

Bank of America, N.A.

Form SBSE-A

Supplemental Filing Attachment:

Amendment to Schedule B, Section II

Question 13B

January 23, 2023

Bank of America, N.A. - Response to Question 13B of Form SBSE-A with respect to arrangements with others who Execute or Trade

Venue Legal Entity Name	Business Address	LEI
24 EXCHANGE BERMUDA LIMITED	C/O BM CORPORATE SERVICES LTD, 3RD FLOOR, SOFIA HOUSE, 48 CHURCH STREET, HM 12, HAMILTON, BM Bermuda	213800YXBUZH7G3NDC51
360 TREASURY SYSTEMS AG	Grüneburgweg 16-18, Frankfurt am Main, GERMANY, 60322	529900P0204W9HA8JP36
BGC DERIVATIVE MARKETS, L.P.	C/O THE CORPORATION TRUST COMPANY, CORPORATION TRUST CENTER 1209 ORANGE ST, 19801, WILMINGTON, US United States of America	549300RKB6B4M8CD2W04
BGC TECHNOLOGY MARKETS, L.P.	499 PARK AVE, New York, UNITED STATES, 100221240	549300HEOMIQJNTK7P92
BLOOMBERG SEF LLC	731 LEXINGTON AVENUE, NEW YORK , UNITED STATES, 10022	5493003IUYOH354SNS58
BLOOMBERG TRADEBOOK CANADA COMPANY	BROOKFIELD PLACE,TD CANADA TRUST TOWER 1, TORONTO, CANADA, M5J 2S1	254900N3K8DHWXXMF546
BLOOMBERG TRADEBOOK LLC	731 LEXINGTON AVE, New York, UNITED STATES, 100221331	549300P0PVQNO43T7K36
BLOOMBERG TRADEBOOK SINGAPORE PTE LTD	23 Church Street, SINGAPORE, SINGAPORE, 49481	254900HSS82AHMTPAD95
BLOOMBERG TRADING FACILITY B.V.	Stadhouderskade 14, Amsterdam, NETHERLANDS, 1054 ES	254900QBKK4WBSO3GE51
BLOOMBERG TRADING FACILITY LIMITED	3 Queen Victoria Street, LONDON, UNITED KINGDOM, EC4N 4TQ	549300ROEJDDAXM6LU05
BROKERTEC USA, L.L.C.	300 Vesey Street, 10282, New York, USA	213800U91OWU6L9YIT33
CBOE FX Markets, LLC	8050 MARSHALL DR, Lenexa, Kansas, UNITED STATES, 662141524	549300NW303IYRUREL46
CBOE SEF, LLC	C/O THE CORPORATION TRUST COMPANY, CORPORATION TRUST CENTER 1209 ORANGE ST, 19801, WILMINGTON, US United States of America	549300D84OQ6BDBRBO35
CHICAGO MERCANTILE EXCHANGE INC.	20 S WACKER DR, Chicago, UNITED STATES, 606067431	SNZ2OJLFK8MNNCLQOF39
CUREX GROUP	120 W 45TH ST FL 22, New York, UNITED STATES, 100364041	254900XVN4LQPMJGD91
DEALERWEB INC.	2200 PLAZA FIVE, Jersey City, UNITED STATES, 73114006	G5M52KXHI10IUWXWHQ71
EBS SERVICE COMPANY LIMITED	Lavaterstrasse 40, ZÜRICH, SWITZERLAND, 8002	213800Y1KZLBMHGMTJ05
EURONEXT FX INC.	180 Maiden Ln FL 7, New York, UNITED STATES, 100385170	549300EXXMRP3JPN4C59
FLEXTRADE SYSTEMS INC.	111 GREAT NECK RD STE 314, Great Neck, UNITED STATES, 110215403	549300FQIJOSVOCB4V70
FX HEDGEPOOL, INC.	1 World Trade Centre, Floor 85, New York, 10007-0103, United States	
FXSPOTSTREAM LLC	100 Town Square PI STE 201, Jersey City, UNITED STATES, 73102778	5493001N6DM40ZPSHW89
GFI SECURITIES LTD	1 Snowden Street, LONDON, UNITED KINGDOM, EC2A 2DQ	GUNTJCA81C7IHNBG1392
ICE BONDS SECURITIES CORPORATION	55 E 52ND ST FL 40, New York, UNITED STATES, 10055	549300OUQA5TQ2JW3I71
ICE U.S. OTC COMMODITY MARKETS, LLC	2100 Riveredge Pkwy STE 500, Atlanta, UNITED STATES, 303284693	(blank)
INTEGRAL DEVELOPMENT CORP.	3000 El Cmino Real Ste 2, Palo Alto, UNITED STATES, 94306	Y28912MCQRZU5ST13393
INTERCONTINENTAL EXCHANGE, INC.	5660 New Northside Dr 3, Atlanta, UNITED STATES, 303285800	5493000F4ZO33MV32P92
MOSCOW EXCHANGE MICEX-RTS OAO	13 per. Kislovski B., MOSCOW, RUSSIAN FEDERATION, 125009	253400M5M1222KPNWE87
OCTAURA LL TRADINGCO LLC	250 West 34th Street, 3rd floor, 10119, New York	254900OCXBIHL4NNMT81
OTCX TRADING LIMITED	49 QUEEN VICTORIA STREET, EC4N 4SA, LONDON, GB United Kingdom	21380098D55AZZWD527
PRIMEXM PRIME EXCHANGE MARKETS AG	Samstagernstrasse 55, WOLLERAU, SWITZERLAND, 8832	(blank)
REFINITIV TRANSACTION SERVICES LIMITED	FIVE CANADA SQUARE CANARY WHARF, E14 5AQ, LONDON, GB-LND, GB United Kingdom	549300SDDJE84DDJNB30
REFINITIV US LLC (FKA FX ALLIANCE)	3 TIMES SQ, New York, UNITED STATES, 100366564	213800HQORQAP68CJJ04
RTX Financial, LLC	128 E31st St, 2nd Fl, 10016, New York	5493007QGZA74K5XCO50
SIEGE FX LIMITED	2nd Floor, Room 230, 63 St.Mary Axe, London, EC3A 8AA, London, United Kingdom	254900BS9K61FESAAY23
SINGAPORE EXCHANGE LIMITED	2 SHENTON WAY #02-02 SGX CENTRE 1, Singapore, SINGAPORE, 68804	549300IQ650PPXM76X03
TRADERTOOLS INC.	250W 57th Street STE 2507, New York, 101072502, United States	
TRADEWEB EUROPE LTD	1 Fore Street Avenue, LONDON, UNITED KINGDOM, EC2Y 9DT	2138001WXZQOPMPA3D50
TRADEWEB GLOBAL LLC	1177 Ave of The Americas, New York, UNITED STATES, 100362714	5493009DYKOCXWBRC524

