

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

OKLAHOMA POLICE PENSION AND
RETIREMENT SYSTEM, *on behalf of itself,
and, in a representative capacity, on behalf of
all those similarly situated,*

Plaintiff,

vs.

BANK OF AMERICA CORPORATION;
BANK OF AMERICA, N.A.; MERRILL
LYNCH, PIERCE, FENNER & SMITH, INC.;
CRÉDIT AGRICOLE S.A.; CRÉDIT
AGRICOLE CORPORATE AND
INVESTMENT BANK; CRÉDIT AGRICOLE
SECURITIES (USA) INC.; CREDIT SUISSE
SECURITIES (USA) LLC; CREDIT SUISSE
GROUP AG; CREDIT SUISSE AG; CREDIT
SUISSE INTERNATIONAL; DEUTSCHE
BANK SECURITIES, INC.; DEUTSCHE
BANK AG; NOMURA HOLDINGS, INC.;
NOMURA INTERNATIONAL PLC;
NOMURA SECURITIES INTERNATIONAL,
INC.; HIREN GUDKA; AMANDEEP SINGH
MANKU; SHAILEN PAU; BHARDEEP
SINGH HEER; and JOHN DOE
DEFENDANTS NOS. 1-100,

Defendants.

Case No. _____

CLASS ACTION COMPLAINT

JURY TRIAL DEMANDED

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COMES NOW Plaintiff OKLAHOMA POLICE PENSION AND RETIREMENT SYSTEM, on behalf of itself, and, in a representative capacity, on behalf of all those similarly situated under Rule 23 of the Federal Rules of Civil Procedure, for its Complaint against Defendants BANK OF AMERICA CORPORATION; BANK OF AMERICA, N.A.; MERRILL LYNCH, PIERCE, FENNER & SMITH, INC.; CRÉDIT AGRICOLE S.A.; CRÉDIT AGRICOLE CORPORATE AND INVESTMENT BANK; CRÉDIT AGRICOLE SECURITIES (USA) INC.; CREDIT SUISSE SECURITIES (USA) LLC; CREDIT SUISSE GROUP AG; CREDIT SUISSE AG; CREDIT SUISSE INTERNATIONAL; DEUTSCHE BANK SECURITIES, INC.; DEUTSCHE BANK AG; NOMURA HOLDINGS, INC.; NOMURA INTERNATIONAL PLC; NOMURA SECURITIES INTERNATIONAL, INC.; HIREN GUDKA; AMANDEEP SINGH MANKU; SHAILEN PAU; BHARDEEP SINGH HEER; and JOHN DOE DEFENDANTS NOS. 1-100 (“Defendants”), brought under the Sherman Antitrust Act, the Clayton Antitrust Act, and the common law of Unjust Enrichment, for, *inter alia*, treble damages, disgorgement and restitution, and costs of suit, for Defendants’ combination and conspiracy to restrain trade in Supra-sovereign, Sub-sovereign and Agency bonds (“SSAs”), from at least January 1, 2010 through April 27, 2014 (“Class Period”), and, based upon personal knowledge, information, belief, and investigation of counsel, alleges:

I. NATURE AND BACKGROUND OF SUIT

1. This case involves a conspiracy by Defendants (known and unknown) to manipulate the U.S. dollar (“USD”)-denominated SSA bond secondary market in violation of the Sherman Antitrust Act and the common law of Unjust Enrichment.

A. SSA Bonds

2. SSA bonds are those issued by Supranational, Sub-Sovereign, or certain quasi-governmental Agencies with social or economic public policy initiatives. The bonds are issued to raise capital for a variety of public purposes worldwide.

3. SSA bonds sit between sovereign bonds (such as Treasuries) on the one hand and private issues (such as corporate bonds) on the other. Because of implicit or explicit credit guarantees by the issuing entity, SSA bonds have extremely high credit ratings and are considered “investment grade” with a low risk of default. SSA bonds can be issued in the local or other currencies, and the U.S. dollar is often selected for issuance because doing so makes the bonds more attractive to U.S. investors.

4. Defendants are market makers in the robust secondary market for SSA bonds and continuously buy and sell SSA bonds with buy-side counterparties in an Over the Counter (“OTC”) market. Volume in the secondary market is robust with billions of dollars’ worth of SSA bonds changing hands.

5. Plaintiff and members of the Class (defined below) are investors that purchased USD-denominated SSA bonds directly from, or sold them directly to, one or more Defendants in the secondary market during the Class Period.

B. Collusion in the USD-denominated SSA Bond Market

6. By secretly colluding to manipulate the spreads on USD-issued SSA bond prices throughout the Class Period, Defendants extracted supra-competitive profits from Plaintiff and members of the Class. Plaintiff brings this action to redress the injuries suffered by it and by members of the Class at the hands of Defendants, which likely amounts to hundreds of millions of dollars during the Class Period.

7. The SSA bond market is one of the largest in the world – estimated to be over \$9 trillion. SSA bonds exploded with popularity following the financial crisis in the United States, by some estimates tripling between 2005 and 2012. This was largely due to the pressure from investors to invest in “safe” instruments and to reduce risk following losses in 2008 and 2009 due to the bursting of the real estate bubble and attendant freeze of the credit market with resulting panic in stock markets throughout the world. For instance, a growing number of U.S. investors (pension funds, insurance companies, etc.) turned to SSA bonds to meet safety requirements in bylaws or investment guidelines following the economic collapse.

8. At the same time, SSA dealers were under enormous pressure to generate profit for several reasons. First, the structure of the market is such that the awarding of underwriting services for a primary issuance (a highly lucrative position) is based on volume in the secondary market. Issuers circulate monthly league tables – or, as insiders call them, “Mickey Mouse” charts that rank the banks by volume and then use these lists to award business. Secondly, several regulatory changes occurred in the aftermath of the global financial crisis that pressured SSA desks to generate more profit and to execute more trades. Given the fact that the spreads on SSA bonds are typically narrow (*i.e.*, less profit for Defendants) due to their perceived safety, Trader Defendants turned to other (collusive) means to obtain desired profitability and relieve the pressure from supervisors.

9. Rather than allow free market forces to set the USD-issued SSA bond spreads, Defendants conspired to, and did, rig them to their advantage during the Class Period.

10. **First**, Defendants shared with each other their own competitively sensitive information, such as customer trading history or order flow and daily inquiries into buying or

selling USD-issued SSA bonds. By sharing such information, Defendants were able to coordinate their trading activities when quoting prices to investors.

11. **Second**, Defendants colluded to widen the spreads on USD-denominated SSA bonds during the Class Period. A “spread” is the difference between the bid and the ask price; the smaller the spread, the better the price for customers; the wider the spread, the more income for Defendants. Defendants were able to manipulate the spreads by the use of chat rooms, the same vehicle that has been at the heart of numerous collusion cases in the financial markets such as the foreign exchange (“FX”) market. Indeed, recognizing the incriminating possibilities of chat rooms, the Trader Defendants set up different chat rooms **every single day**.

C. The Collusion Abruptly Ends and Then Is Revealed

12. On Sunday, April 27, 2014, both *Reuters* and the *Financial Times* (“FT”) announced that U.S. criminal prosecutors were on their way to London to meet with individual currency traders and question them regarding the manipulation of the FX market. That investigation and prosecution likewise involved the use of chat rooms and other means to collude to fix prices in a major market. Faced with the serious, even criminal, ramifications of collusion, Defendants here took actions evidencing consciousness of guilt; *i.e.* they shut down their chat rooms and immediately ceased colluding. Thus, the Class Period ends on April 27, 2014. The very next day, three Barclays employees were criminally charged in conjunction with the manipulation of the LIBOR benchmark. Tellingly, the economic analyses undertaken by Plaintiff’s Counsel serve to show that the SSA bond market “returned to normal” at that time. However, Plaintiff and the Class have not been compensated for their losses in the years that Defendants manipulated the USD-issued SSA market

13. The conspiracy and overt acts in furtherance harmed Plaintiff and members of the Class. Plaintiff and members of the Class suffered direct financial injury and conferred a

financial windfall upon Defendants when they directly purchased or sold USD-denominated SSA bonds from Defendants in the secondary market during the Class Period.

D. Counsel’s Pre-Filing Investigation Confirms Collusion and Resulting Antitrust Injury

14. In December 2015, *Bloomberg* reported that the U.S. Department of Justice (“DOJ”) had launched an investigation into potential collusion in the USD-based SSA bond market, including potential *criminal charges*. In ensuing articles, it was revealed that the DOJ had uncovered chat rooms where Defendants colluded to fix prices and share customer information. Other regulators, such as the U.K. Financial Conduct Authority (“FCA”) and the European Commission (“EC”), have launched parallel probes into the manipulation of the USD-issued SSA bond market, and several implicated traders have been removed from their positions at Defendant banks.

15. Upon learning of the investigations into SSA collusion, the undersigned counsel (“Counsel”) commenced its own thorough investigation into the alleged wrongdoing. Undertaken during the months since the story first broke, that investigation has consisted of, *inter alia*: meeting numerous times with industry insiders in multiple countries, repeated in-person consultations with multiple experts, and in-person meetings with representatives of Class members to better diagram and investigate the USD-denominated SSA bond market.

16. Counsel acquired SSA market data for an almost 10-year period, that included the Class Period, for Plaintiff’s experts to analyze. Based on its extensive factual investigation, which continues, Counsel commissioned comprehensive economic studies of the behavior of the USD-denominated SSA market. Counsel worked with academic experts and statisticians on a series of econometric studies of the SSA market during and after the collusion period. These

analyses yielded results consistent with Plaintiff's claim that Defendants had colluded on prices in the USD-denominated SSA market.

17. To begin, Counsel first commissioned an analysis that compared the spreads of USD-denominated SSA bonds to those of corporate bonds, as it is expected that corporate bonds would have similar spreads to SSA bonds. However, during the Class Period, the average spreads for USD-denominated SSA bonds were significantly higher than those for corporate bonds during the same period. To test these results, Counsel commissioned a number of sub-tests that included looking at bonds that were coded "Supra-National" ("SN") only, isolating the time period that could arguably have been affected by the European debt crisis and performing the same review on winsorized data.¹ Regressions with these and other variables were run and yielded the same pattern of results.

18. Additionally, Counsel commissioned a study of the average bid, ask, and transaction prices during the Class Period to determine whether the transaction price fell where it predictably would under normal competitive market conditions: somewhere around the midpoint of the bid and ask prices. In reality, though, the average transaction price skewed ***over 40% off the midpoint.***

19. Counsel also commissioned a study of the time correlation of the bid-ask spread on SSA bonds during the Class Period versus the non-collusion period. The study showed, consistent with price collusion, very high correlation of bid-ask prices on SSA bonds during the Class Period as opposed to the post-collusion period. To ensure the accuracy of this result, Counsel had studies done on the five-day trading period surrounding the end of the Class Period

¹ As discussed herein, "winsorizing" is a common method that accounts for any outliers by ascribing 5 and 95 percentile values to them.

as well as the fifteen-day trading periods prior to and after the end of the Class Period. They, too, were consistent with collusion.

20. To further confirm this accuracy, Counsel ordered a comparison study of Euro-denominated SSAs as they were traded at different desks and are not the subject of this action. Counsel compared the five-day trading period surrounding the end of the Class Period for Euro-traded SSA bonds as well as the fifteen-day trading periods prior to and after the end of the Class Period. The Euro-traded SSA bonds ***did not exhibit abnormal behavior during these time periods but instead maintained the “status quo.”***

21. Furthermore, industry sources have confirmed that while Fannie Mae and Freddie Mac bonds are sometimes considered as a part of the “SSA market,” ***they were not traded by the implicated SSA desks but by separate desks.*** Therefore, counsel commissioned a study of the behavior of Fannie Mae and Freddie Mac bonds during the Class Period and noted that they behaved quite differently from the USD-denominated SSA bonds, indicative of collusion.

22. Finally, Counsel commissioned a cross check of the results from the cumulative dataset. To do that, counsel isolated specific SSA issues during a given period. For those bonds, Counsel commissioned a regression analysis between U.S. Treasury bonds (rated similarly) and the individual SSA bonds. In numerous instances, the R-squared was extremely low, likewise suggesting collusion.

23. To deepen the Treasury analysis, Counsel looked at the relationship between the level of an index of Treasury prices (“PDPLGOVT”) and the daily average of SSA prices over the 2010 – 2016 period by using weekly observations and a “dummy variable” for the collusion period. The dummy variable had a positive and statistically significant value, which shows other

factors that caused the SSA prices to be higher than predicted by the movement of Treasury prices in the Class Period.

24. Counsel's extensive analysis, research, and investigation involving academic experts, SSA trading veterans, statisticians, and transaction data demonstrates collusion in USD-denominated SSA bonds during the Class Period among Defendants as set forth in more detail below.

II. JURISDICTION, VENUE, AND COMMERCE

25. This action arises under Sections 1 and 3 of the Sherman Antitrust Act, 15 U.S.C. §§1 & 3, and Section 4 of the Clayton Antitrust Act, 15 U.S.C. §15.

26. This Court has subject matter jurisdiction under 28 U.S.C. §§1331, 1332(d)(2), 1337, and 1367.

27. Venue is proper in this District under 15 U.S.C. §§15(a) and 22, and 28 U.S.C. §1391(b), (c), and (d), because during the Class Period, Defendants resided, transacted business, were found, or had agents in the United States, including in this District, and a substantial portion of the alleged activity affected interstate trade and commerce, including in this District.

