, the Commission has determined that certain additional interest rate swaps be subject to the clearing requirement.

The Commission considered two alternative implementation scenarios. First, the Commission considered a scenario under which the clearing requirement for all swaps subject to the rulemaking would take effect at the same time, regardless of whether an analogous clearing requirement has been promulgated by an authority of a non-U.S. jurisdiction. The benefits associated with implementing the clearing requirement for all swaps subject to this rulemaking on a single date would include giving market participants certainty and making it easier for industry members to update relevant policies and procedures at one time.

As a second option, the Commission considered a scenario under which compliance with the clearing requirement would be required upon the earlier of (a) the date 60 days after the effective date of an analogous clearing requirement that has been adopted by a regulator in a non-U.S. jurisdiction, provided that any such date for any swap covered by the final rule shall not be earlier than the date which is 60 days after the Commission's final rule is published in the **Federal Register**, or (b) the date two years after the Commission's final rule is published in the NPRM, the second scenario allows the Commission to coordinate compliance dates with the effective dates set by non-U.S. jurisdictions in order to promote international harmonization of clearing requirements while maintaining certainty that compliance with the expanded clearing requirement will be required within a specific time period (*i.e.*, all products subject to the determination will be subject to a clearing requirement no later than two years after the final rule is published).

As discussed above, after considering comments on the two proposed implementation schedules, the Commission has decided to proceed with the second option, a schedule that is tied to the first date upon which any person in a non-U.S. jurisdiction is first subject to a clearing mandate issued by a non-U.S. jurisdiction, not including any front-loading or back-loading requirements.<sup>214</sup> Compared to the first option of requiring implementation of

the clearing requirement for all products on a single date, the second option will delay implementation of the clearing requirement for certain products, and thus will delay the realization of the costs and benefits of mandatory clearing for these products. However, the Commission is adopting the second option in light of the benefits of international harmonization of clearing requirements on a jurisdiction-by-jurisdiction basis, including mitigation of regulatory arbitrage.

#### *E. Section 15(a) Factors*

As noted above, the requirement to clear the fixed-to-floating interest rate swaps, basis swaps, FRAs, and OIS covered by this adopting release is expected to result in increased use of central clearing, although it is not feasible to quantify with certainty the extent of that increase. Thus, this section discusses the expected results from an overall increase in the use of swap clearing in terms of the factors set forth in section 15(a) of the CEA.

##### *i. Protection of Market Participants and the Public*

As described above, required clearing of the interest rate swaps identified in this clearing requirement determination is expected to most likely reduce counterparty risk for market participants that clear those swaps because they will face the DCO rather than another market participant that lacks the full array of risk management tools that the DCO has at its disposal. This also reduces uncertainty in times of market stress because market participants facing a DCO are less concerned with the impact of such stress on the solvency of their counterparty for cleared trades.

By requiring clearing of certain interest rate swaps, all of which are already available for clearing, the Commission expects, as it stated in the NPRM, that this rule will encourage a smooth transition by creating an opportunity for market participants to work out challenges related to required clearing of swaps while operating in familiar terrain. More specifically, the DCOs currently clearing these interest rate swaps, CME, Eurex, LCH, and SGX, will clear an increased volume of swaps that they already understand and have experience managing. Similarly, FCMs likely will realize increased customer and transaction volume as a result of the requirement, but will not have to simultaneously learn how to operationalize clearing for the covered interest rate swaps. The experience of FCMs with these types of products also is likely to benefit any customers that are new to clearing, as the FCM guides

<sup>213</sup> See summary of these comments in section II.B.

<sup>214</sup> See discussion, including summary of comments received, in section IV.



them through initial experiences with cleared swaps.

In addition, uncleared swaps subject to collateral agreements can be the subject of valuation disputes. These valuation disputes sometimes require several months or longer to resolve. Potential future exposures can grow significantly and even beyond the amount of initial margin posted during that time, leaving one of the two counterparties exposed to counterparty credit risk. DCOs significantly reduce and potentially may eliminate valuation disputes for cleared swaps, as well as the risk that uncollateralized exposure can develop and accumulate during the time when such a dispute would have otherwise occurred, thus providing additional protection to market participants that transact in swaps that are required to be cleared.