TRADEWEB MARKETS LLC	2200 PLAZA FIVE, Jersey City, UNITED STATES, 73114006	5493000G5QHJUY9ZWQ91
WEMATCH.LIVE R&D LTD	121 Begin Menachem Rd, TEL AVIV-JAFFA, ISRAEL, 6701203	894500EG497MGE7BSI77
YELDBROKER PTY LIMITED	L 6 14 MARTIN PLACE, SYDNEY, AUSTRALIA, 2000	549300QRJM24CLE17N18

Bank of America, N.A. - Response to Question 13B of Form SBSE-A with respect to arrangements with others who Custody, Clear, or Settle

Entity Name	External LEI	Full Address of Third Party	Location	Category	Sub category	Product
AUSTRACLEAR LTD	549300SW1A0SWG24LO05	20 Bridge Street 2000 Sydney AU-NSW	AUSTRALIA	Financial Market Utility	Central Securities Depository (CSD)	Securities
BANK OF JAPAN	353800717BLAHZMEXR15	Nihonbashi-Hongokuchō 2-1-1, Chuo-ku, Tokyo, 103-8660	JAPAN	Financial Market Utility	Central Securities Depository (CSD)	Securities
BANK OF TAIWAN	549300QBHSCTZ7YV010	120 Section 1, Chongcing South Road, Jhongjheng District, 100, Taipei, Taiwan	TAIWAN	Partner Bank	Securities Partner Bank	Sub Custodian
BANK POLSKA KASA OPIEKI SA	5493000LKS7B3UTF7H35	Żwirki i Wigury 31, 02-091 Warsaw, Poland	POLAND	Partner Bank	Securities Partner Bank	Sub Custodian
BANK POLSKA KASA OPIEKI SA	5493000LKS7B3UTF7H35	Żwirki i Wigury 31, 02-091 Warsaw, Poland	POLAND	Partner Bank	Securities Partner Bank	Sub Custodian
BNP PARIBAS SA	ROMUWSFPU8MPRO8K5P83	Les Grands Moulin de Pantin, 9 Rue du Debarcadere 93500 Pantin, France	FRANCE/Portugal	Partner Bank	Securities Partner Bank	Sub Custodian
BNP PARIBAS SA	ROMUWSFPU8MPRO8K5P83	Les Grands Moulin de Pantin, 9 Rue du Debarcadere 93500 Pantin, France	FRANCE/Portugal	Partner Bank	Securities Partner Bank	Sub Custodian
BNP Paribas S.A., Succursale Italia	ROMUWSFPU8MPRO8K5P83	Piazza Lina Bo Bardi 3, 20124 Milano, Italy 20124 Milano	ITALY	Partner Bank	Securities Partner Bank	Sub Custodian
BNP Paribas S.A., Succursale Italia	ROMUWSFPU8MPRO8K5P83	Piazza Lina Bo Bardi 3, 20124 Milano, Italy 20124 Milano	ITALY	Partner Bank	Securities Partner Bank	Sub Custodian
BNP PARIBAS SA SUCURSAL EN ESPANA	ROMUWSFPU8MPRO8K5P83	Calle de Emilio Vargas 4, 28043 Madrid, Spain	SPAIN	Partner Bank	Securities Partner Bank	Sub Custodian
BNP PARIBAS SA SUCURSAL EN ESPANA	ROMUWSFPU8MPRO8K5P83	Calle de Emilio Vargas 4, 28043 Madrid, Spain	SPAIN	Partner Bank	Securities Partner Bank	Sub Custodian
BNP PARIBAS, Paris, Zurich Branch	ROMUWSFPU8MPRO8K5P83	Selnaustrasse 16, PO Box, 8022 Zurich, Switzerland	SWITZERLAND	Partner Bank	Securities Partner Bank	Sub Custodian
BNP PARIBAS, Paris, Zurich Branch	ROMUWSFPU8MPRO8K5P83	Selnaustrasse 16, PO Box, 8022 Zurich, Switzerland	SWITZERLAND	Partner Bank	Securities Partner Bank	Sub Custodian
BNP PARIBAS Australia Branch	ROMUWSFPU8MPRO8K5P83	Level 4, 60 Castlereagh Street, Sydney, NSW, 2000, Australia	NEW ZEALAND	Partner Bank	Securities Partner Bank	Sub Custodian
BNP PARIBAS Australia Branch	ROMUWSFPU8MPRO8K5P83	Level 4, 60 Castlereagh Street, Sydney, NSW, 2000, Australia	NEW ZEALAND	Partner Bank	Securities Partner Bank	Sub Custodian
BNP Paribas S.A. Niederlassung Deutschland	ROMUWSFPU8MPRO8K5P83	Senckenberganlage 19, 60325 Frankfurt am Main, Germany	AUSTRIA	Partner Bank	Securities Partner Bank	Sub Custodian
BNP Paribas S.A. Niederlassung Deutschland	ROMUWSFPU8MPRO8K5P83	Senckenberganlage 19, 60325 Frankfurt am Main, Germany	GERMANY	Partner Bank	Securities Partner Bank	Sub Custodian
BNP Paribas S.A. Niederlassung Deutschland	ROMUWSFPU8MPRO8K5P83	Senckenberganlage 19, 60325 Frankfurt am Main, Germany	GERMANY	Partner Bank	Securities Partner Bank	Sub Custodian
BNP Paribas S.A. Niederlassung Deutschland	ROMUWSFPU8MPRO8K5P83	Senckenberganlage 19, 60325 Frankfurt am Main, Germany	AUSTRIA	Partner Bank	Securities Partner Bank	Sub Custodian