28. Defendants' conduct was within the flow of, was intended to, and did, in fact, have a substantial effect on the interstate commerce of the United States. During the Class Period, Defendants used the instrumentalities of interstate commerce, including interstate wires, in furtherance of their illegal scheme.

29. Defendants' manipulation, conspiracy and conduct alleged herein has been in U.S. import commerce, or has had a direct, substantial and reasonably foreseeable effect on U.S. domestic commerce, and such effect gives rise to the claims of Plaintiff and members of Class, within the meaning of the Foreign Trade Antitrust Improvements Act of 1982, 15 U.S.C. §6a.

30. This Court has personal jurisdiction over each Defendant because each Defendant transacted business, maintained substantial contacts, is located, or they or their co-conspirators committed overt acts in furtherance of their illegal conspiracy, in the United States, including in this District. Some of the Defendants are also located in this District.

31. The conspiracy and overt acts taken in furtherance were directed at, and had the intended effect of, causing injury to persons residing in, located in, or doing business in the United States, including in this District.

III. THE PARTIES

A. Plaintiff

32. Oklahoma Police Pension and Retirement System (“Oklahoma” or “Plaintiff”) is a governmental pension system that provides pension and disability benefits for municipal police officers in the State of Oklahoma. Its stated mission is to provide secure retirement benefits for its approximately 8,000 members and their beneficiaries. Oklahoma purchased USD-denominated SSA bonds during the Class Period and was injured in its business and property by reason of Defendants’ violations of law. Plaintiff is located in Oklahoma City, Oklahoma.

B. Defendants

1. Bank Defendants

a. Bank of America

33. Defendant Bank of America Corporation (“BAC”) is a Delaware corporation headquartered at 100 North Tryon Street, Charlotte, North Carolina 28255. Bank of America is the ultimate parent of BofA and Merrill Lynch.

34. Defendant Bank of America, N.A. (“BofA”) is a federally chartered national banking association with its principal place of business in Charlotte, North Carolina, and is an indirect, wholly owned subsidiary of BAC.

35. Defendant Merrill Lynch, Pierce, Fenner & Smith, Inc. (“Merrill Lynch”) is a Delaware corporation with its principal place of business at One Bryant Park, New York, New York 10036, and is an indirect, wholly owned subsidiary of BAC.

36. Defendants BAC, BofA, Merrill Lynch, and their subsidiaries and affiliates are referenced collectively in this Complaint as “Bank of America.” During the Class Period, Bank of America purchased USD SSA bonds directly from and sold USD SSA bonds directly to members of the Class in the United States and in this District at prices that were the product of collusion. During the Class Period, Bank of America employed Amandeep Singh Manku and Hiren Gudka, both of whom are USD SSA bond traders under investigation by the DOJ.

b. Crédit Agricole

37. Defendant Crédit Agricole S.A. is a French *société anonyme* with its principal place of business in Montrouge, France.

38. Defendant Crédit Agricole Corporate and Investment Bank is a wholly owned subsidiary of Crédit Agricole S.A. and is a bank organized and existing under the laws of France with its principal place of business in Paris, France, and with branch locations in New York, New York. It is wholly owned by Crédit Agricole S.A.

39. Defendant Crédit Agricole Securities (USA) Inc. is a New York corporation headquartered in the Crédit Agricole Building, 1301 Avenue of the Americas, New York, New York. Crédit Agricole Securities (USA) Inc. is wholly owned by Crédit Agricole S.A.

40. Defendants Crédit Agricole S.A., Crédit Agricole Corporate and Investment Bank, Crédit Agricole Securities (USA) Inc., and their subsidiaries and affiliates are referenced collectively in this Complaint as “Crédit Agricole.” During the Class Period, Crédit Agricole purchased USD SSA bonds directly from and sold USD SSA bonds directly to members of the

Class in the United States and in this District at prices that were the product of collusion. During the Class Period, Crédit Agricole employed Defendants Amandeep Singh Manku and Shailen Pau, both of whom are USD SSA bond traders under investigation by the DOJ.

c. Credit Suisse

41. Defendant Credit Suisse Group AG is a Swiss *Aktiengesellschaft* with its principal place of business in Zurich, Switzerland.

42. Defendant Credit Suisse AG is a Swiss *Aktiengesellschaft* with its principal place of business in Zurich, Switzerland.

43. Defendant Credit Suisse AG is a wholly owned subsidiary of Credit Suisse Group AG and Credit Suisse AG and is a bank organized and existing under the laws of Switzerland with its principal place of business in Zurich, Switzerland. It maintains a New York, New York branch. Credit Suisse AG is registered with and licensed by the New York Department of Financial Services and operates a branch registered in New York, New York.

44. Defendant Credit Suisse Securities (USA) LLC is a corporation organized and existing under the laws of the State of Delaware with its principal place of business in New York, New York, and is a wholly owned subsidiary of Credit Suisse Group AG.

45. Defendants Credit Suisse Group AG, Credit Suisse AG, Credit Suisse Securities (USA) LLC, and their subsidiaries and affiliates are referenced collectively in this Complaint as “Credit Suisse.” During the Class Period, Credit Suisse purchased USD SSA bonds directly from and sold USD SSA bonds directly to members of the Class in the United States and in this District at prices that were the product of collusion. During the Class Period, Credit Suisse employed Defendant Shailen Pau, a USD SSA bond trader who is under investigation by the DOJ.

d. Deutsche Bank

46. Defendant Deutsche Bank AG is a German *Aktiengesellschaft* with its principal place of business in Frankfurt, Germany. Deutsche Bank AG is registered with and licensed by the New York Department of Financial Services with a registered address in New York, New York.

47. Defendant Deutsche Bank Securities, Inc. is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business in New York, New York, and is an indirect wholly owned subsidiary of Deutsche Bank AG.

48. Defendants Deutsche Bank AG, Deutsche Bank Securities Inc., and their subsidiaries and affiliates are referenced collectively in this Complaint as “Deutsche Bank.” During the Class Period, Deutsche Bank purchased USD SSA bonds directly from and sold USD SSA bonds directly to members of the Class in the United States and in this District at prices that were the product of collusion. During the Class Period, Deutsche Bank employed Defendant Hiren Gudka, a USD SSA bond trader who is under investigation by the DOJ.

e. Nomura

49. Defendant Nomura Holdings, Inc. (“Nomura Holdings”) is a Japanese corporation with its principal place of business at 1-9-1 Nihonbashi, Chuo-ku, Tokyo, Japan 103-8645. It is the ultimate parent of Nomura.

50. Defendant Nomura Securities International, Inc. (“Nomura Securities”) is a New York corporation with its principal place of business at 309 West 49th Street, Worldwide Plaza, New York, New York 10019. It is wholly owned by Nomura Holdings.

51. Defendant Nomura Securities International, Inc. (“NSI”) is a corporation organized and existing under the laws of the State of New York, with its principal place of business in New York, New York. It is wholly owned by Nomura Holdings.

52. Defendants Nomura Holdings, Nomura Securities, NSI, and their subsidiaries and affiliates are referenced collectively in this Complaint as “Nomura.” During the Class Period, Nomura purchased USD SSA bonds directly from and sold USD SSA bonds directly to members of the Class in the United States and in this District at prices that were the product of collusion. During the Class Period, Nomura employed Defendant Bhardeep Singh Heer, a USD SSA bond trader under investigation by the DOJ.

2. Trader Defendants

a. Hiren Gudka

53. Defendant Hiren Gudka (“Gudka”) is an individual residing in Middlesex, England. During the Class Period, Gudka purchased SSA bonds from and sold SSA bonds to members of the Class in the United States. During the Class Period, Gudka was an SSA bond trader who traded USD SSA bonds and was employed by Defendants Bank of America and Deutsche Bank.

b. Amandeep Singh Manku

54. Defendant Amandeep Singh Manku (“Manku”) is an individual residing in Essex, England. During the Class Period, Manku purchased SSA bonds from and sold SSA bonds to members of the Class in the United States. During the Class Period, Manku was an SSA bond trader who traded USD SSA bonds and was employed by Bank of America and Crédit Agricole.

c. Shailen Pau

55. Defendant Shailen Pau (“Pau”) is an individual residing in London, England. During the Class Period, Pau purchased and sold SSA bond to members of the Class. During the Class Period, Pau was an SSA bond trader who traded USD SSA bonds and was employed by Credit Suisse and Cr dit Agricole.

d. Bhardeep Singh Heer

56. Defendant Bhardeep Singh Heer (“Heer”) is an individual residing in Essex, England. During the Class Period, Heer purchased SSA bonds from and sold SSA bonds to members of the Class in the United States. During the Class Period, Heer was an SSA bond trader who traded USD SSA bonds and was employed by Nomura.

3. John Doe Defendants

57. John Doe Defendants Nos. 1-100 are other entities or persons, including banks, brokers, their parents, subsidiaries, affiliates, current or former employees, and co-conspirators whose identities are currently unknown to Plaintiff. The John Doe Defendants participated in, furthered, and/or combined, conspired, aided and abetted, or agreed with others to perform the unlawful agreements and acts alleged herein.

58. The John Doe Defendants, collectively with the Bank Defendants and the Trader Defendants, are referred to herein collectively as “Defendants.”

Agents, Affiliates, and Co-conspirators

59. Whenever reference is made to any act, deed, or transaction of any corporation or partnership, the allegation means that the corporation or partnership engaged in the act, deed or transaction by or through its officers, directors, agents, employees, representatives, parent,

predecessors or successors-in-interest while they were actually engaged in the management, direction, control or transaction of business or affairs of the corporation or partnership.

60. “Defendant” or “Defendants” as used herein, includes, in addition to those named specifically above, all of the named Defendants’ predecessors, including those merged with or acquired by the named Defendants, and each named Defendants’ wholly owned or controlled subsidiaries or affiliates that played a material role in the unlawful acts alleged in this Complaint.

61. Various other persons, firms, and corporations, that are unknown and not named as Defendants have participated as co-conspirators with Defendants and have performed acts or made statements in furtherance of the conspiracy. Each of the Defendants named herein acted as the agent or joint-venturer of or for the other Defendants with respect to the acts, violations, and common course of conduct alleged herein. Defendants are jointly and severally liable for the acts of their co-conspirators whether named or not named as Defendants in this Complaint.

IV. FACTUAL ALLEGATIONS

A. Overview of the SSA Market

62. The SSA bond market is a large global market that has traditionally been viewed as “safe” and protected due to its ties to public entities and sovereign issuers.

63. SSA bonds are those issued by Supranational, Sub-Sovereign, or certain Agencies which are seen as mandated with social or economic public policy initiatives. The bonds are issued to raise capital for a variety of public (social, infrastructure, policy, economic) purposes worldwide. Supranational issuers are institutions whose mandates extend across national borders and are governed by representatives from a number of countries. Examples of these include the World Bank, the African Development Bank, the European Investment Bank (“EIB”) and the International Finance Corporation (“IFC”).

64. Sub-sovereign issuers are those entities that sit one level beneath the sovereign issuer and are therefore state-level, as opposed to federal government, issues. Examples of these bonds include the German states (such as Berlin or Saxony) or Canadian provinces (Ontario, Alberta, etc.).

65. Agency bonds that are included in the SSA bond market involve a variety of quasi-public entities that meet the social or economic public policy mandates. Examples of these agency bonds would include Kreditanstalt für Wiederaufbau (“KfW”) in Germany and Caisse d’Amortissement de la Dette Sociale (CADES) in France.

66. While Fannie Mae and Freddie Mac are sometimes considered SSA bonds², they were traded by a separate trading desk during the Class Period. An analysis of their behavior during the Class Period confirms that trading of Fannie Mae and Freddie Mac bonds was not affected by the collusion at issue.

67. Some SSA bonds have full government guarantees of repayment, such as KfW and JBIC (Japan), while others have an implied guarantee or government ownership (CADES, *e.g.*). SSA bonds thus have high credit ratings and are considered “investment grade” (BBB- or higher) with an extremely low risk of default. For example, according to the Barclays U.S. Aggregate Index, KfW bonds are rated AAA by S&P and Aaa by Moody’s. The same holds true for EIB bonds.

68. SSA bonds can be issued in the local currency such as Euros for KfW bonds and Yen for JPIC bonds. They can also be issued in other currencies. Quite often, the U.S. dollar is selected for an issuance because of the lower costs associated with borrowing in dollars as compared to Euros or some other currency and because issuing in dollars makes the bonds more

² See, *e.g.* http://www.incapital.com/Products_and_Offerings/SSA/Overview/About_Agencies.aspx

attractive to U.S. investors who were, as termed by one insider, the “Holy Grail” of the SSA bond market.

69. Defendant banks had separate desks under the SSA umbrella with different traders specializing in the various currencies. For example, a Defendant would have a distinct desk for trading in USD SSAs and one for Euro SSAs, Sterling SSAs, Yen SSAs, etc. Traders were unlikely to work between the separate currencies. While the USD SSA traders may have sat in London or New York, frequently they were overseen by managers in New York.

70. The SSA market is extremely large, with *Bloomberg* having indicated that its total market (all outstanding) ranges from \$9 trillion to \$15 trillion. In 2015, according to *International Financial Review*, new issues in SSA bonds reached \$843.35 billion.³ The SSA market experienced significant growth in the past decade, having tripled from 2005 to 2012.