As far as costs are concerned, market participants that do not currently have established clearing relationships with an FCM will have to set up and maintain such a relationship in order to clear swaps that are required to be cleared. As discussed above, market participants that conduct a limited number of swaps per year likely will be required to pay monthly or annual fees that FCMs charge to maintain both the relationship and outstanding swap positions belonging to the customer. In addition, the FCM is likely to pass along fees charged by the DCO for establishing and maintaining open positions.<sup>215</sup>

It is expected that most market participants already will have had experience complying with prior clearing requirements and that the incremental burdens associated with clearing the additional interest rate swaps subject to this rulemaking should be minimal, especially given the similarities that these products have to those already included within the prior clearing requirement determination and the fact that they are already widely cleared products.

## ii. Efficiency, Competitiveness, and Financial Integrity of Swap Markets

The Commission continues to expect that swap clearing will reduce counterparty risk in times of market stress and promote liquidity and efficiency during those times. Increased liquidity promotes the ability of market participants to limit losses by exiting positions effectively and efficiently when necessary in order to manage risk during a time of market stress.

<sup>215</sup> See sections II.B.iii. and V.C.ii for a summary of JBA's comment concerning the potential costs of establishing a new clearing arrangement at a DCO in response to this rulemaking, and the Commission's response to that comment.

In addition, to the extent that positions move from facing multiple counterparties in the bilateral market to being cleared through a smaller number of clearinghouses, clearing facilitates increased netting. This reduces the amount of collateral that a party must post in margin accounts.

As discussed above, in setting forth this new clearing requirement determination, the Commission took into account a number of specific factors that relate to the financial integrity of the swap markets. Specifically, the NPRM and the discussion above include an assessment of whether CME, Eurex, LCH, and SGX, each of which currently clears interest rate swaps, have the rule framework, capacity, operational expertise and resources, and credit support infrastructure to clear these swaps on terms that are consistent with the material terms and trading conventions on which the contract is now traded. The Commission also considered the resources of DCOs to handle additional clearing during stressed and non-stressed market conditions, as well as the existence of reasonable legal certainty in the event of a clearing member or DCO insolvency.<sup>216</sup>

In considering the efficiencies, competitiveness, and financial integrity of the swap markets associated with this clearing requirement determination, the Commission observes that the use of bilateral swaps generates a need for market participants to conduct due diligence on each potential counterparty due to concerns about counterparty credit risk. Requiring certain types of swaps to be centrally cleared reduces the number of separate counterparties for which such due diligence is necessary, thereby potentially contributing to the overall efficiency and competitiveness of the swap markets.

In support of this reasoning, Citadel's comments suggest that extinguishing bilateral counterparty credit exposure and eliminating complex bilateral trading documentation for swaps subject to a clearing requirement enables market participants to access a wider range of execution counterparties and encourages the entry of new liquidity providers.<sup>217</sup> As a result, when a clearing requirement is in effect, price

<sup>216</sup> See section II.C.iii.

<sup>217</sup> Commission regulation 39.12(b)(6) requires a DCO to establish rules providing that upon acceptance of a swap for clearing, the original swap is extinguished and replaced by an equal and opposite swap between the DCO and each clearing member acting as principal for a house trade or acting as agent for a customer trade. This process extinguishes counterparty credit risk between the original executing counterparties.

competition tends to increase, execution costs for investors and customers tend to decrease, and overall market liquidity would therefore improve for the swaps subject to the clearing requirement. Citadel also notes that the imposition of a clearing requirement may create the commercial rationale for another DCO or FCM to launch or expand its clearing offering given the expected increase in overall cleared volumes.

In adopting this clearing requirement for interest rate swaps, the Commission must consider the effect on competition, including appropriate fees and charges applied to clearing. As discussed in more detail in section II.B.iii, there are a number of potential outcomes that may result from required clearing. Some of these outcomes may impose costs, such as if a DCO possessed market power and exercised that power in an anticompetitive manner, and some of the outcomes would be positive, such as if the clearing requirement facilitated a stronger entry opportunity for competitors.<sup>218</sup>

## iii. Price Discovery

As the Commission noted in the NPRM, central clearing, in general, encourages better price discovery because it eliminates the importance of counterparty creditworthiness in pricing swaps cleared through a given DCO. That is, by making the counterparty creditworthiness of all swaps of a certain type essentially the same, prices should reflect factors related to the terms of the swap, rather than the idiosyncratic risk posed by the entities trading it.

As discussed in section II.C.iii.a above, CME, Eurex, LCH, and SGX obtain adequate pricing data for the interest rate swaps that they clear. Each of these DCOs establishes a rule framework for its pricing methodology and rigorously tests its pricing models to ensure that the cornerstone of its risk management regime is as sound as possible.