FEDERAL RESERVE BANK OF RICHMOND	549300GF3UGINKR7U365	Federal Reserve Board of Governors 20th & K Streets, NW Washington, DC 20551	UNITED STATES	Financial Market Utility	Central Securities Depository (CSD)	Securities - Fedwire Securities Service
CIBC MELLON TRUST COMPANY	2IGI19DL77OX0HC3ZE78	CIBC Mellon, 1 York Street, Suite 500, Toronto Ontario, Canada, M5J 0B6	CANADA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK DEL PERU S.A.	MYTK5NHHP1G8TVFGT193	Canaval y Moreyra 480, Piso 3, San Isidro, Lima 27, Peru	PERU	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK DEL PERU S.A.	MYTK5NHHP1G8TVFGT193	Canaval y Moreyra 480, Piso 3, San Isidro, Lima 27, Peru	PERU	Partner Bank	Securities Partner Bank	Sub Custodian
N A CITIBANK	E570DZWZ7FF32TWEFA76	388 Greenwich Street New York NY 10013	UNITED STATES	Partner Bank	Securities Partner Bank	Sub Custodian
N A CITIBANK	E570DZWZ7FF32TWEFA76	388 Greenwich Street New York NY 10013	UNITED STATES	Partner Bank	Securities Partner Bank	Sub Custodian
BANCO NACIONAL DE MEXICO, S.A.	2SFFM4FUIE05S37WFU55	Actuario Roberto Medellin. 800 Colonia Santa Fe Mexico D.F 01219	MEXICO	Partner Bank	Securities Partner Bank	Sub Custodian
BANCO NACIONAL DE MEXICO, S.A.	2SFFM4FUIE05S37WFU55	Actuario Roberto Medellin. 800 Colonia Santa Fe Mexico D.F 01219	MEXICO	Partner Bank	Securities Partner Bank	Sub Custodian
AO Citibank	CHSQDSVI1UI96Y2SW097	8-10, bld.1, Gasheka street, Moscow, 125047, Russia	RUSSIAN FEDERATION	Partner Bank	Securities Partner Bank	Sub Custodian
AO Citibank	CHSQDSVI1UI96Y2SW097	8-10, bld.1, Gasheka street, Moscow, 125047, Russia	RUSSIAN FEDERATION	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK N.A. LONDON BRANCH	G2M96IXONJEAOBNT6B40	Citigroup Centre, Canary Wharf, London, E14 5LB	UNITED KINGDOM	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK N.A. LONDON BRANCH	G2M96IXONJEAOBNT6B40	Citigroup Centre, Canary Wharf, London, E14 5LB	UNITED KINGDOM	Partner Bank	Securities Partner Bank	Sub Custodian
The Branch of CITIBANK, N.A. in the Republic of Argentina	579100KKDGKCFKKF005	Bartolomé Mitre 530 –3rd floor, Buenos Aires, C1036AAJ, Argentina	ARGENTINA	Partner Bank	Securities Partner Bank	Sub Custodian
The Branch of CITIBANK, N.A. in the Republic of Argentina	579100KKDGKCFKKF005	Bartolomé Mitre 530 –3rd floor, Buenos Aires, C1036AAJ, Argentina	ARGENTINA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK, N.A. (BANGKOK BRANCH)	E570DZWZ7FF32TWEFA76	18th Floor, 399 Interchange 21 Building, Sukhumvit Road, Klongtoey Nua, Wattana District, Bangkok 10110, THAILAND	THAILAND	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK, N.A. (BANGKOK BRANCH)	E570DZWZ7FF32TWEFA76	18th Floor, 399 Interchange 21 Building, Sukhumvit Road, Klongtoey Nua, Wattana District, Bangkok 10110, THAILAND	THAILAND	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK, N.A. (BANGKOK BRANCH)	E570DZWZ7FF32TWEFA76	18th Floor, 399 Interchange 21 Building, Sukhumvit Road, Klongtoey Nua, Wattana District, Bangkok 10110, THAILAND	THAILAND	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK N.A. ISRAEL BRANCH	E570DZWZ7FF32TWEFA76	Ha'arba'a 21 Tel Aviv	ISRAEL	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK N.A. ISRAEL BRANCH	E570DZWZ7FF32TWEFA76	Ha'arba'a 21 Tel Aviv	ISRAEL	Partner Bank	Securities Partner Bank	Sub Custodian