71. USD-denominated SSA issuances account for roughly 35% of the global SSA market. According to some sources, the combined amount of outstanding USD-denominated SSA bonds is around \$2 trillion. Investors are located globally, with an increasing demand from U.S. investors – in 2013, over 75% of USD SSA activity came from U.S.-based clients.

72. Within the SSA bond market, there are two separate markets: the primary and the secondary. At the primary market, new bonds are usually issued at par, or face value. An investment bank (Defendant) typically serves as an intermediary between the organization issuing the securities and the investors who purchase them. As an underwriter of the bond, an investment bank assesses investor demand for the new bonds, assists in determining the appropriate price, and ultimately sells the bonds in the primary market. Underwriting fees at the

³ See Abhinav Ramnarayan and Helene Durand., *DoJ investigates bond traders over market-rigging*, INTERNATIONAL FINANCING REVIEW (Jan. 6, 2016), <http://www.ifre.com/exclusivedoj-investigates-bond-traders-over-market-rigging/21230385.fullarticle>.

primary level are substantial and there is a high level of competition to be awarded a primary issuance. As is the case with an IPO in the equities markets, issuers commonly select multiple Defendants to underwrite a new issue.

73. After the primary market, there is a robust secondary market where bond dealers and investors trade. The investor base in the secondary market includes pension funds, hedge funds, mutual funds, domestic and international banks, central banks, insurance companies, corporations, foundations and some individuals. The secondary market is highly active with billions of dollars' worth of SSA bonds changing hands during the lifetime of the bonds.

74. Trading in the SSA secondary market is done OTC – which means the bank dealers interact directly with an investor counterparty (as opposed to on an exchange). Defendants are market makers in the secondary SSA market and buy and sell SSA bonds continuously.

B. The Purported Process of Buying and Selling SSA Bonds in the Secondary Market

75. In the secondary market, if an investor wants to buy or sell an SSA bond, it obtains quotes on bond prices from a number of dealers. The prices of SSA bonds are stated in terms of the bond's par value, coupon, and maturity date. Par value is face value, payable on maturity date. The coupon is the interest rate that the bond issuer must pay an investor. SSA bonds are sold at a percentage of their par value and can also be measured by their "yield": a figure that shows the return that an investor receives by holding the bond to maturity.

76. Throughout the Class Period, quotes were obtained either telephonically or, increasingly, through electronic trading platforms such as "TradeWeb" or "MarketAxess." Either way, an investor would solicit bids from multiple dealers, partially to satisfy the best execution mandates developing in Europe.

77. “Best execution” refers to the duty of a broker or someone executing orders on behalf of customers to ensure the best execution (*i.e.*, price) possible for their customers’ orders. The Markets in Financial Instruments Directive (“MiFID”) has attempted to define “best execution” but, in practice, one agreed-upon element of best execution has been to solicit bids from multiple banks, and always at least three. Therefore, a customer would either telephonically solicit multiple bids from banks, or send ticker inquiries to multiple banks, or use one of the trading platforms (such as MarketAxess). In the latter scenario, a customer is able to select the specific banks from which they seek to obtain a bond quote by checking a box on the platform screen for that specific bank. Brokers or money managers using these online trading platforms will often check boxes for all of the Defendants for any given quote request.

78. Defendants then respond with quotes on bond prices for the investor, providing “bid” and “ask” prices. Bid price is the maximum price at which a dealer will ***purchase*** the SSA bonds from a customer; the ask price is the minimum price at which a dealer will ***sell*** the SSA bonds to a customer. The difference between these two is the “spread” and the smaller the spread, the better and more competitive the prices are for customers. Bid and ask prices are usually set in terms of basis points (“bp”s) (1/100th of one percent). Economically rational customers want to buy low and sell high, and banks compete with each other based on bid and ask prices, and thus the spreads they offer.

79. Customers want narrower spreads, meaning they can buy bonds for less and sell them for more. The dealer banks want to maintain as broad a spread as possible without losing the trade to another dealer.

80. In comparison to other trading desks, the pace for SSA trading is relatively slow. A trader may undertake zero trades in one day or as many as 25, and Defendants are given as

long as 20 minutes to respond to quote inquiries, thus allowing ample time to enter a chat room in order to communicate and coordinate with other Defendants about the bid in question.

81. Traders would typically arrive to their desks between 6:00 am and 7:00 am to price their portfolios of USD-denominated SSA bonds and then those prices would be published. If buyers or sellers entered during the course of the day, Trader Defendants could change the listed prices. After the markets closed at 5:00 pm, each bank's own systems ran checks on the Trader Defendants' (and all SSA traders) portfolio excel sheets to ensure they were priced competitively – *i.e.* that other banks were not receiving more income.

C. Increasing Pressures in the Secondary SSA Market

1. Market volume

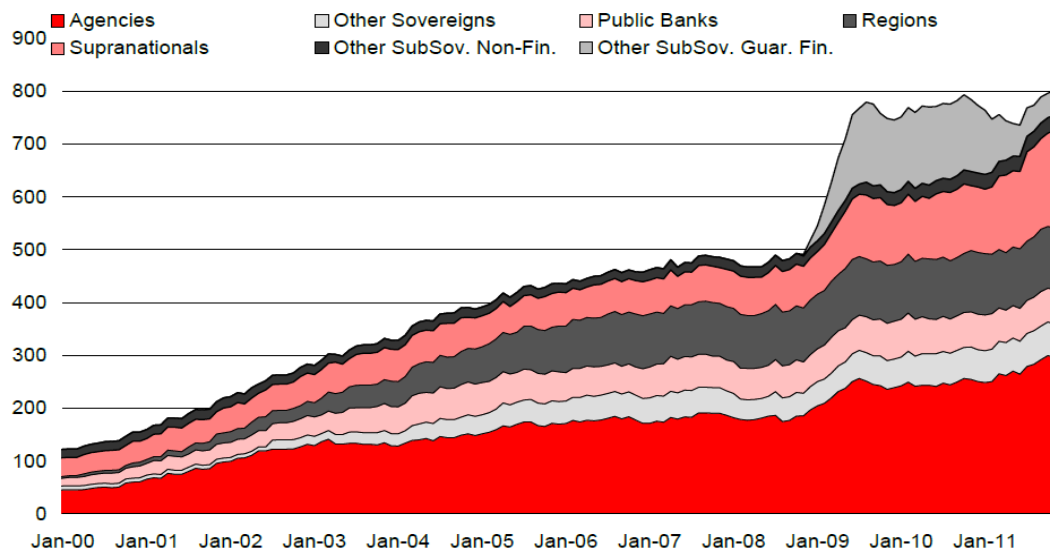
82. During the Class Period, the SSA market skyrocketed. This was due in large part to the financial crisis in the United States and the desire to thereafter invest in “safe” bonds, along with an increased number of issuances coming out of Europe. Pimco explained it as a “crowding in effect” where investors were searching for investments offering “safe spreads.”⁴

83. Indeed, in 2009 alone, the SSA supply jumped by over 30% in one year:⁵

⁴ Kendall Miller, *The SSA Market: a Legitimate “Safe Spread Alternative”?*, PIMCO (Nov. 2012), <https://www.pimco.com/insights/investment-strategies/featured-solutions/the-ssa-market-a-legitimate-safe-spread-alternative>.

⁵ Valentina Stadler and Amey Dyckmans, *The Sub-Sovereigns & Agencies Chartbook*, UNICREDIT RESEARCH GROUP (2011), at 12, https://www.research.unicreditgroup.eu/DocsKey/credit_docs_2013_134286.ashx?EXT=pdf&KEY=n03ZZLYZf5lf7or0wmWQ7aaj78BHiHo8rkB3VOXZqZo=.

Overall Outstanding Volumes* (EUR bn)

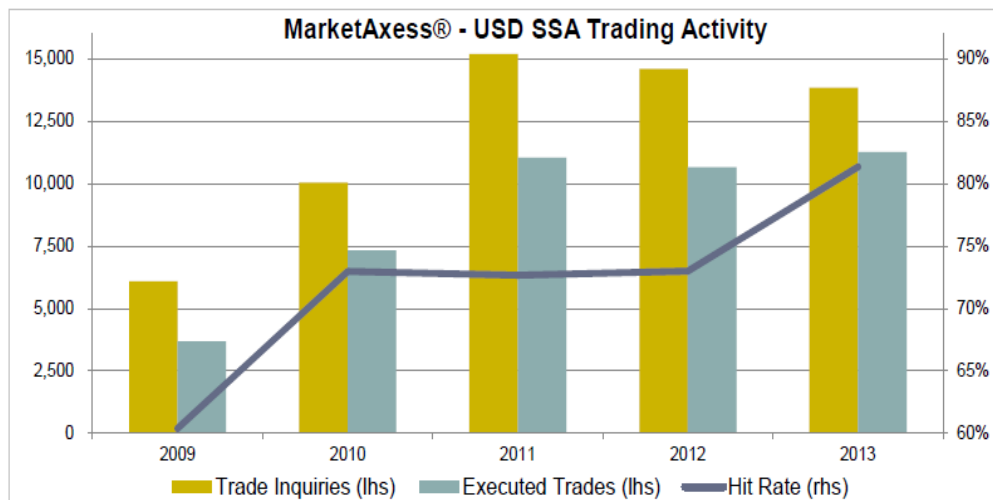


*Figures are based on iBoxx data, i.e. inclusion criteria for iBoxx: minimum outstanding of EUR 1bn; minimum time to maturity of one year; EUR-denomination;
Source: iBoxx, UniCredit Research

84. A 2013 report from MarketAxess shows this increased growth, investor demand, and liquidity of the USD-denominated SSA market:⁶

⁶ George Richardson and Daniel Kim, *Demystifying Supranationals*, GIOA 2014 CONFERENCE PRESENTATION (Mar. 2016), at 17, http://www.gioa.us/presentations/2014/2014_World_Bank_Richardson_Jefferies_Kim.pdf.

Year	Active Clients	Trade Inquiries	Executed Trades	Hit Rate
2009	212	6,091	3,679	60.4%
2010	230	10,050	7,334	73.0%
2011	303	15,201	11,045	72.7%
2012	320	14,603	10,661	73.0%
2013	303	13,847	11,266	81.4%
2009 – 2013 Growth Rate	43%	127%	206%	



85. Because SSA bonds are viewed as “safe” and liquid with allegedly lower yields, there is pressure in the market to execute a higher volume of trades. With the increased growth in the USD-based SSA market during the Class Period, this pressure would have been even higher.

86. Furthermore, prior to the financial crisis, the vast majority of USD-denominated SSA bonds were bought by European central banks and then “parked” as their capital reserves, therefore the secondary market was relatively quiet. However, once U.S. investors began to seek out USD-denominated SSA bonds (during the Class Period), the market became more active and was unique in that it was a more nascent market as compared to the Euro-denominated SSA market which has had an active secondary market for as long as such bonds have been issued.

For example, KfW was founded in 1948 and began issuing Euro-denominated SSA bonds soon thereafter.

2. Relationship of primary and secondary markets

87. Adding to that pressure is the way the primary and secondary markets for SSA bonds are structured. There is a big opportunity for a Defendant bank to garner tremendous fees by serving as an underwriter for primary SSA bond issues. According to numerous industry insiders, when SSA issuers such as EIB choose banks to manage the original issuance of new bonds, they tend to favor those banks that can also show that they have traded the borrower's previously issued bonds in large volumes in the secondary market.

88. Therefore, in order to be awarded the lucrative and highly sought after position of underwriting an issue in the primary market, Defendants are under pressure to generate volume in the secondary market. This pressure is only heightened due to the use of certain charts by the issuing entities. Issuers will create and circulate charts depicting trading volume in the secondary market, and these charts are thereafter used to award underwriting business. The banks are not listed by name in the charts, but instead, code names, such as names of cartoon characters, are used. For example, one bank one month might be deemed "Mickey Mouse" while another is "Donald Duck." These "Mickey Mouse" charts are circulated to all market makers and inform them (in a code name) where they rank to incentivize banks to do more secondary business. A lower ranking in the secondary market, as depicted in the Mickey Mouse chart could jeopardize the banks' ability to be selected to underwrite a new primary issue down the line, which is extremely profitable to the banks.

3. Regulatory changes

89. Furthermore, there were a number of regulatory changes that encouraged an increased demand for highly liquid, low credit risk securities such as SSA bonds during the Class Period. These regulatory pressures included the passage of the Dodd-Frank Act of 2010, Basel III, Capital Requirements Directive (“CRD4”) and the Bank Recovery and Resolution Directive (BRRD), which all placed considerable pressure on Defendants to closely review their internal balance sheets and to build up capital and liquidity.

90. While the Dodd-Frank Act contained hundreds of proposed regulatory changes in the wake of the financial crisis, the most important sub-section was the Volcker Rule. Essentially, the Volcker Rule restricted trading by a bank for its own account, so called “proprietary trading,” where a bank risked its own capital in trading. Instead, banks were to be restricted to trading on behalf of their clients. This rule has resulted in banks holding less risky securities in their asset portfolios. While the rule only became effective in mid-2015, banks started cutting back on their risky securities trading activities soon after the Dodd-Frank Act came into effect in 2010.