## iv. Sound Risk Management Practices

If a firm enters into uncleared and uncollateralized swaps to hedge certain positions and then the counterparty to those swaps defaults unexpectedly, the firm could be left with large outstanding exposures. Even for uncleared swaps that are subject to the new uncleared swap margin regulations, some counterparty credit risk remains.<sup>219</sup> As

<sup>218</sup> See section II.B.iii for full discussion of comments related to competition issues.

<sup>219</sup> For example, there is a small risk of a sudden price move so large that a counterparty would be unable to post sufficient variation margin to cover

explained in the NPRM and as stated above, when a swap is cleared the DCO becomes the counterparty facing each of the two original participants in the swap. This standardizes and reduces counterparty risk for each of the two original participants. To the extent that a market participant's hedges comprise swaps that are required to be cleared, the requirement enhances the market participant's risk management practices by reducing its counterparty risk.

In addition, required clearing reduces the complexity of unwinding or transferring swap positions from large entities that default. Procedures for transfer of swap positions and mutualization of losses among DCO members are already in place, and the Commission anticipates that they are much more likely to function in a manner that enables rapid transfer of defaulted positions than legal processes that would surround the enforcement of bilateral contracts for uncleared swaps.<sup>220</sup>

Central clearing has evolved since the 2009 G20 Pittsburgh Summit, when G20 leaders committed to central clearing of all standardized swaps. The percentage of the swap market that is centrally cleared has increased significantly, clearinghouses have expanded their offerings, and the range of banks and other financial institutions that submit swaps to clearinghouses has broadened. At the same time, the numbers of swap clearinghouses and swap clearing members has remained highly concentrated. This has created concerns about a concentration of credit and liquidity risk at clearinghouses that could have systemic implications.<sup>221</sup>

the loss, which may exceed the amount of initial margin posted, and could be forced into default.

<sup>220</sup> As discussed in sections I.E.iii, II.B.iii, and V.B., sound risk management practices are critical for all DCOs, especially those offering clearing for interest rate swaps. In section II.B.ii, the Commission considered whether each § 39.5(b) submission under review was consistent with the core principles for DCOs. In particular, the Commission considered the DCO submissions in light of Core Principle D, which relates to risk management. See also section II.B.iii for a discussion of the effect on the mitigation of systemic risk in the interest rate swap market, as well as the protection of market participants during insolvency events at either the clearing member or DCO level.

<sup>221</sup> See Dietrich Domanski, Leonardo Gambacorta, and Cristina Picillo, "Central clearing: Trends and

However, the Commission believes that DCOs are capable of risk managing the interest rate swaps subject to this rulemaking. Moreover, because only a very small percentage of the swap market will be affected by this clearing requirement determination and because significant percentages of the swaps covered by this determination are already cleared voluntarily, this clearing requirement determination will not significantly increase credit risk and liquidity risk to DCOs. The Commission requested comment on this issue and did not receive any comments in response.

#### v. Other Public Interest Considerations

In September 2009, the President and the other leaders of the G20 nations met in Pittsburgh and committed to a program of action that includes, among other things, central clearing of all standardized swaps.<sup>222</sup> The Commission believes that this clearing requirement will represent another step toward the fulfillment of the G20's commitment.

### VI. Related Matters

#### A. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) requires agencies to consider whether the rules they propose will have a significant economic impact on a substantial number of small entities and, if so, provide a regulatory flexibility analysis respecting the impact.<sup>223</sup> As stated in the NPRM, this clearing requirement determination will not affect any small entities, as the RFA uses that term.<sup>224</sup> Pursuant to section 2(e) of the CEA, only eligible contract participants (ECPs) may enter into swaps, unless the swap is listed on a DCM. The Commission has previously determined that ECPs are not small entities for purposes of the RFA.<sup>225</sup> As

current issues," BIS Quarterly Review (Dec. 2015), available at: <http://www.bis.org/publ/qtrpdf/rqt1512g.pdf>, and 2015 Financial Stability Report published by the Office of Financial Research of the U.S. Department of the Treasury (Dec. 15, 2015), available at: [http://financialresearch.gov/financial-stability-reports/files/OFR\\_2015-Financial-Stability-Report\\_12-15-2015.pdf](http://financialresearch.gov/financial-stability-reports/files/OFR_2015-Financial-Stability-Report_12-15-2015.pdf).