CITIBANK BERHAD	E57ODZWZ7FF32TWEFA76	Level 43, Securities Services, Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia	MALAYSIA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK BERHAD	E57ODZWZ7FF32TWEFA76	Level 43, Securities Services, Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia	MALAYSIA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK BERHAD	E57ODZWZ7FF32TWEFA76	Level 43, Securities Services, Menara Citibank, 165 Jalan Ampang, 50450 Kuala Lumpur, Malaysia	MALAYSIA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK, N.A. (HONG KONG BRANCH)	E57ODZWZ7FF32TWEFA76	Citi HK address: 50/F, Champion Tower, Three Garden Road, Central, Hong Kong Citi China address: 35/F, Citigroup Tower, No.33 Hua Yuan Shi Qiao Road, Lu Jia Zui Finance and Trade Zone, Shanghai, 200120, P.R. China	CHINA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK, N.A. (HONG KONG BRANCH)	E57ODZWZ7FF32TWEFA76	50/F Citibank Tower, Citibank Plaza, 3 Garden Road, Central, Hong Kong	HONG KONG	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK, N.A. (HONG KONG BRANCH)	E57ODZWZ7FF32TWEFA76	50/F Citibank Tower, Citibank Plaza, 3 Garden Road, Central, Hong Kong	HONG KONG	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK N.A. (MUMBAI BRANCH)	E57ODZWZ7FF32TWEFA76	Citibank N.A. FIFC, C-54 & 55, G Block, Bandra Kura Complex, Bandra East, Mumbai - 400051	INDIA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK N.A. (MUMBAI BRANCH)	E57ODZWZ7FF32TWEFA76	Citibank N.A. FIFC, C-54 & 55, G Block, Bandra Kura Complex, Bandra East, Mumbai - 400051	INDIA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK EUROPE PLC, GREECE BRANCH	N1FBEDJ5J41VKZLO2475	8 Othonos street, 10557 Athens, Greece	GREECE / CYPRUS	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK EUROPE PLC, GREECE BRANCH	N1FBEDJ5J41VKZLO2475	8 Othonos street, 10557 Athens, Greece	GREECE / CYPRUS	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK N.A., PAKISTAN	E57ODZWZ7FF32TWEFA76	Army Welfare Trust (AWT) Plaza, I.I.Chundrigar Road, Karachi, Pakistan- 74200	PAKISTAN	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK SINGAPORE LIMITED	549300BSM2K5JOIUQ068	8 Marina View, #16-00 Asia Square Tower 1, Singapore 018960	SINGAPORE	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK SINGAPORE LIMITED	549300BSM2K5JOIUQ068	8 Marina View, #16-00 Asia Square Tower 1, Singapore 018960	SINGAPORE	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK ANONIM SIRKETI	CWZ8NZDH5SKY12Q4US31	Tekfen Tower, Eski Buyukdere Caddesi 209 Kat 2, Postal Code 34394 Levent, Istanbul - Turkey	TURKEY	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK ANONIM SIRKETI	CWZ8NZDH5SKY12Q4US31	Tekfen Tower, Eski Buyukdere Caddesi 209 Kat 2, Postal Code 34394 Levent, Istanbul - Turkey	TURKEY	Partner Bank	Securities Partner Bank	Sub Custodian
Citibank, N.A. Brazilian Branch	E57ODZWZ7FF32TWEFA76	Av. Paulista 1.111, 12º andar, CEP: 01311-920 São Paulo SP	BRAZIL	Partner Bank	Securities Partner Bank	Sub Custodian

CITITRUST COLOMBIA S A SOCIEDAD FIDUCIARIA	549300242J3IJCOSGI49	Carrera 9A, No. 99-02, Bogota, Colombia	COLOMBIA	Partner Bank	Securities Partner Bank	Sub Custodian
CITITRUST COLOMBIA S A SOCIEDAD FIDUCIARIA	549300242J3IJCOSGI49	Carrera 9A, No. 99-02, Bogota, Colombia	COLOMBIA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK NA (PHILIPPINES BRANCH)	E570DZWZ7FF32TWEFA76	Citibank N.A. Philippine Branch 16th Floor, Citibank Plaza, 34th St., Bonifacio Global City, Taguig City, Metro Manila ,Philippines 1634	PHILIPPINES	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK NA (PHILIPPINES BRANCH)	E570DZWZ7FF32TWEFA76	Citibank N.A. Philippine Branch 16th Floor, Citibank Plaza, 34th St., Bonifacio Global City, Taguig City, Metro Manila ,Philippines 1634	PHILIPPINES	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK N.A. EGYPT	E570DZWZ7FF32TWEFA76	Level 3, 46, Al Salam Axis Street, First Sector at the Fifth Settlement, New Cairo – Cairo, Egypt	EGYPT	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK N.A. EGYPT	E570DZWZ7FF32TWEFA76	Level 3, 46, Al Salam Axis Street, First Sector at the Fifth Settlement, New Cairo – Cairo, Egypt	EGYPT	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK KOREA INC.	745P3MMS7E8CUVXDRJ82	50, Saemunan-ro, Jongno-gu, Seoul, 03184, Korea	SOUTH KOREA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIBANK KOREA INC.	745P3MMS7E8CUVXDRJ82	50, Saemunan-ro, Jongno-gu, Seoul, 03184, Korea	SOUTH KOREA	Partner Bank	Securities Partner Bank	Sub Custodian
N A Citibank	8B4EZFY8IHJC44TT2K84	Estado 260, Level 2, Santiago, Chile 8320204	CHILE	Partner Bank	Securities Partner Bank	Sub Custodian
N A Citibank	8B4EZFY8IHJC44TT2K84	Estado 260, Level 2, Santiago, Chile 8320204	CHILE	Partner Bank	Securities Partner Bank	Sub Custodian
CITIGROUP PTY LIMITED	0C45RG70GW42XSBLJ131	Level 16, 120 Collins Street, Melbourne VIC 3000	AUSTRALIA	Partner Bank	Securities Partner Bank	Sub Custodian
CITIGROUP PTY LIMITED	0C45RG70GW42XSBLJ131	Level 16, 120 Collins Street, Melbourne VIC 3000	AUSTRALIA	Partner Bank	Securities Partner Bank	Sub Custodian
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	Winchester House, 1 Great Winchester St, London EC2N 2DB, United Kingdom	UNITED KINGDOM	Partner Bank	Securities Partner Bank	Sub Custodian
DEUTSCHE BANK AKTIENGESELLSCHAFT	7LTWFZYICNSX8D621K86	Winchester House, 1 Great Winchester St, London EC2N 2DB, United Kingdom	UNITED KINGDOM	Partner Bank	Securities Partner Bank	Sub Custodian
CLEARSTREAM INTERNATIONAL SA	5493000L514RA0SXJJ44	11 Westferry Circus, Canary Wharf, London, E14 4HE, United Kingdom	LUXEMBOURG	Partner Bank	Securities Partner Bank	International Central Securities Depository
CLEARSTREAM INTERNATIONAL SA	5493000L514RA0SXJJ44	11 Westferry Circus, Canary Wharf, London, E14 4HE, United Kingdom	LUXEMBOURG	Partner Bank	Securities Partner Bank	International Central Securities Depository
EUROCLEAR BANK SA	5493000Z46BRLZ8Y6F65	1 Boulevard du Roi Albert II, B – 1210 Brussels, Belgium	BELGIUM	Partner Bank	Securities Partner Bank	International Central