91. The second major regulatory change during the Class Period was the Basel III regulatory requirements. While these are to become fully effective in 2016-2019, banks started implementing them as soon as they were announced. There are two aspects to the Basel III regulations: First, the capital requirements of banks were made more stringent by increasing the absolute amount of capital reserves a bank had to hold against its credit and trading risks as well as penalizing the holding of more risky assets in calculating the Basel III capital requirement. This encouraged the holding of relatively safe securities such as SSA bonds. The second aspect of Basel III was the introduction, for the first time, of minimum liquidity ratio requirements for

banks. These liquidity requirements – the Liquidity Coverage Ratio (“LCR”) and the Net Stable Funds Ratio (“NSFR”) – enhanced banks’ needs for highly liquid assets which in turn increased the demand for assets such as SSA bonds.

92. For European Union (“EU”) banks, Basel III requirements were formally adopted as the foundation of the EU regulatory framework following the EU’s adoption of CRD 4 (Capital Requirements Directive 4) in 2013. Moreover, the EU also passed the BRRD in 2014 which punishes bank equity and bond holders for risk taking. During the financial crisis, many large banks were “bailed out” because they were perceived to be “too big to fail.” Under the BRRD, large banks and other financial institutions are more likely to be allowed to fail. Specifically, while deposits and payment system transactions may be protected, other activities, such as trading, will not be, so that shareholders and other debt holders will be “bailed in” to losses rather than “bailed out,” thereby imposing losses on bank stockholders and bondholders rather than the government. This has created further impetus for financial institutions to focus their investments and trading activities on relatively low risk securities such as Treasuries and SSA bonds.

4. A perfect storm for collusion

93. All of this combined to increase the pressure on SSA dealers during the Class Period and lead to a “perfect storm” for collusion. As demand for SSA bonds increased, the potential to earn returns from dealer market-making activity by utilizing non-competitive and collusive means became more lucrative. One banker who covers the sector said: “Investors demand liquidity, issuers expect volume turnover like there’s no tomorrow and bank balance

sheets are shrinking all the time because of regulatory pressures. SSA is a tough business to be in at the moment.”⁷

94. Similarly, a January 7, 2016 article quoted one syndicate head as stating that there was considerable pressure on SSA bond traders to perform, and this may have “created the motivation and opportunity for market rigging.”⁸

95. Finally, during the Class Period, market insiders confirmed that Defendant banks had “aged inventory” policies in place, which meant that there would be a charge to a trader’s profit and loss account if a position was maintained for 90 days and that, in some instances during the Class Period, that time frame could have been as low as 40 days.

5. In response to increasing pressures, dealers collude to increase spreads

96. In a competitive market, Defendants would compete with each other for customers and sales. To gain customers’ business, in a functioning market, Defendants would tighten the spreads, which also has the effect of reducing dealers’ margins.

97. Instead of doing this, and in order to respond to the pressures placed on the market **and** to make more money at the expense of investors, Defendants conspired to manipulate the prices and spreads of SSA bonds.

98. They did this by communicating with each other **daily** about customers’ bond purchases and sales information as well as customer identities, trading habits, trade flow, and

⁷ Helene Durand and Abhinav Ramnarayan, *SSA scandal prompts soul-searching*, INTERNATIONAL FINANCING REVIEW (Jan. 8, 2016), <http://www.ifre.com/ssa-scandal-prompts-soul-searching/21230826.article>.

⁸ Craig McGlashan, et al., *‘Forced competition’ to generate trading flow under fire for fomenting SSA scandal*, GLOBALCAPITAL (Jan. 7, 2016), <http://www.globalcapital.com/article/vz0phyg7g5jt/39forced-competition39-to-generate-trading-flow-under-fire-for-fomenting-ssa-scandal>.

order sizes. By sharing information, Defendants were better able to determine the level of the prices being quoted to investors. Sharing this information, and agreeing to collectively respond to customers' buy/sell inquiries with specific predetermined supra-competitive quotes, lessened competition and enabled Defendants to offer USD-issued SSA bonds at wider spreads without jeopardizing sales because they knew their co-conspirators would not come in and quote a narrower spread.

99. In practice, Defendants would agree upon their morning pricing and then, when customer orders came in, Defendants communicated with each other via daily chat rooms, sharing their order flows. Chat rooms were commonplace in the general bond markets during the Class Period although, sensing the potentially incriminating nature of their use, Trader Defendants here set up daily ones. In these chat rooms, Defendants agreed that they would offer the same or similar spreads to the potential buyers/sellers of SSA bonds. This ensured that they would both get the deal and that investors received non-competitive prices for their USD-denominated SSA bond trades in the secondary market.

100. The details of Defendants' conspiracy are contained in the transcripts of the chat rooms they used. As one SSA bond trader acknowledged, "[I]f you can speak to another trader and agree to see a bond at a certain price and not below, then that makes a big difference."⁹

101. Sharing customer information and manipulating spreads on SSA bonds, via daily chat rooms, constitutes an illegal scheme to fix the bid-ask spreads for SSA bonds sold to investors in the secondary market. In short, a classic horizontal price fixing scheme played out in the market for USD-denominated SSA bonds.

⁹ Ramnarayan, *supra* ¶56.

102. Defendants' conspiracy inflicted severe financial harm on Plaintiff and the Class and restrained competition in the market for USD-denominated SSA bonds. Plaintiff and the Class entered into billions of dollars' worth of USD-denominated SSA bond transactions with Defendants during the Class Period.

D. Reports of Regulatory Investigations into the SSA Market

103. In 2015, the DOJ launched an extensive investigation into the USD-denominated SSA bond market. This first became public when *Bloomberg* published the article "U.S. Said to Probe Possible Rigging in Agency Bond Market." That article announced that, according to three people familiar with the matter, the DOJ was examining possible manipulation in the USD-based SSA bond market. It also outlined the key features of the investigation, including looking at whether traders violated fraud statutes or antitrust laws that prohibit collusion. The probe targeted London-based traders, in the years primarily before 2014, who allegedly, *inter alia*, coordinated with each other before deciding who would offer price quotes to potential buyers and sellers. The article explicitly noted that prosecutors at the DOJ had obtained and were reviewing transcripts of electronic chat rooms used by USD-based SSA bond traders. Furthermore, *Bloomberg* sources indicated that the investigation *is criminal in nature*.¹⁰

104. Similarly, on December 10, 2015, a *MLex* article confirmed that the DOJ had opened a probe into the USD-based SSA bond market, involving "both the antitrust division's New York office and the criminal division's fraud section in Washington."¹¹ The article also

¹⁰ David McLaughlin and Tom Schoenberg, *U.S. Said to Probe Possible Rigging in Agency Bond Market*, BLOOMBERG (Dec. 9, 2015), www.bloomberg.com/news/articles/2015-12-09/u-s-said-to-probe-possible-rigging-in-agency-bond-market.

¹¹ Leah Nylen and Joshua Sisco, *DOJ looking into possible antitrust violations in SSA bond market*, MLEX (Dec. 10, 2015).

noted that the focus of the probe is “on the secondary market, where the bonds are bought and sold, rather than on the issuance.”

105. On January 6, 2016, an article published in the *International Financing Review* provided greater detail of the investigation, naming banks under investigation, highlighting the chat rooms being probed, and citing “several sources” as its authority.¹²

106. These articles reveal that the DOJ is investigating the USD-based SSA trading desks at market makers in the secondary market for USD-based SSA bonds and that the “DoJ is investigating allegations that SSA traders at different banks agreed on prices and shared information on certain US dollar bonds in chat rooms they established for the purpose.” They furthermore explain that “[l]ike past investigations, the DoJ is examining whether traders at banks colluded to manipulate prices in the SSA market and used chat rooms as part of the alleged scheme.”¹³

107. The DOJ has obtained transcripts of on-line chat room conversations and has requested information and answers from certain Defendants.

108. The DOJ is being assisted by the FCA, which has also opened up its own preliminary investigations into potential anticompetitive conduct in the SSA bond market.

109. At about the same time that the DOJ launched its investigation, the European Commission (“EC”) likewise initiated preliminary investigations into potential anticompetitive conduct in the SSA bond market. A February 9, 2016 article in the *Financial Times* stated that

¹² Ramnarayan, *supra* ¶56.

¹³ Gina Chon, Caroline Binham and Laura Noonan, *DoJ investigates traders over debt-market rigging*, FINANCIAL TIMES (Jan. 6, 2016), <http://www.ft.com/cms/s/0/5d58c314-b495-11e5-b147-e5e5bba42e51.html>.

the EC had opened a *preliminary cartel investigation into the possible manipulation of the \$1.5 trillion debt market*.¹⁴

110. Additionally, on February 10, 2016, *Reuters* reported that EU antitrust regulators were investigating several Defendants for possible “rigging” of the SSA market.¹⁵

E. Banks Terminated SSA Traders as News of the Investigations Was Revealed to the Public

111. In a move suggestive of guilt, several traders were removed or suspended from their USD-issued SSA desk positions at Defendant banks immediately following announcement of the investigations. Hiren Gudka of Bank of America, Amandeep Manku of Credit Agricole, and Shailed Pau of Credit Suisse were all removed from their positions in the end of 2015 while Bhardeep Singh lost his FCA authorization at Nomura on March 6, 2016. Each of these traders was actively being investigated by various authorities at the time of their departures.

F. The Structure of the SSA Market Facilitates Collusion

112. The nature of the SSA bond market during the Class Period lent itself to collusion. To begin with, the set-up of the primary and secondary markets served to provide both an opportunity and an incentive to collude. Traders were under extreme pressure from their employers and supervisors to generate volume in order to be awarded underwriting services down the line.

113. Primary SSA bond issues tend to be over \$100 million in a single offering and generate large fees for Defendants. Even a 1% fee on a \$100 million offering would produce a

¹⁴ Jim Brunsten, *EU probes suspected rigging of \$1.5 trillion debt market*, FINANCIAL TIMES (Feb. 9, 2016), <http://www.ft.com/cms/s/0/04befd8a-cf35-11e5-92a1-c5e23ef99c77.html>.

¹⁵ Foo Yun Chee, *EU investigating possible rigging of debt market, sources say*, REUTERS (Feb. 10, 2016), <http://www.reuters.com/article/us-eu-antitrust-bonds-idUSKCN0VI213>.

\$1 million underwriting fee.¹⁶ Given the size of many issues of SSA bonds, issuers often retain multiple Defendants to carry out the primary offering. Therefore a group of Defendants (called a “syndicate”) would work together in the underwriting process. As stated in one article, “once banks are mandated [to perform underwriting services] they have to work together. . . Given the collegial nature, people might talk about things that they shouldn’t.”¹⁷

114. Beyond the syndicated nature of the primary offerings, they also provided a chance for Trader Defendants to gain inside information into the life of a bond. For example, Trader Defendants would have been part of “soft sounding” meetings made with potential investors for the primary offering and thereby been able to learn about that particular offering and to thereafter track the whereabouts of the outstanding bonds. With collusion, it was possible for the Trader Defendants to thus “boss” an issue- to know where the outstanding bonds were and with collusion to be able to control the price. Or, as acknowledged in the industry, “***he who holds bonds is king.***”

115. Furthermore, the USD-based SSA bond market was very “collegial” and afforded opportunities to collude. As explained by several industry insiders, there were groups of SSA traders that were friends. Even if all traders involved were not friends outside of the banking world, there was, during the Class Period, an unregulated culture of SSA bond market hospitality where traders at Defendant banks would get together. It has been described as a “very social market” that included trips sponsored by brokers (skiing, Ibiza, or Las Vegas) where SSA traders convened. Issuers would also host events that brought them together. For example, KfW

¹⁶ Underwriting fees have commonly been around 1% in the debt market. See Kim, et al., *The Effects of Commercial Banks on Underwriting Spreads: Evidence from Three Decades*, JOURNAL OF FINANCIAL AND QUANTITATIVE ANALYSIS, Volume 43, No. 4, Dec. 2008, at 975-1000.

¹⁷ McGlashan, *supra* ¶79.

annually held a meeting in New York where SSA traders met up, while World Bank held such an annual meeting in Washington, D.C.

116. Additionally, the use of chat rooms was “commonplace” in the SSA bond market during the Class Period. At that time, investigations into the use of chat rooms in other markets (as discussed below) had not yet been announced and therefore traders still felt free to communicate with each other on such chat rooms, even if the purpose of those communications was to fix the market. Especially in the SSA bond market, where the daily pace was somewhat slower, Defendants had the opportunity to use the chat rooms before offering quotes to ensure uniformity and/or coordination in the offerings.

117. Defendants also had the opportunity to collude through interdealer brokers, which operate as middlemen in putting together buyers and sellers in the bond markets via phone and electronically. A number of SSA bond transactions are performed through interdealer brokers. The Bank of England warns that, as a general matter, “inter-dealer brokers will often have confidential information about order flow, even though they cannot take principal positions.”¹⁸

118. The leading interdealer broker in SSA bonds is GFI Group (“GFI”). As an interdealer broker, GFI “brokers a variety of financial products, acting as intermediary,” and it “charges commissions for successfully bringing about trades between [its] customers,” which are “typically large financial institutions.”¹⁹ GFI sponsored events where the Trader Defendants would have an opportunity to communicate.

¹⁸ Bank of England, Fair and Effective Market Reviews, at 13 (Oct. 2014), <http://www.bankofengland.co.uk/markets/Documents/femr/consultation271014.pdf>.