<sup>222</sup> The G20 Leaders Statement made in Pittsburgh is available at: <http://www.g20.utoronto.ca/2009/2009communiqué0925.html>.

<sup>223</sup> 5 U.S.C. 601 *et seq.*

<sup>224</sup> 81 FR at 39534–39535.

<sup>225</sup> 66 FR 20740, 20743 (Apr. 25, 2001).

stated in the NPRM, the clearing requirement determination will only affect ECPs because all persons that are not ECPs are required to execute their swaps on a DCM, and all contracts executed on a DCM must be cleared by a DCO, as required by statute and regulation, not by operation of any clearing requirement determination. The Commission did not receive comments on this conclusion. Therefore, the Chairman, on behalf of the Commission, hereby certifies pursuant to 5 U.S.C. 605(b) that this rulemaking will not have a significant economic impact on a substantial number of small entities.

#### B. Paperwork Reduction Act

The Paperwork Reduction Act (PRA)<sup>226</sup> imposes certain requirements on federal agencies, including the Commission, in connection with conducting or sponsoring any collection of information as defined by the PRA. This rulemaking will not require a new collection of information from any persons or entities. The Commission did not receive any comments relating to the PRA in response to the NPRM.

#### List of Subjects in 17 CFR Part 50

Business and industry, Clearing, Swaps.

For the reasons set forth in the preamble, the Commodity Futures Trading Commission amends 17 CFR part 50 as follows:

### PART 50—CLEARING REQUIREMENT AND RELATED RULES

■ 1. The authority citation for part 50 continues to read as follows:

**Authority:** 7 U.S.C. 2(h) and 7a–1 as amended by Pub. L. 111–203, 124 Stat. 1376.

■ 2. Revise § 50.4(a) to read as follows:

#### § 50.4 Classes of swaps required to be cleared.

(a) *Interest rate swaps.* Swaps that have the following specifications are required to be cleared under section 2(h)(1) of the Act, and shall be cleared pursuant to the rules of any derivatives clearing organization eligible to clear such swaps under § 39.5(a) of this chapter.

<sup>226</sup> 44 U.S.C. 3507(d).

TABLE 1a

Specification	Fixed-to-floating swap class					
1. Currency .....	Australian Dollar (AUD).	Canadian Dollar (CAD).	Euro (EUR) .....	Hong Kong Dollar (HKD).	Mexican Peso (MXN).	Norwegian Krone (NOK).
2. Floating Rate Indexes ..	BBSW .....	CDOR .....	EURIBOR .....	HIBOR .....	TIIE-BANXICO .....	NIBOR.
3. Stated Termination Date Range.	28 days to 30 years	28 days to 30 years	28 days to 50 years	28 days to 10 years	28 days to 21 years	28 days to 10 years.
4. Optionality .....	No .....	No .....	No .....	No .....	No .....	No.
5. Dual Currencies .....	No .....	No .....	No .....	No .....	No .....	No.
6. Conditional Notional Amounts.	No .....	No .....	No .....	No .....	No .....	No.

TABLE 1b

Specification	Fixed-to-floating swap class						
1. Currency .....	Polish Zloty (PLN).	Singapore Dollar (SGD).	Swedish Krona (SEK).	Swiss Franc (CHF).	Sterling (GBP) ....	U.S. Dollar (USD)	Yen (JPY).
2. Floating Rate Indexes.	WIBOR .....	SOR-VWAP .....	STIBOR .....	LIBOR .....	LIBOR .....	LIBOR .....	LIBOR.
3. Stated Termination Date Range.	28 days to 10 years.	28 days to 10 years.	28 days to 15 years.	28 days to 30 years.	28 days to 50 years.	28 days to 50 years.	28 days to 30 years.
4. Optionality .....	No .....	No .....	No .....	No .....	No .....	No .....	No.
5. Dual Currencies .....	No .....	No .....	No .....	No .....	No .....	No .....	No.
6. Conditional Notional Amounts.	No .....	No .....	No .....	No .....	No .....	No .....	No.

TABLE 2

Specification	Basis swap class					
1. Currency .....	Australian Dollar (AUD) ..	Euro (EUR) .....	Sterling (GBP) .....	U.S. Dollar (USD) .....	Yen (JPY).	
2. Floating Rate Indexes	BBSW .....	EURIBOR .....	LIBOR .....	LIBOR .....	LIBOR.	
3. Stated Termination Date Range.	28 days to 30 years .....	28 days to 50 years .....	28 days to 50 years .....	28 days to 50 years .....	28 days to 30 years.	
4. Optionality .....	No .....	No .....	No .....	No .....	No.	
5. Dual Currencies .....	No .....	No .....	No .....	No .....	No.	
6. Conditional Notional Amounts.	No .....	No .....	No .....	No .....	No.	