						Securities Depository
EUROCLEAR BANK SA	549300OZ46BRLZ8Y6F65	1 Boulevard du Roi Albert II, B – 1210 Brussels, Belgium	BELGIUM	Partner Bank	Securities Partner Bank	International Central Securities Depository
EUROCLEAR BANK SA	549300OZ46BRLZ8Y6F65	1 Boulevard du Roi Albert II, B – 1210 Brussels, Belgium	BELGIUM	Partner Bank	Securities Partner Bank	International Central Securities Depository
EUROCLEAR BANK SA	549300OZ46BRLZ8Y6F65	1 Boulevard du Roi Albert II, B – 1210 Brussels, Belgium	BELGIUM	Partner Bank	Securities Partner Bank	International Central Securities Depository
EUROCLEAR BANK SA	549300OZ46BRLZ8Y6F65	1 Boulevard du Roi Albert II, B – 1210 Brussels, Belgium	BELGIUM	Partner Bank	Securities Partner Bank	International Central Securities Depository
HDFC BANK LIMITED	335800ZQ6I4E2JXENC50	HDFC Bank House, Senapati Bapat Marg, Lower Parel, Mumbai, Maharashtra India 400013	INDIA	Partner Bank	Securities Partner Bank	Sub Custodian
OTC CLEARING HONG KONG LIMITED	213800CKBBZUAHHARH83	8/F, TWO EXCHANGE SQUARE 8 CONNAUGHT PLACE CENTRAL HONG KONG	HONG KONG	Financial Market Utility	Central Counterparty (CCP)	OTC Derivatives
HONG KONG MONETARY AUTHORITY	Not available	55th Floor Two International Finance Centre 8 Finance Street Central and Western District HK Hong Kong	HONG KONG	Financial Market Utility	Central Securities Depository (CSD)	Securities
HSBC SAUDI ARABIA	2138009S6SHV5GLS7987	HSBC Head Office, 2nd Floor, 7267 Olaya, Al Murooj, Riyadh 12283-2255, Kingdom of Saudi Arabia	SAUDI ARABIA	Partner Bank	Securities Partner Bank	Sub Custodian
HSBC BANK MIDDLE EAST LIMITED, QATAR BRANCH	549300F99IL9YJDWH369	Securities Services Department (HSS Dept), 2nd Floor, Ali Bin Ali Tower Building no: 150, Al Matar Street (Airport Road), P.O.Box 57. Street no. 950, Ummghuwalina Area, Doha, Qatar	QATAR	Partner Bank	Securities Partner Bank	Sub Custodian
HSBC BANK MIDDLE EAST LIMITED, QATAR BRANCH	549300F99IL9YJDWH369	Securities Services Department (HSS Dept), 2nd Floor, Ali Bin Ali Tower Building no: 150, Al Matar Street (Airport Road), P.O.Box 57. Street no. 950, Ummghuwalina Area, Doha, Qatar	QATAR	Partner Bank	Securities Partner Bank	Sub Custodian
HSBC BANK MIDDLE EAST LIMITED, KUWAIT BRANCH	549300F99IL9YJDWH369	Qibla Area, Hamad Al-Saqr St., Kharafi Tower, G/1/2 Floors, P.O Box 1683, Safat 13017 Kuwait	KUWAIT	Partner Bank	Securities Partner Bank	Sub Custodian