¹⁹ *GFI Brokers LLC v. Santana*, Case No. 1:06-cv-03988-GEL, ECF No. 43, Affidavit of Nicholas John Brown (S.D.N.Y. Jan. 25, 2008).

119. Upon information and belief, at least one interdealer broker has been contacted in connection with the SSA bond investigation.

120. Therefore, given the pressures in the SSA market due to the awarding in the primary based on secondary volume as well as the growing market, lack of oversight, and role of brokers, there was ample motive and opportunity to collude.

V. ECONOMIC EVIDENCE OF COLLUSION IN THE SSA MARKET

121. To test Defendants' collusive conduct, Counsel for Plaintiff sponsored a number of economic analyses of transaction data from a 10-year period that included the Class Period. The first analysis compared the spreads of USD-denominated SSA bonds to those of corporate bonds, as it is expected that corporate bonds would have similar spreads to SSA bonds. This analysis shows the opposite result and indicates collusion.

122. The second analysis looked at the average bid, ask, and transaction prices during the Class Period to see if the transaction price fell where it predictably would under normal market conditions: somewhere around the midpoint. It did not, also indicating collusion.

123. The third was a study of the time correlation of the bid-ask spread on SSA bonds during the Class Period versus the non-collusion period. This too indicated collusion.

124. The fourth study ran regressions using the spreads of Fannie Mae and Freddie Mac bonds, as well as Euro-denominated SSA bonds.

125. Finally, regressions were run between U.S. Treasury bonds (rated similarly) prices and yields and individual USD-denominated SSA bonds prices and yields. Collectively and individually, these studies are consistent with collusion.

A. **Analysis of Corporate Bond Spreads to USD-denominated SSA Bond Spreads**

126. In order to compare corporate bond spreads with the spreads of USD-denominated SSA bonds during various time periods, actual transaction data was obtained from MarketAxess, a leading trading platform in the SSA bond market.

127. MarketAxess furnished a dataset with daily bid, ask, and transaction prices for SSA bonds traded between January 1, 2008 and May 31, 2016. To focus on USD-denominated SSA bonds, 617,317 transactions from 40 unique issuers were isolated and analyzed.

128. The “High Grade TRACE BASI Corporate Bond spreads” from MarketAxess provided the average spreads for corporate bonds. This index was selected because it uses the same approach to calculate spreads as was done for the SSA bonds, therefore a valid comparison could be conducted. The TRACE BASI data produces a volume weighted average price spread that is calculated on both the bid and offer side for each security, and the difference results in the daily bid-ask spread at the bond level. It does so for investment grade corporate bonds, which are comparable (or should be) to SSA bonds.

129. Corporate bonds include high quality securities that are held by buy-side investors. They are also somewhat transparent given the competitive trading and reporting platforms in place in that industry (TRACE). These attributes make them akin to SSA bonds that carry implicit or explicit credit guarantees from the issuing entity. Therefore, in a competitive market, USD-denominated SSA bond spreads should be relatively close to those of corporate bond spreads.

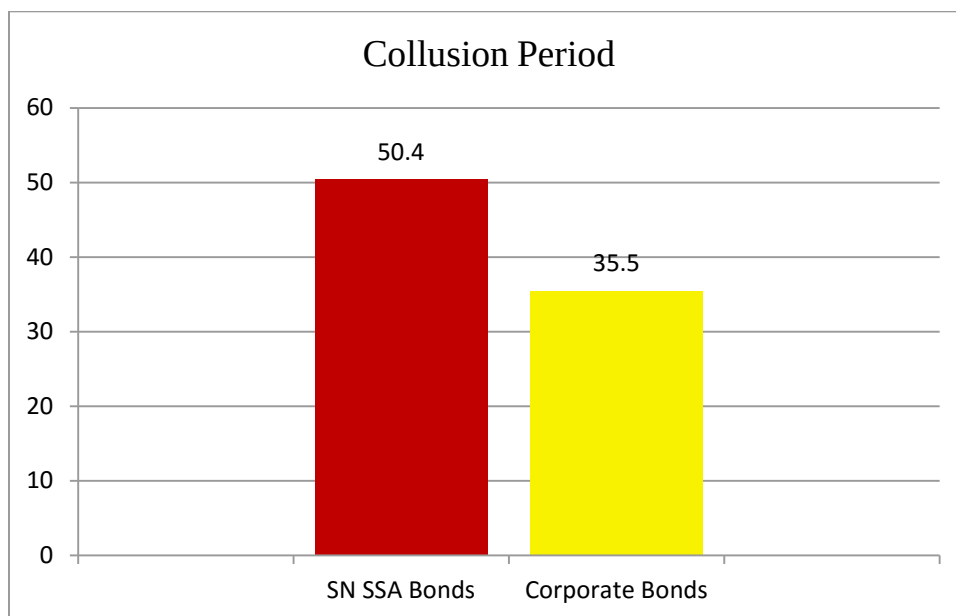
130. However, quite the opposite was true during the Class Period. The average spread for USD-denominated SSA bonds during the Class Period was ***significantly higher*** than

the TRACE BASI spread for corporate bonds during the same time period despite the presence of either implicit or explicit guarantees.

131. The April 27, 2014 date was chosen as the end of the Class Period because, on that date, the *Financial Times* and *Reuters* reported that DOJ criminal prosecutors were travelling to London to question FX traders. Economic analyses confirm an abrupt shift in the spreads of USD-denominated SSA bonds as of April 28, 2014 as discussed herein.

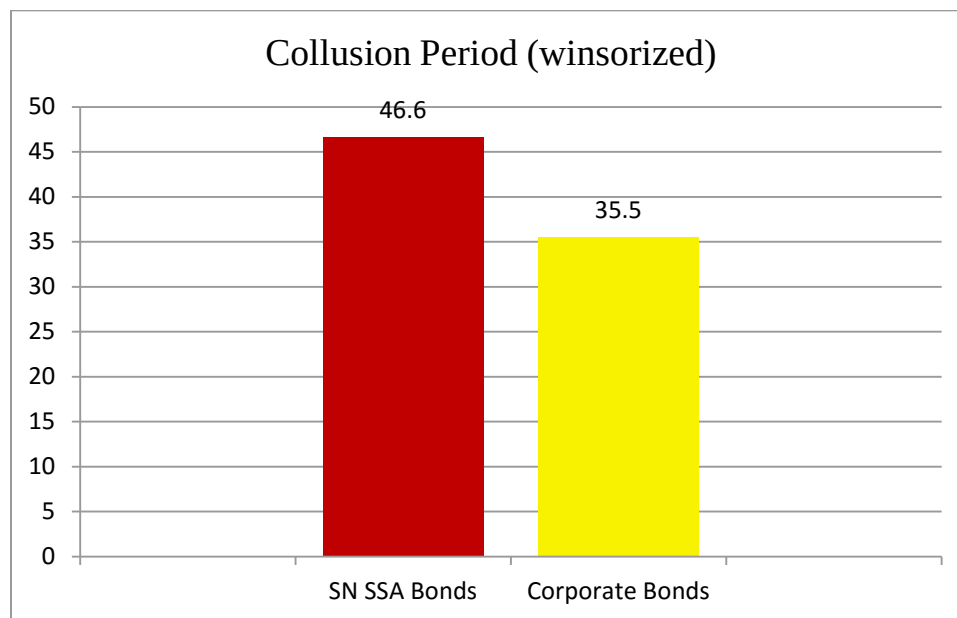
132. To start, the analysis isolated the transactions coded as “Supranational” (“SN”) only. This resulted in a pool of 576,342 unique observations coded “SN” that came from 25 unique issuers. Examples of the largest issuers in this data sub-set include: World-Bank International Bank for Reconstruction and Development, EIB, Inter-American Development Bank, and Asian Development Bank.

133. In that analysis, the average spread for USD-denominated SN SSA bonds during the Class Period was **50.4** bp. During that same period, the average spread for corporate bonds was **35.5** bp.



134. That is a difference of **14.9** basis points. This difference is significant on both a statistical and an economic basis and satisfies the standard threshold utilized in litigation and academic contexts for statistical significance.

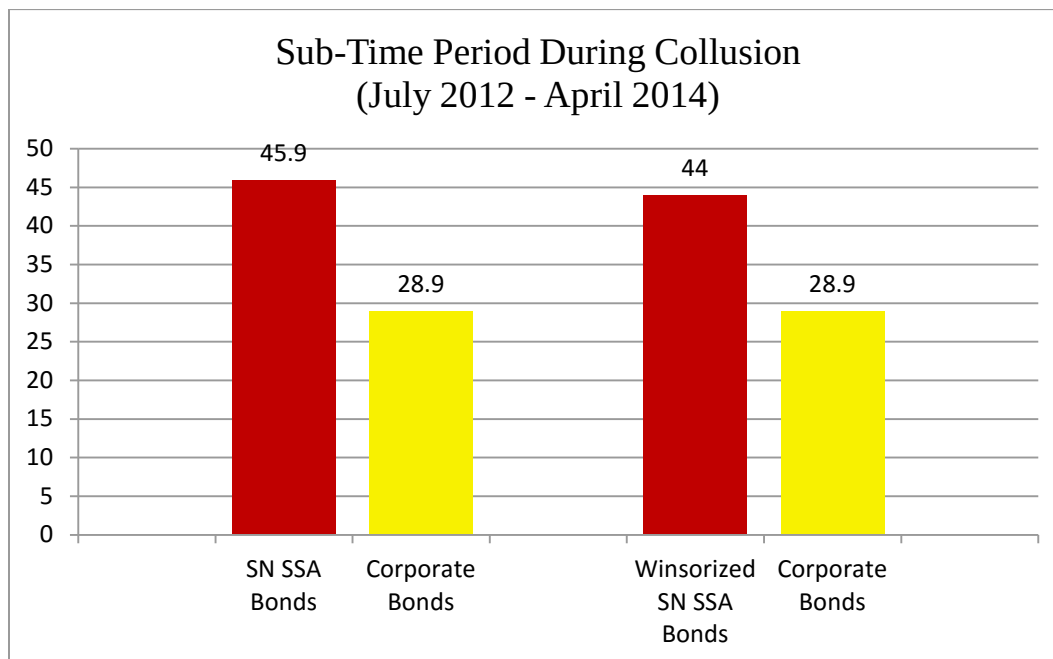
135. In order to ensure the validity of these results, Counsel commissioned an analysis of a winsorized dataset, which means the top 5% and the bottom 5% of all results were set at either the 95th or the 5th percentage level (or percentile). This ensures that averages are not overly sensitive to outliers. Winsorizing is a common practice in both business and academic economics.²⁰ When using the winsorized dataset, the average spread for USD-denominated SN SSA bonds during the Class Period was **46.6** bp compared to the **35.5** bp for corporate bonds.



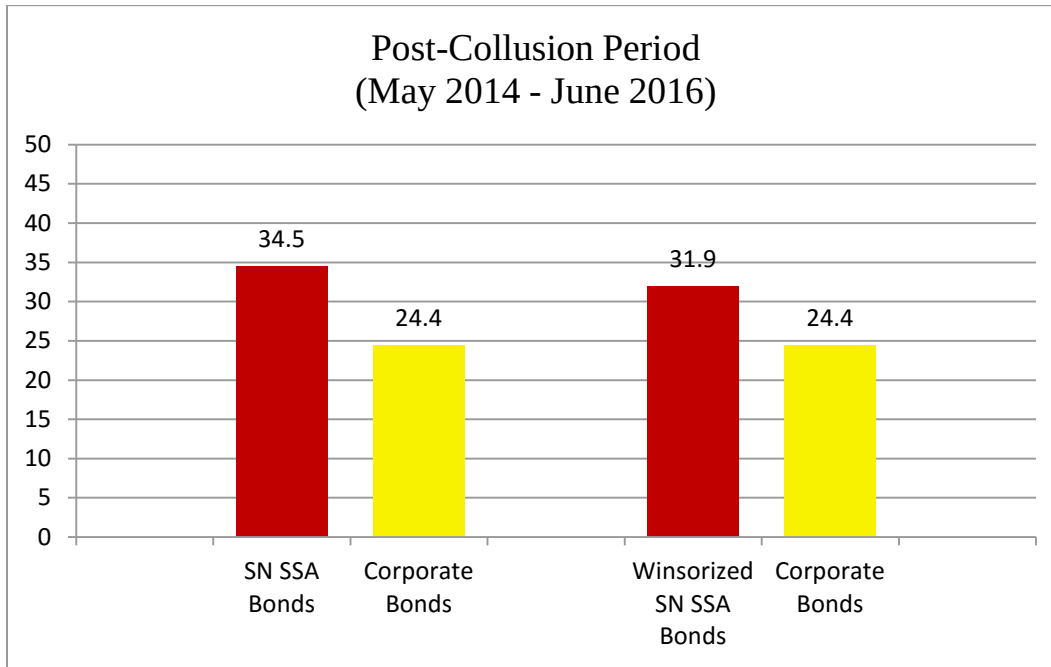
136. That is a difference of **11.1** bp, which is significant on both a statistical and an economic basis.

²⁰ See, e.g. J. W. Tukey, *The Future of Data Analysis*, 33 THE ANNALS OF MATHEMATICAL STATISTICS, Sept. 18 (1962).