TABLE 3

Specification	Forward rate agreement class						
1. Currency .....	Euro (EUR) .....	Polish Zloty (PLN).	Norwegian Krone (NOK).	Swedish Krona (SEK).	Sterling (GBP) ....	U.S. Dollar (USD)	Yen (JPY).
2. Floating Rate Indexes.	EURIBOR .....	WIBOR .....	NIBOR .....	STIBOR .....	LIBOR .....	LIBOR .....	LIBOR.
3. Stated Termination Date Range.	3 days to 3 years	3 days to 2 years	3 days to 2 years	3 days to 3 years	3 days to 3 years	3 days to 3 years	3 days to 3 years.
4. Optionality .....	No .....	No .....	No .....	No .....	No .....	No .....	No.
5. Dual Currencies .....	No .....	No .....	No .....	No .....	No .....	No .....	No.
6. Conditional Notional Amounts.	No .....	No .....	No .....	No .....	No .....	No .....	No.

TABLE 4

Specification	Overnight index swap class				
1. Currency .....	Australian Dollar (AUD) ..	Canadian Dollar (CAD) ..	Euro (EUR) .....	Sterling (GBP) .....	U.S. Dollar (USD).
2. Floating Rate Indexes	AONIA-OIS .....	CORRA-OIS .....	EONIA .....	SONIA .....	FedFunds.
3. Stated Termination Date Range.	7 days to 2 years .....	7 days to 2 years .....	7 days to 3 years .....	7 days to 3 years .....	7 days to 3 years.
4. Optionality .....	No .....	No .....	No .....	No .....	No.
5. Dual Currencies .....	No .....	No .....	No .....	No .....	No.
6. Conditional Notional Amounts.	No .....	No .....	No .....	No .....	No.

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Issued in Washington, DC, on September 28, 2016, by the Commission.

**Christopher J. Kirkpatrick,**  
*Secretary of the Commission.*

**Note:** The following appendices will not appear in the Code of Federal Regulations.

**Appendices to Clearing Requirement Determination Under Section 2(h) of the Commodity Exchange Act for Interest Rate Swaps—Commission Voting Summary and Chairman's Statement**

**Appendix 1—Commission Voting Summary**

On this matter, Chairman Massad and Commissioners Bowen and Giancarlo voted in the affirmative. No Commissioner voted in the negative.

**Appendix 2—Statement of Chairman Timothy G. Massad**

Central clearing is one of the great innovations of the financial system. Indeed, increasing the use of central clearing for over-

the-counter swaps is one of the most important goals of the 2009 G20 Leaders' agreement and the Dodd-Frank Act.

Of course, central clearing does not eliminate the risk of transactions. But clearinghouses can monitor and mitigate that risk, which can make our financial system more stable.

In just a few short years, the percentage of over-the-counter swaps being cleared has increased substantially. And today, I am very pleased that we are continuing this progress by expanding the Commission's swap clearing requirement to include interest rate swaps denominated in nine additional currencies. Our counterparts in the relevant non-U.S. jurisdictions have mandated, or are expected soon to mandate, central clearing for these products, and our requirements will be phased based on when the corresponding clearing requirements have taken effect in non-U.S. jurisdictions.

The Commission's first clearing requirement, adopted in 2012, applied to interest rate swaps denominated in four currencies—U.S. dollar, euro, British sterling, and Japanese yen. Today, we have expanded the interest rate swap clearing requirement to

include those denominated in the Australian dollar, Canadian dollar, Hong Kong dollar, Singapore dollar, Mexican peso, Norwegian krone, Polish zloty, Swedish krona, and Swiss franc.

Requiring clearing for these swaps will further reduce risk within our financial system. Today's determination also represents another important step toward cross-border harmonization of swaps regulations, which is critically important to creating an effective regulatory framework.

This rule reflects the CFTC's close coordination with our fellow regulatory authorities from the various jurisdictions with whom we are seeking to harmonize. We also consulted and coordinated with our fellow financial regulators here in the United States.

I want to thank the hardworking CFTC staff for their efforts on this important measure. I'd also like to thank my fellow Commissioners Bowen and Giancarlo for their support.

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