HSBC BANK (VIETNAM) LIMITED	213800H95OG9OVRT4Y78	The Metropolitan, Floor 2, 235 Dong Khoi Street, District 1, Ho Chi Minh city, Vietnam	VIETNAM	Partner Bank	Securities Partner Bank	Sub Custodian
HSBC BANK (TAIWAN) LIMITED	549300SG184IVNYDMN03	13F, No. 333 Keelung Road, Sec. 1, Xinyi District, Taipei 110, Taiwan	TAIWAN	Partner Bank	Securities Partner Bank	Sub Custodian
HSBC BANK (TAIWAN) LIMITED	549300SG184IVNYDMN03	13F, No. 333 Keelung Road, Sec. 1, Xinyi District, Taipei 110, Taiwan	TAIWAN	Partner Bank	Securities Partner Bank	Sub Custodian
HONGKONG AND SHANGHAI BANKING CORPORATION LIMITED, TOKYO BRANCH	2HI3YI5320L3RW6NJ957	HSBC Building, 11-1, Nihonbashi 3-chome Chuo-ku, Tokyo 103-0027, Japan	JAPAN	Partner Bank	Securities Partner Bank	Sub Custodian
INDUSTRIAL AND COMMERCIAL BANK OF CHINA LIMITED	5493002ERZU2K9PZDL40	55 Fuxingmennei Avenue, Xicheng District, Beijing 100140, China	CHINA	Partner Bank	Securities Partner Bank	Sub Custodian
ICE CLEAR EUROPE LTD	5R6J7JCQRIPQR1EEP713	MILTON GATE, 60 CHISWELL STREET, London EC1Y 4SA, GB	UNITED KINGDOM	Financial Market Utility	Central Counterparty (CCP)	CDS
ICE CLEAR CREDIT LLC	T330E4AS4QXXS2TT7X50	353 North Clark Street, Chicago, 60654, US	UNITED STATES	Financial Market Utility	Central Counterparty (CCP)	CDS
KBC Bank Bulgaria EAD	5299009KAL4KO7584196	55 Nikola Vaptsarov Blvd., Expo 2000, Phase III, 4 floor, 1407 Sofia, Bulgaria	BULGARIA	Partner Bank	Securities Partner Bank	Sub Custodian
KOREA EXCHANGE	549300TJ3RRV6Q1UEW14	40, Munhyeongeumyung-ro, Nam-gu, Busan 50F, BIFC 48400 Busan Metropolitan City KR-26	SOUTH KOREA	Financial Market Utility	Central Counterparty (CCP)	OTC
KOREA SECURITIES DEPOSITORY	9884008RRMX1X5HV6625	40, Munhyeongeumyung-ro, Nam-gu, Busan 50F, BIFC 48400 Busan Metropolitan City KR-26	SOUTH KOREA	Financial Market Utility	Central Securities Depository (CSD)	Securities
LCH LIMITED	F226TOH6YD6XJB17KS62	Aldgate House, 33 Aldgate High Street, EC3N 1EA London	UNITED KINGDOM	Financial Market Utility	Central Counterparty (CCP)	ForexClear (SCM)
LCH LIMITED	F226TOH6YD6XJB17KS62	Aldgate House, 33 Aldgate High Street, EC3N 1EA London	UNITED KINGDOM	Financial Market Utility	Central Counterparty (CCP)	LCH SwapClear (SCM)
BANQUE CENTRALE DE COMPENSATION (LCH SA)	R1IO4YJ0079SMWVCHB58	18 RUE DU 4 SEPTEMBRE, 75002, Paris, FR-75, France	FRANCE	Financial Market Utility	Central Counterparty (CCP)	CDS Clear
MIZUHO BANK,LTD.	353800CI5L6DDAN5XZ33	5-5, Otemachi 1 Chome, Chiyoda-ku, Tokyo, 100- 8176, Japan	JAPAN	Partner Bank	Securities Partner Bank	Sub Custodian