137. Furthermore, as the Class Period encompassed the European sovereign debt crisis, additional analysis was performed to isolate the effects of the sovereign debt crisis. This was done by focusing on a time period within the Class Period, but *after* the debt crisis, selecting the July 26, 2012 speech by Mario Draghi, President of the European Central Bank when he vowed to do “whatever it takes” to save the Euro (a speech that is widely viewed as demarcating the end of the European debt crisis), as the start date and the end of the Class Period (April 27, 2014) as the end date. When that “clean” period (July 26, 2012- April 27, 2014) is analyzed, the results remain consistent. The average spread for SN SSA bonds during this time period was **45.9** bp against the corporate bond average of **28.9** bp, or a **17.0** basis point difference, which likewise is significant on both a statistical and an economic basis. For the winsorized dataset, the results were **44.0** bp to the **28.9** bp, or a **15.1** basis point difference, which again is statistically significant.



138. These same spreads drop *considerably* in the post-collusion period (April 28, 2014 through June, 2016)²¹ as shown below:



139. To summarize, this first data test on bid/ask spreads produces the following cumulative results:

USD-Denominated SSA Bond Spread over Corporate Bond Spread (bp) by Time Period, Industry Code Supranational (SN) Only:

Bond Type	Collusion Period	Post-Euro Crisis ("Clean")	Post Collusion
SN SSA Bid-Offer Spread Average	50.4	45.9	34.5
Winsorized SN SSA Bid-Offer Spread Average	46.6	44.0	31.9
High Grade Corporate Bid-Offer Spread	35.5	28.9	24.4

²¹ Data from the pre-collusion period is noisier due to the global financial crisis, so it could not be used as a comparative time period.

Bond Type	Collusion Period	Post-Euro Crisis ("Clean")	Post Collusion
SN SSA Spread Less Corporate Spread Average	14.9	17.0	10.1
Winsorized Dataset SN SSA Spread Less Corporate Spread Average	11.1	15.1	7.5

140. These data strongly suggest that the spreads for SN SSA bonds during the Class Period were manipulated – both because the spreads are so high during the Class Period and because the spreads narrow after the Class Period.

141. Counsel also commissioned a study of all USD-denominated SSA bond spreads isolated from the transaction data during the Class Period and compared those to the TRACE BASI corporate spreads.

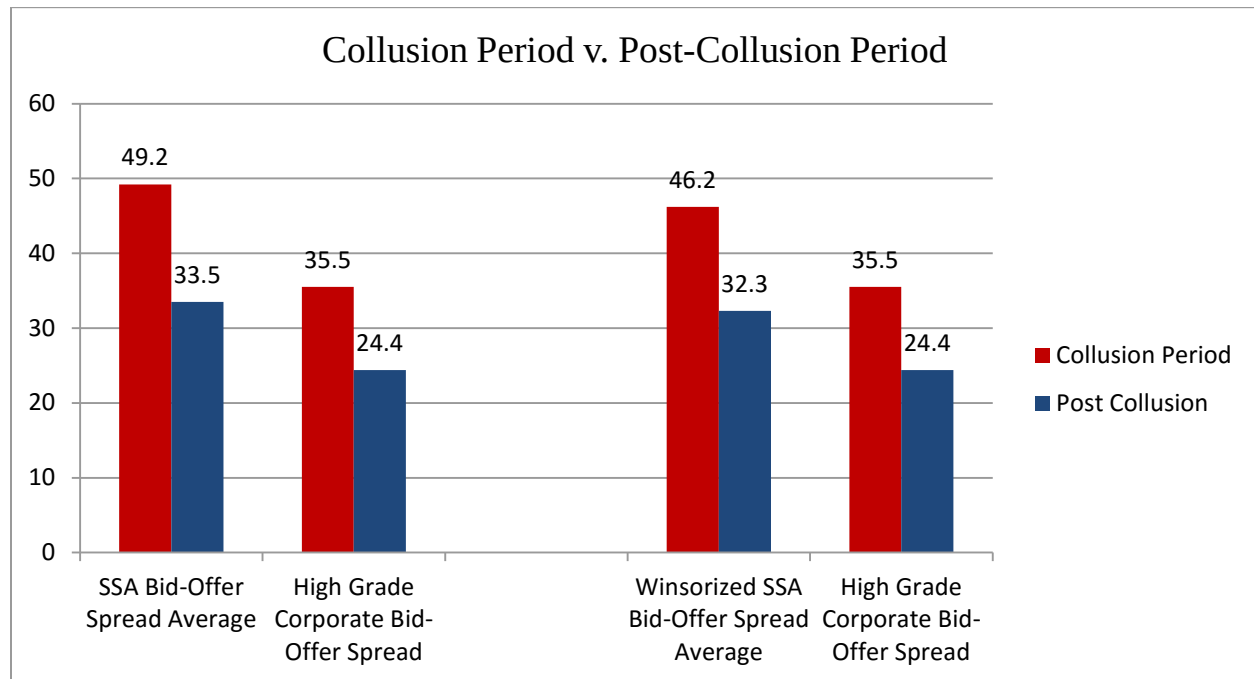
142. Those results are in line with the above results from the SN SSA study:

USD-Denominated SSA Bond Spread over Corporate Bond Spread (bp) by Time Period:

Bond Type	Collusion Period	Post-Euro Crisis ("Clean")	Post Collusion
SSA Bid-Offer Spread Average	49.2	43.3	33.5
Winsorized SSA Bid- Offer Spread Average	46.2	43.2	32.3
High Grade Corporate Bid-Offer Spread	35.5	28.9	24.4
SSA Spread Less Corporate Spread Average	13.7	14.4	9.1
Winsorized Dataset SSA Spread Less Corporate Spread Average	10.8	14.3	7.9

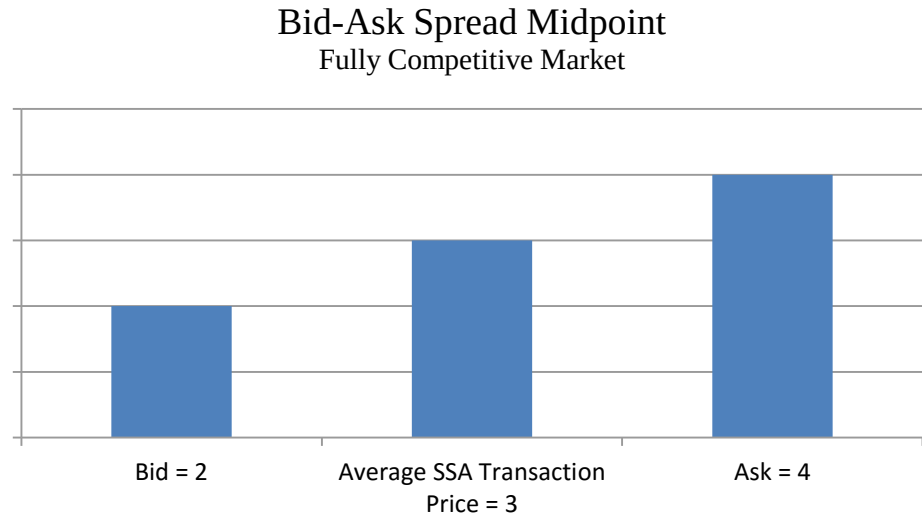
143. Once again, the differences between the average SSA bid-offer spreads and the corporate bond bid-offer spreads are significant on both a statistical and an economic basis.

Represented differently, average total SSA bond spreads were strikingly higher than the corporate bond spreads during the Class Period.



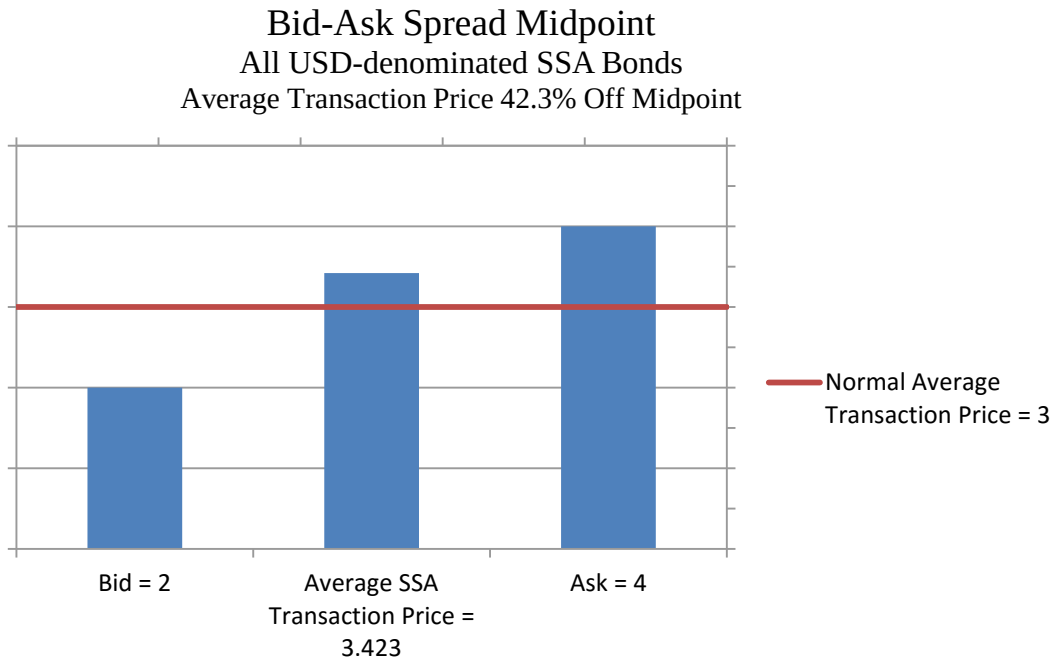
B. Comparison of Actual Transaction Prices to Bid-Ask Midpoint

144. To further test this result, Counsel commissioned a study to look at where transaction prices during the Class Period fell in relation to the bid-ask spread midpoint. In a fully competitive market, the trade price should fall close to the midpoint of the bid and the ask. Therefore, if the bid price is “2” and the ask price is “4,” in a competitive dealer market, the transaction price would likely be around “3”:



145. However, when transaction prices were analyzed for all USD-denominated SSA bonds during the Class Period, Plaintiff’s experts found that, during the Class Period, the trade price was **41.4% off the bid-ask spread midpoint**. Again, isolating a “clean” period after the debt crisis but before the end of the Class Period resulted in an average transaction price that was **42.3% off** of the bid-ask spread midpoint. These comparisons strongly suggest collusion and material overcharge.

146. Therefore, if a Class Member were to buy SSA bonds during the collusion period, they would pay an average price of 3.423 for a bond with a bid quote of 2 and an ask quote of 4:



147. When Plaintiff’s experts looked at a sub-set of the data (USD-denominated SN SSA bonds or 576,342 observations) during the Class Period, the trade price was **41.4% off the bid-ask spread midpoint**. Again, isolating a “clean” period after the debt crisis but before the end of the Class Period resulted in an average transaction price that was also **42.3%** off the bid-ask spread midpoint when the average transaction price in a competitive dealer market should be much closer to the bid-ask midpoint. These numbers are very large and suggestive of collusion.

C. Regression Analysis of Daily Average Spread over Time

148. A further test of collusion is to examine the degree of variation in the average bid-ask spread of bonds over time. One would expect to see less variation over time when there is collusion on bids and offers.

149. Here, during the Class Period (January 2010 – April 27, 2014), the R-squared was 79.83% for all SSA bonds and 74.80% for the SN SSA subset. However, during the post collusion period (April 28, 2014 – June 2016), the R-squared for all SSA bonds isolated from the transaction data dropped to 49.49% and to 51.50% for SN SSA bonds. Those are declines of

30.34% and 23.30% respectively. Such evidence is strongly consistent with collusion in bid-ask spreads in the SSA market during the 2010-2014 period.

150. These results were checked with the winsorized dataset and reveal the following:

- R-squared of 78.08% for all SSA bonds during the Class Period;
- R-squared of 74.12% for SN SSA bonds during the Class Period;
- R-squared of 49.85% post collusion for all SSA bonds;
- R-squared of 57.78% post collusion for SN SSA bonds; and
- For all SSA bonds, that is a change of 28.23% and 16.34% for the SN SSA bonds subset.

151. The bid-offer spreads for the week of April 23 to April 29, 2014 also tend to confirm the end of the Class Period. The bid-offer spread on SN SSA bonds on April 25, 2014 (the last trading day in the Class Period) was 46.3 basis points. By the next trading day and the first day after the Class Period (April 28, 2014), it had dropped 13.6% to 40.0 basis points.

152. Further, in the 15 trading days between April 3 and April 27, 2014 versus the fifteen trading days from April 28 to May 19, 2014, the 15-day average spread fell 8.5 basis points for SN SSA bonds, while corporate bond average spreads fell only 0.9 basis points for the same comparison.

153. A slightly different analysis using the 15- and 5-day trading periods only confirms the end of the Class Period. Counsel commissioned a study of the average bid-offer spreads for ***EURO-denominated SSA bonds*** for the same 15- and 5-day trading periods surrounding the end of the Class Period. Because Euro-denominated SSA bonds were traded at different desks and presumably not part of the collusion, they were used as a benchmark.