CENTRAL COUNTERPARTY NATIONAL CLEARING CENTRE	2534007UK6G30KDX1A47	13, Bol'shoy Kislovskiy Lane, 125009, Moscow, Russian Federation	RUSSIA	Financial Market Utility	Central Counterparty (CCP)	FX Cash Equity and Derivatives
RESERVE BANK OF NEW ZEALAND	54930066LV3G32L0HB48	PO Box 2498 2 The Terrace 6140 Wellington NZ-WGN	NEW ZEALAND	Financial Market Utility	Central Securities Depository (CSD)	Securities
SHANGHAI CLEARING HOUSE	3003009OCN1WA6ED1054	Floor 33-34, No. 318 South Zhongshan Road 200010 Huangpu Qu CN-SH	CHINA	Financial Market Utility	Central Counterparty (CCP)	IRS
Skandinaviska Enskilda Banken AB (publ)	F3JS33DEI6XQ4ZBPTN86	Kungsträdgårdsgatan 8, SE-106 40 STOCKHOLM, SWEDEN	FINLAND	Partner Bank	Securities Partner Bank	Sub Custodian
Skandinaviska Enskilda Banken AB (publ)	F3JS33DEI6XQ4ZBPTN86	Kungsträdgårdsgatan 8, SE-106 40 STOCKHOLM, SWEDEN	Denmark	Partner Bank	Securities Partner Bank	Sub Custodian
SKANDINAVISKA ENSKILDA BANKEN AB	549300ND1MQ8SNNYMJ22	2 Tornimäe Street, Tallinn 15010, Estonia;	Estonia	Partner Bank	Securities Partner Bank	Sub Custodian
SKANDINAVISKA ENSKILDA BANKEN AB	549300YW95G1VBBGGV07	Meistaru iela 1, Valdlauci, Kekavas pag., Rigas raj., LV-1076, Latvia;	Latvia	Partner Bank	Securities Partner Bank	Sub Custodian
SKANDINAVISKA ENSKILDA BANKEN AB	549300SBPFE9JX7N8J82	Gedimino ave.12, 01103, Vilnius, Lithuania;	Lithuania	Partner Bank	Securities Partner Bank	Sub Custodian
Skandinaviska Enskilda Banken AB (publ)	F3JS33DEI6XQ4ZBPTN86	Kungsträdgårdsgatan 8, SE-106 40 STOCKHOLM, SWEDEN	Sweden	Partner Bank	Securities Partner Bank	Sub Custodian
Skandinaviska Enskilda Banken AB (publ)	F3JS33DEI6XQ4ZBPTN86	Kungsträdgårdsgatan 8, SE-106 40 STOCKHOLM, SWEDEN	FINLAND	Partner Bank	Securities Partner Bank	Sub Custodian
Skandinaviska Enskilda Banken AB (publ)	F3JS33DEI6XQ4ZBPTN86	Kungsträdgårdsgatan 8, SE-106 40 STOCKHOLM, SWEDEN	Denmark	Partner Bank	Securities Partner Bank	Sub Custodian
Skandinaviska Enskilda Banken AB (publ)	F3JS33DEI6XQ4ZBPTN86	Kungsträdgårdsgatan 8, SE-106 40 STOCKHOLM, SWEDEN	Norway	Partner Bank	Securities Partner Bank	Sub Custodian
SKANDINAVISKA ENSKILDA BANKEN AB	549300ND1MQ8SNNYMJ22	2 Tornimäe Street, Tallinn 15010, Estonia;	Estonia	Partner Bank	Securities Partner Bank	Sub Custodian
SKANDINAVISKA ENSKILDA BANKEN AB	549300YW95G1VBBGGV07	Meistaru iela 1, Valdlauci, Kekavas pag., Rigas raj., LV-1076, Latvia;	Latvia	Partner Bank	Securities Partner Bank	Sub Custodian
SKANDINAVISKA ENSKILDA BANKEN AB	549300SBPFE9JX7N8J82	Gedimino ave.12, 01103, Vilnius, Lithuania;	Lithuania	Partner Bank	Securities Partner Bank	Sub Custodian
Skandinaviska Enskilda Banken AB (publ)	F3JS33DEI6XQ4ZBPTN86	Kungsträdgårdsgatan 8, SE-106 40 STOCKHOLM, SWEDEN	Sweden	Partner Bank	Securities Partner Bank	Sub Custodian
SOCIETE GENERALE MAROCAINE DE BANQUES SA	549300WHIMVBNIDQWK21	55, Boulevard Abdelmoumen, Casablanca, 20100, Morocco	MOROCCO	Partner Bank	Securities Partner Bank	Sub Custodian
SOCIETE GENERALE MAROCAINE DE BANQUES SA	549300WHIMVBNIDQWK21	55, Boulevard Abdelmoumen, Casablanca, 20100, Morocco	MOROCCO	Partner Bank	Securities Partner Bank	Sub Custodian
THE STANDARD BANK OF SOUTH AFRICA LTD	QFC8ZCW3Q5PRXU1XTM60	Investor Services, 3rd Floor, 25 Pixley Ka Isaka Seme Street, Johannesburg, 2001	SOUTH AFRICA	Partner Bank	Securities Partner Bank	Sub Custodian

THE STANDARD BANK OF SOUTH AFRICA LTD	QFC8ZCW3Q5PRXU1XTM60	Investor Services, 3rd Floor, 25 Pixley Ka Isaka Seme Street, Johannesburg, 2001	SOUTH AFRICA	Partner Bank	Securities Partner Bank	Sub Custodian
STANBIC IBTC BANK PLC	029200098C3K8BI2D551	Stanbic I.B.T.C Bank PLC I.B.T.C Place Walter Carrington Crescent Victoria Island Lagos Nigeria	NIGERIA	Partner Bank	Securities Partner Bank	Sub Custodian
STANBIC IBTC BANK PLC	029200098C3K8BI2D551	Stanbic I.B.T.C Bank PLC I.B.T.C Place Walter Carrington Crescent Victoria Island Lagos Nigeria	NIGERIA	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK (INDONESIA BRANCH)	RILFO74KP1CM8P6PCT96	World Trade Center II, 3rd Floor Jl.Jend. Sudirman Kav.29-31 Jakarta 12920	INDONESIA	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK (INDONESIA BRANCH)	RILFO74KP1CM8P6PCT96	World Trade Center II, 3rd Floor Jl.Jend. Sudirman Kav.29-31 Jakarta 12920	INDONESIA	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK (INDONESIA BRANCH)	RILFO74KP1CM8P6PCT96	World Trade Center II, 3rd Floor Jl.Jend. Sudirman Kav.29-31 Jakarta 12920	INDONESIA	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK, OMAN BRANCH	RILFO74KP1CM8P6PCT96	Standard Chartered Bank, Bait Al Falaj Street, Ruwi, Sultanate of Oman	OMAN	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK, OMAN BRANCH	RILFO74KP1CM8P6PCT96	Standard Chartered Bank, Bait Al Falaj Street, Ruwi, Sultanate of Oman	OMAN	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK, JORDAN BRANCH	RILFO74KP1CM8P6PCT96	Standard Chartered Bank, Shemissani Main Building, Al Thakafa Street, Amman - 111910, Jordan	JORDAN	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK, BAHRAIN BRANCH	RILFO74KP1CM8P6PCT96	Manama Main Branch, Building no.180, Government Avenue, Manama 315. Kingdon of Bahrain	BAHRAIN	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK, DIFC BRANCH	RILFO74KP1CM8P6PCT96	Standard Chartered Bank, Building 1, DIFC, 4th Floor, PO Box 999, Dubari, UAE	UNITED ARAB EMIRATES	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK, UAE BRANCH	RILFO74KP1CM8P6PCT96	Standard Chartered Bank, Building 1, DIFC, 4th Floor, PO Box 999, Dubari, UAE	UNITED ARAB EMIRATES	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK, UAE BRANCH	RILFO74KP1CM8P6PCT96	Standard Chartered Bank, Building 1, DIFC, 4th Floor, PO Box 999, Dubari, UAE	UNITED ARAB EMIRATES	Partner Bank	Securities Partner Bank	Sub Custodian
STANDARD CHARTERED BANK, DIFC BRANCH	RILFO74KP1CM8P6PCT96	Standard Chartered Bank, Building 1, DIFC, 4th Floor, PO Box 999, Dubari, UAE	UNITED ARAB EMIRATES	Partner Bank	Securities Partner Bank	Sub Custodian