154. While the average spread for USD-denominated SSA bonds narrowed considerably in the 15 trading days following the end of the Class Period as compared to those preceding it, with the Euro-denominated SSA bonds, their spreads ***did not narrow at all***. The average bid-offer spread for Euro-denominated SN SSA bonds from April 3-27, 2014 was 19.8, while it was 20.7 for the 15 days after the end of the Class Period (April 28-May 19, 2014).

155. When all Euro-denominated SSA bonds were evaluated, the average bid-offer spread for the 15 days before the end of the Class Period was 23.7. That number only changed (widened) to 24.1 during the 15 trading days after the Class Period.

156. The identical thing holds true when the days surrounding April 27 and 28, 2014 were examined – the spreads stayed constant. This only reinforces the end of the Class Period.

D. Using Fannie Mae and Freddie Mac Bonds as a Comparison

157. Fannie Mae and Freddie Mac bonds are sometimes lumped in with USD-denominated SSA bonds because they carry an implicit government guarantee but are not sovereign bonds.²² However, insiders have confirmed that Fannie Mae and Freddie Mac bonds were not traded at the same desks as USD-denominated SSA bonds. That is, they were traded independently and separately from USD-denominated SSA bonds.

158. Therefore, since Fannie Mae and Freddie Mac bonds are very similar to SSA bonds, they are a suitable “clean” comparison by which to demonstrate whether collusion occurred.

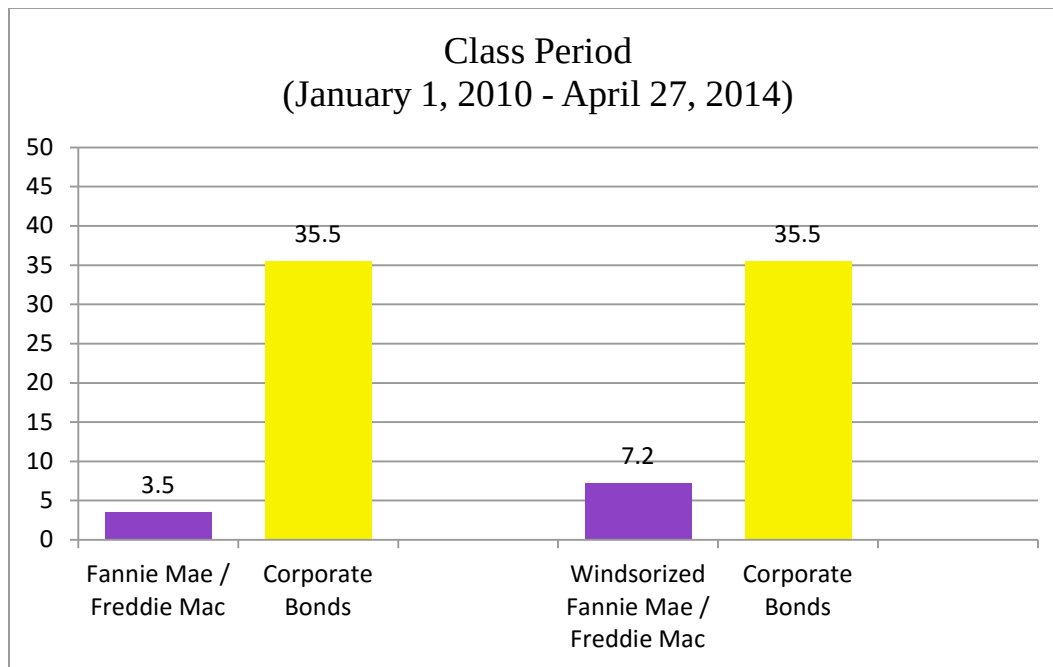
159. As stated above, when Counsel looked at the spreads for USD-denominated SSA bonds during the Class Period, their average spread was ***significantly higher*** than the TRACE

²² See, e.g. http://www.incapital.com/Products_and_Offerings/SSA/Overview/About_Agencies.aspx

BASI spreads for corporate bonds during the same time period, which was unexpected due to their implicit or explicit guarantees.

160. However, that was not true for Fannie Mae and Freddie Mac bonds during the Class Period. Instead, the bid-offer spreads for Fannie Mae and Freddie Mac bonds were **significantly lower** than the same TRACE BASI spreads for corporate bonds during the same time period.

161. For all observations during the Class Period, Fannie Mae and Freddie Mac bonds had an average spread of 3.5 bp as compared to corporate bonds that had an average spread of 35.5 bp. Similarly, when the data was winsorized, the average spread during the Class Period for Fannie Mae and Freddie Mac bonds was 7.2 bp as compared to the same 35.5 bp.



162. These results are additional evidence in support of the conclusion that collusion was present in the USD-denominated SSA bond market during the Class Period.

E. Linear Regression Analysis of SSA Prices Relative to U.S. Treasury Bonds

163. An additional way to examine the potential presence of collusion is to look at the relationship between the level of an index of Treasury prices (“PDPLGOVT”) and the daily average of SSA prices over the 2010 – 2016 period.

164. Using weekly observations (on a Wednesday) of the average SSA price and the Bloomberg reported PDPLGOVT index of Treasury prices (on a Wednesday), a regression was run of SSA prices (net of Fannie Mae and Freddie Mac bonds) on the Treasury bond index over the January 2010 – June 2016 period. In addition, a dummy variable was included in the regression, which was “1” for the 2010 to 2014 collusion period and “0” for the non-collusion 2015 – 2016 period.

165. If there are factors causing the SSA bond price to be higher than predicted by the movement of Treasury prices in the collusion period, this dummy variable should have a positive and statistically significant value. This was found to be so, for both the SSA (excluding Fannie Mae and Freddie Mac) regression and the same regression using the SN prices.

166. This result is consistent with the presence of collusion within the USD-denominated SSA bond market.

F. Linear Regression Analysis of SSA Bond Yield Changes Relative to the Yield Changes on U.S. Treasury Bonds

167. Counsel also commissioned an analysis that compared certain USD-issued SSA bond yield changes to U.S. Treasury bond yield changes during the Class Period. Again, U.S. Treasuries were selected because they likewise carry a credit guarantee, although U.S. Treasuries have a full faith guarantee from the U.S. government, whereas USD-denominated SSA bonds have either an explicit or implicit credit guarantee. Nonetheless, given the degree of safety against credit risk of both, it would be expected that they move very closely together over time.

168. By comparing daily changes in the yields of U.S. Treasury bonds with specific SSA bonds, Counsel was able to see how much of the change in SSA bond yields could be explained by a change in U.S. Treasury bond yields. This is also expressed in terms of the “R-squared” which is the square of the correlation coefficient between two variables. Thus, if two variables are highly correlated (*i.e.*, they move together), the R-squared should be close to “1.” However, if the variables move in completely uncorrelated directions, the R-squared will be close to “0.”

169. When Plaintiff’s Counsel ran a linear regression analysis on certain USD-denominated SSA bonds and their reference to U.S. Treasury bonds during the Class Period, it found that despite similar credit ratings and perceived safety, the yields on certain SSA bonds had low correlations with matched U.S. Treasury bonds yields during the Class Period.

170. For example, the change in the yields of a \$3 billion KfW bond that was rated AAA by S&P (thus of a similar rating as Treasury bonds), did not move in lockstep with the yields on a matched Treasury bond during the period studied. In fact, the R-squared was only 0.44:

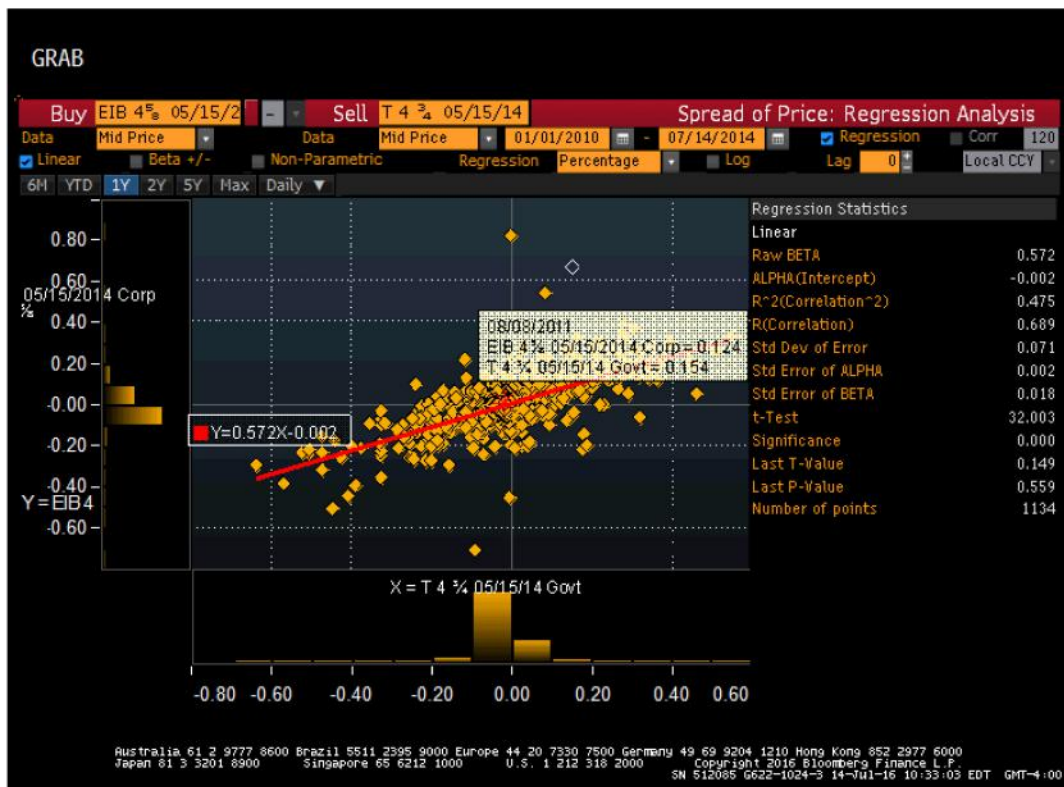
KFW 2.0% 10/4/22



171. Some SSA bonds analyzed had even lower R-squared values. Another KfW bond (\$4.5 billion issued), had an R-squared of 0.307 (30.7%):

KFW 1.00% 1/12/15

172. An EIB bond over the Class Period had an R-squared of 0.475 (47.5%):

EIB 4.63% 5/15/14

173. Finally, a \$1.5 billion A+ rated USD-denominated JBIC (Japan Bank for International Cooperation) bond had an R-squared of 0.077:

JBIC 1.75% 5/29/19



VI. GUILTY PLEAS, PROSECUTIONS, ENFORCEMENT ACTIONS, AND INVESTIGATIONS INTO OTHER PRICE FIXING AND BID RIGGING CONSPIRACIES IN THE FINANCIAL SERVICES INDUSTRY INVOLVING MANY OF THE SAME DEFENDANTS ARE SUGGESTIVE OF CONSPIRACY

174. This is the latest chapter in the saga of the “too big to fail” banks and other multinational financial institutions colluding to rig, fix, and manipulate numerous U.S. and global financial services markets.

175. Defendants and their co-conspirators have collectively paid more than \$20 billion dollars in government fines and penalties to resolve civil and criminal charges, and certain Defendants are also defending, and have agreed to civil settlements of cases similar to this,

brought by classes of investors alleging violations of the Sherman Antitrust Act in significant financial services markets, including:

- **LIBOR.** Conspiracy to fix and manipulate a financial benchmark interest rate ubiquitous in U.S. consumer, commercial, and financial transactions;
- **FX.** Conspiracy to fix and manipulate the exchange rates of global currencies, including for the U.S. Dollar; and
- **ISDAfix.** Conspiracy to fix and manipulate a key benchmark rate used in trillions of dollars of U.S. transactions such as interest rate swaps and swaptions.

176. Some of the Defendants also find themselves under federal investigation and defending civil litigation for antitrust conspiracies and commodities manipulation in other markets, including in other key benchmark interest rates (*e.g.*, EURIBOR, TIBOR, and Swiss Franc-LIBOR), financial products (*e.g.*, U.S. Treasuries and Interest Rate Swaps), as well as the prices of Gold, Silver, and Platinum, and related precious metals derivatives.

177. The conspiracy in the USD SSA market alleged here occurred in large part contemporaneously with these others, though just recently discovered. Defendants employed the same means to accomplish their collusive manipulation.

LIBOR

178. Certain Defendants or their affiliates are being investigated by (or have already pled guilty and/or paid fines or penalties to) governmental regulators for collusion of LIBOR, the most widely used interest rate benchmark in the world.

179. LIBOR is computed based on the banks' self-reporting of the cost at which they could borrow money in the London interbank market. Government investigations have found that the banks colluded with one another to submit false rates that benefited individual trader

positions and to appear healthier than they actually were. This manipulated the published LIBOR, causing investors in financial instruments linked to LIBOR to pay more or receive less than they otherwise would have in a competitive market. Government prosecutors and regulators have found that this conspiracy constituted price fixing in violation of Section 1 of the Sherman Act. Certain brokers that were active in the LIBOR conspiracy are now on criminal trial in the U.K. The brokers in LIBOR also ***conspired through electronic chat rooms***.

180. Defendant Deutsche Bank has been fined €725.4 million by the EC for rigging Yen LIBOR and EURIBOR. Deutsche Bank entered into a deferred prosecution agreement with the DOJ, in which it plead guilty and admitted that it colluded with other banks to manipulate LIBOR submissions, and agreed to pay \$626 million in fines. In connection with its manipulation of LIBOR and EURIBOR, Deutsche Bank was also fined \$800 million by the U.S. Commodity Futures Trading Commission, \$600 million by the New York Department of Financial Services, and \$344 million by the U.K. Financial Conduct Authority.