STATE STREET CORPORATION	549300ZFEEJ2IP5VME73	State Street Financial Center 1 Lincoln Street Boston MA 02111	UNITED STATES	Partner Bank	Securities Partner Bank	Sub Custodian
THE BANK OF NEW YORK MELLON	HPFHU0OQ28E4N0NFVK49	240 Green Street, New York, NY 10286	UNITED STATES	Partner Bank	Securities Partner Bank	Sub Custodian
THE CLEARING CORPORATION OF INDIA LIMITED	335800CNVQFGRCP1PR55	CCIL BHAVAN S. K. BOLE ROAD DADAR (WEST) 400028 MUMBAI IN-MH	INDIA	Financial Market Utility	Central Counterparty (CCP)	FX
THE CLEARING CORPORATION OF INDIA LIMITED	335800CNVQFGRCP1PR55	CCIL BHAVAN S. K. BOLE ROAD DADAR (WEST) 400028 MUMBAI IN-MH	INDIA	Financial Market Utility	Central Counterparty (CCP)	FX Forwards
THE CLEARING CORPORATION OF INDIA LIMITED	335800CNVQFGRCP1PR55	CCIL BHAVAN S. K. BOLE ROAD DADAR (WEST) 400028 MUMBAI IN-MH	INDIA	Financial Market Utility	Central Counterparty (CCP)	Securities
THE DEPOSITORY TRUST COMPANY INC	MLDY5N6PZ58ZE60QU102	55 Water St New York, NY 10041	UNITED STATES	Financial Market Utility	Central Securities Depository (CSD)	Securities
NATIONAL SECURITIES CLEARING CORPORATION	549300RYC9NELN2ICA34	55 Water St New York, NY 10041	UNITED STATES	Financial Market Utility	Central Counterparty (CCP)	Securities
FIXED INCOME CLEARING CORPORATION	549300H47WTHXPU08X20	55 Water St New York, NY 10041	UNITED STATES	Financial Market Utility	Central Counterparty (CCP)	GSD
FIXED INCOME CLEARING CORPORATION	549300H47WTHXPU08X20	55 Water St New York, NY 10041	UNITED STATES	Financial Market Utility	Central Counterparty (CCP)	GSD GCF Repo
FIXED INCOME CLEARING CORPORATION	549300H47WTHXPU08X20	55 Water St New York, NY 10041	UNITED STATES	Financial Market Utility	Central Counterparty (CCP)	MBSD
THAILAND SECURITIES DEPOSITORY COMPANY LIMITED	254900IJQ6ZM0PD20H32	14th Floor, 93 Ratchadaphisek Road, Dindaeng, 10400, Bangkok, Thailand	THAILAND	Financial Market Utility	Central Securities Depository (CSD)	Securities
U.S. BANK NATIONAL ASSOCIATION	6BYL5QZYBDK8S7L73M02	425 Walnut Street Cincinnati OH 45202	UNITED STATES	Partner Bank	Securities Partner Bank	Sub Custodian
UNICREDIT BANK CZECH REPUBLIC AND SLOVAKIA, A.S.	KR6LSKV3BTSJRD41IF75	Želetavská 1525/1, 140 92 Praha 4 - Michle, Czech Republic	CZECH REPUBLIC	Partner Bank	Securities Partner Bank	Sub Custodian
UNICREDIT BANK CZECH REPUBLIC AND SLOVAKIA, A.S.	KR6LSKV3BTSJRD41IF75	Želetavská 1525/1, 140 92 Praha 4 - Michle, Czech Republic	CZECH REPUBLIC	Partner Bank	Securities Partner Bank	Sub Custodian

UNICREDIT BANK HUNGARY ZRT.	Y28RT6GGYJ696PMW8T44	Szabadság tér 5-6. HU-1054 Budapest	HUNGARY	Partner Bank	Securities Partner Bank	Sub Custodian
UNICREDIT BANK HUNGARY ZRT.	Y28RT6GGYJ696PMW8T44	Szabadság tér 5-6. HU-1054 Budapest	HUNGARY	Partner Bank	Securities Partner Bank	Sub Custodian
UNICREDIT BANKA SLOVENIJA d.d.	549300O2UN9JLME31F08	Šmartinska 140 SI-1000 Ljubljana, Slovenija/Slovenia	SLOVENIA	Partner Bank	Securities Partner Bank	Sub Custodian
ZAGREBACKA BANKA D.D.	PRNXTNXHBIOTSY1V8P17	Savska 62, 10000 Zagreb	CROATIA	Partner Bank	Securities Partner Bank	Sub Custodian
ZAGREBACKA BANKA D.D.	PRNXTNXHBIOTSY1V8P17	Savska 62, 10000 Zagreb	CROATIA	Partner Bank	Securities Partner Bank	Sub Custodian