181. Defendants Bank of America, Credit Agricole, Credit Suisse, and Deutsche Bank are named as defendants in the civil class actions, which are in discovery, and against which the Second Circuit held plaintiffs “plausibly alleged an antitrust violation attributable to the Banks, for which appellants seek damages.” *Gelboim v. Bank of Am. Corp.*, No. 13-3565-cv, 2016 WL 2956968, at *7 (2d Cir. May 23, 2016).

FX

182. Certain Defendants or their affiliates are also being investigated (or have already plead guilty and/or paid) by government prosecutors and regulators for violating federal antitrust laws by colluding to rig the \$5.3 trillion-a-day FX market, the largest financial market in the world.

183. Through the FX investigations, it has come to light that traders in a group of traders at these banks met regularly *in electronic chat rooms* to swap confidential information, including details about their customers' orders, in order to collusively set key FX benchmark rates and to set artificially wide spreads on FX transactions. These traders gave their chat rooms names such as "The Cartel" and "The Mafia." The banks were able to accomplish their conspiracy because, in part, the FX market is, like the USD-denominated SSA market, primarily conducted over-the-counter with little regulation and because the banks involved in the conspiracy are the dominant players in the market.

184. In the FX investigation, the DOJ has obtained guilty pleas and billions in fines from several defendants thus far. In addition to the governmental fines, nine of the defendants in that case have agreed to pay U.S. investors more than \$2 billion in settlements.

185. Defendants Bank of America, Credit Suisse, and Deutsche Bank are named as defendants in the civil case, in which Judge Schofield held the complaint "sufficiently alleges the existence of a conspiracy in violation of Section 1 of the Sherman Act, and that all Defendants were part of that conspiracy." *In re Foreign Exch. Benchmark Rates Antitrust Litig.*, 74 F. Supp. 3d 581, 590 (S.D.N.Y. 2015).

ISDAfix

186. Government regulators are also investigating certain Defendants' collusive manipulation of the ISDAfix, a key benchmark interest rate for a number of important financial instruments, including interest rate swaps.

187. The ISDAfix was supposed to be set based on Defendants' transactions in the swaps market, in which Defendants competed with one another. However, the banks colluded with one another to manipulate the ISDAFIX by: (a) sharing competitively sensitive information,

including order flows, (b) coordinating the execution of a rapid-fire series of transactions immediately before the computation window (*i.e.*, “banging the close”), and (c) quoting the same spread – down to five decimal points – during the computation window.

188. The banks were able to accomplish this collusion because, in part: (a) interest rate derivatives (like SSA bonds) are traded over-the-counter in a non-transparent market, and (b) the banks control the interest rate derivative market. Again, as here, ***the conspiracy was accomplished using telephone calls, emails, and chat rooms*** to coordinate their activities.

189. An interdealer broker – ICAP plc (“ICAP”) – played a key role in facilitating the conspiracy among the defendant banks, who colluded through their dealings with ICAP and otherwise. ICAP, like GFI, is a leading interbroker dealer in SSA bonds.

190. The ISDAfix investigation remains ongoing against several Defendants.

191. In the related civil class actions pending in this District, Defendants Bank of America, Credit Suisse, Deutsche Bank, and Nomura are named as defendants in the ISDAFix complaint. The case is in discovery, with Judge Furman having held that the complaint “plausibly alleges that a conspiracy among Defendants existed.” *Alaska Elec. Pension Fund v. Bank of Am. Corp.*, 14-CV-7126 (JMF), 2016 WL 1241533, at *5 (S.D.N.Y. Mar. 28, 2016). Defendants Bank of America, Credit Suisse, and Deutsche Bank each agreed to pay \$50 million to settle the case.

VII. PLAINTIFF AND MEMBERS OF THE CLASS SUFFERED INJURY, INCLUDING ANTITRUST INJURY, PROXIMATELY CAUSED BY DEFENDANTS’ VIOLATIONS OF LAW

192. Defendants’ conspiracy and overt acts in furtherance caused injury to Plaintiff and members of the Class who transacted in USD-denominated SSA bonds during the Class Period. Plaintiff and members of the Class were harmed each time they purchased or sold such SSA

bonds. Defendants' collusive manipulation of SSA bonds had an immediate, direct, substantially certain, and foreseeable effect on the prices of those bonds in the secondary market.

193. Plaintiff and Class members suffered economic injuries by buying or selling at prices distorted by Defendants' unlawful manipulation and collusion. The market for SSA bonds is ostensibly competitive. But, using covert and clandestine means, such as electronic chat rooms and other communications over interstate wires and otherwise, Defendants discussed trades, coordinated bids, and disclosed confidential customer information. This anticompetitive behavior harmed customers and other market participants who believed that they were participating in a fair and competitive market.

194. As a result of their collusive manipulation, Defendants maximized their own profits at the expense of investors in USD-denominated SSA bonds, such as Plaintiff. As a result of their unlawful conduct, Defendants reaped artificial and anticompetitive gains to the detriment of Plaintiff and members of the Class.

195. The injuries suffered by Plaintiff and members of the Class are of the type antitrust laws were designed to prevent and flow from that which makes Defendants' conspiracy and overt acts unlawful.

VIII. FRAUDULENT CONCEALMENT

196. Any applicable limitations period relating to the causes of action alleged herein was tolled for Plaintiff's claims through at least December 2015, because: (1) Defendants' conspiracy was self-concealing; (2) Defendants' affirmative steps concealed their conspiracy; and (3) the DOJ investigation of the SSA market was revealed in December 2015.

197. Neither Plaintiff nor members of the Class knew of Defendants' and their co-conspirators' unlawful and self-concealing manipulative acts and could not have discovered

them by the exercise of reasonable due diligence, if at all, at least prior to public reports disclosing the DOJ's investigation into their conduct in December 2015.

198. Reasonable due diligence could not have uncovered Defendants' and their co-conspirators' manipulative conspiracy because Defendants' transactional data, instant messaging, and other internal documents that may have indicated conspiracy earlier were and are not publicly available. At the same time, SSA transactions have been held out as based on competition and not collusion.

199. Defendants fraudulently concealed their anticompetitive activities by, among other things, engaging in secret communications in furtherance of their conspiracy. These communications occurred in non-public chat rooms, instant messages, and through email, none of which are or were reasonably available to Plaintiff or members of the Class.

200. To Plaintiff's knowledge, the first news report of possible manipulation in SSAs was published on December 9, 2015.²³

201. Plaintiff and members of the Class have acted diligently in seeking to bring their claims promptly.

202. Because of Defendants' active steps, including fraudulent concealment of their conspiracy to prevent Plaintiff from suing them for the anticompetitive activities alleged in this Complaint, Defendants are equitably estopped from asserting that any otherwise applicable limitations period has run.

IX. CLASS ACTION ALLEGATIONS

203. Plaintiff brings this action on behalf of itself, and, under Rules 23(a) and (b) of the Federal Rules of Civil Procedure, on behalf of:

²³ See David McLaughlin & Tom Schoenberg, *U.S. Said to Probe Possible Rigging in Agency Bond Market*, BLOOMBERG (Dec. 9, 2015), at <http://bloom.bg/1RaD1OR>.

All persons that engaged in a Covered Transaction during the Class Period, while such persons were either (i) domiciled in the United States or its territories, or (ii) if domiciled outside the United States or its territories, engaged in a Covered Transaction in the United States or its territories.

204. "Covered Transaction" is defined as (i) a direct purchase from a Defendant of a USD-denominated SSA in the secondary market, or (ii) a direct sale to a Defendant of a USD-denominated SSA in the secondary market. Excluded from the definition of Covered Transaction are all interdealer transactions.

205. Excluded from the Class are Defendants, and their officers, directors, management, employees, subsidiaries, and affiliates. Also excluded is the Judge presiding over this action, his or her law clerks, spouse, and any person within the third degree of relationship living in the Judge's household and the spouse of such a person.

206. Members of the Class are so numerous and geographically dispersed that joinder is impracticable. Further, members of the Class are readily identifiable from information and records in the possession of Defendants.

207. Plaintiff's claims are typical of the claims of members of the Class. Plaintiff and members of the Class were damaged by the same wrongful conduct of Defendants.

208. Plaintiff will fairly and adequately protect and represent the interests of members of the Class. The interests of Plaintiff are coincident with, and not antagonistic to, those of members of the Class.

209. Plaintiff is represented by counsel with experience in the prosecution of class action antitrust litigation, including, in particular, class actions in the financial services industry successfully bringing claims against many of the same Defendants named herein.

210. Questions of law and fact common to the members of the Class predominate over questions that may affect only individual Class members, thereby making damages with respect

to members of the Class as a whole appropriate. Questions of law and fact common to members of the Class include, but are not limited to:

- a. whether Defendants unreasonably restrained trade in violation of federal antitrust laws;
- b. whether Defendants were unjustly enriched;
- c. the duration of the alleged conspiracy; and
- d. damages suffered by Plaintiff and members of the Class.

211. Class action treatment is a superior method for the fair and efficient adjudication of the controversy. Such treatment will permit a large number of similarly situated persons to prosecute their common claims in a single forum simultaneously, efficiently and without the unnecessary duplication of evidence, effort, or expense that numerous individual actions would require.

212. The benefits of proceeding through the class mechanism, including providing injured persons or entities a method for obtaining redress on claims that could not practicably be pursued individually, substantially outweighs potential difficulties in management of this class action.

213. Plaintiff knows of no special difficulty to be encountered in the maintenance of this action that would preclude its maintenance as a class action.

214. The Class is defined herein based on currently available information and Plaintiff hereby reserves the right to amend the definition of members of the Class, including, without limitation, the Class Period.

**CLAIM I:
COMBINATION AND CONSPIRACY IN
UNREASONABLE RESTRAINT OF TRADE**

215. Plaintiff incorporates by reference and re-alleges the preceding allegations as though fully set forth herein.

216. The combination and conspiracy alleged herein is a per se violation of Sections 1 and 3 of the Sherman Antitrust Act of 1890, 15 U.S.C. §§1 & 3. During the Class Period, Defendants conspired to, and did, unreasonably restrain trade by fixing, rigging, and otherwise manipulating the price of USD-denominated SSA bonds.

217. The conspiracy and overt acts in furtherance thereof by Defendants and their co-conspirators had the purpose and effect of injuring Plaintiff and members of the Class by causing them to pay more or received less than they otherwise would have in a competitive market.

218. Alternatively, the combination and conspiracy in unreasonable restraint of trade alleged herein is a quick look or rule of reason violation of Sections 1 and 3 of the Sherman Act. There is no legitimate business justification for, or pro-competitive benefits attributable to, Defendants' conspiracy and overt acts in furtherance.

219. Any proffered business justification or asserted procompetitive benefits would be pretextual, outweighed by the anticompetitive effects of Defendants' conduct, and the conspiracy and overt acts would not be the least restrictive means by which they could be achieved.

220. Plaintiff and members of the Class have been injured in their business and property by reason of Defendants' violation of Sections 1 and 3 of the Sherman Antitrust Act of 1890, 15 U.S.C. §§1 & 3, within the meaning of Section 4 of the Clayton Antitrust Act, 15 U.S.C. §15.

**CLAIM II:
UNJUST ENRICHMENT**

221. Plaintiff incorporates by reference and re-alleges the preceding allegations as though fully set forth herein.

222. Because of the acts of Defendants and their co-conspirators as alleged herein, Defendants have been unjustly enriched at the expense of Plaintiff and members of the Class. Defendants profited at the expense of Plaintiff and members of the Class, which conferred a direct benefit on Defendants. It would violate established principles of equity and good conscience for Defendants to keep their ill-gotten gains.

223. Plaintiff seeks establishment of a constructive trust, into which Defendants be ordered to disgorge their ill-gotten gains, and from which Plaintiff and Class members may obtain restitution from Defendants.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff, on behalf of itself and the members of the Class, respectfully prays that this Honorable Court:

A. Order that this action may be maintained as a class action pursuant to Rules 23(a) & (b) of the Federal Rules of Civil Procedure, that it be named a Class Representative, that the undersigned be named Lead Class Counsel, and that reasonable notice of this action, as provided by Rule 23(c)(2), be given to members of the Class.

B. Adjudge and decree that Defendants violated Section 1 and 3 of the Sherman Antitrust Act of 1890, 15 U.S.C. §§1 & 3, and enter joint and several judgments against Defendants in favor of Plaintiff and members of the Class.

C. Adjudge and decree that Plaintiff has suffered antitrust injury and has antitrust standing to sue Defendants for their violations of law under Sections 4 of the Clayton Antitrust Act of 1914, 15 U.S.C. §§15.

D. Award three times the damages suffered by reason of Defendants' violations of law.

E. Order that a constructive trust be established, into which Defendants disgorge all ill-gotten gains, and from which Plaintiff and members of the Class may be provided restitution.

F. Award reasonable costs of suit, including costs of mediation and experts.

G. Award pre- and post-judgment interest.

H. Award reasonable attorney's fees.

I. Grant such other, further and different relief as is just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiff demands a jury trial as to all issues triable by a jury.

DATED: August 2, 2016

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